

Rio Tinto announces returns to shareholders of \$3.5 billion including interim dividend of \$2.5 billion and special dividend of \$1.0 billion

1 August 2019

Rio Tinto chief executive J-S Jacques said “We have delivered strong financial results with underlying EBITDA of \$10.3 billion and EBITDA margin of 47%. Our financial performance was driven by our Pilbara operations with a 72% EBITDA margin, underpinned by strong iron ore prices.

“We are taking actions to protect the Pilbara Blend and optimise performance across our iron ore system, following the operational challenges which emerged in the first half.

“Our world-class portfolio and strong balance sheet serve us well in all market conditions. This, together with our disciplined capital allocation, underpins our ability to continue to invest in our business and deliver superior returns to shareholders in the short, medium and long term. Our delivery is in evidence today, with our record interim returns of \$3.5 billion.”

Six months to 30 June	2019	2018	Change
Net cash generated from operating activities (US\$ millions)*	6,389	5,228	22 %
Capital expenditure ¹ (US\$ millions)	2,391	2,363	1 %
Free cash flow ² (US\$ millions)	3,879	2,883	35 %
Underlying EBITDA ³ (US\$ millions)	10,250	9,198	11 %
Underlying earnings ³ (US\$ millions)	4,932	4,416	12 %
Net earnings (US\$ millions)	4,130	4,380	(6)%
Underlying earnings ³ per share (US cents)	301.5	253.6	19 %
Basic earnings per share (US cents)	252.5	251.6	-
Ordinary dividend per share (US cents)	151.0	127.0	19 %

	At 30 June 2019	At 31 Dec 2018
Net (debt)/cash ⁴ (US\$ millions)	(4,855)	255
Net gearing ratio ⁵	10%	(1)%
Return on Capital Employed (ROCE) ⁶	23%	19 %

*2019 first half operating cash flow of \$6,389m is shown net of \$856m of tax paid on the 2018 coking coal disposals. See page 3 for other footnotes.

- Sustained improvement in safety performance, with the All Injury Frequency Rate continuing to decline, a reduction in the severity rate and fewer process safety incidents.
- Underlying EBITDA³ of \$10.3 billion (excluding the contribution from the coking coal assets divested in 2018), was 19% above 2018 first half, with an EBITDA margin⁷ of 47%.
- Operating cash flow of \$6.4 billion is presented net of \$0.9 billion of tax paid in 2019 first half relating to the 2018 coking coal disposals.
- Free cash flow² of \$3.9 billion was 35% higher than 2018 first half.
- Cash returns of \$3.5 billion announced today, comprising record interim ordinary dividend of \$2.5 billion, equivalent to 151 US cents per share, and special dividend of \$1.0 billion, equivalent to 61 US cents per share.
- \$4.9 billion underlying earnings³, 12% higher due to a strong contribution from Iron Ore.
- Following our update on the Oyu Tolgoi underground project on 16 July 2019, we completed an impairment assessment and concluded that the changes to project cost and schedule led to an impairment charge, net of tax and non-controlling interests, of \$0.8 billion. The impairment is reflected in net earnings of \$4.1 billion⁹.
- Record 23% Return on Capital Employed⁶, a rise of four percentage points on 2018.
- Strong balance sheet with net debt⁵ of \$4.9 billion, mainly reflects \$7.8 billion of cash returns to shareholders paid in 2019 first half, partly offset by free cash flow.

The financial results are prepared in accordance with IFRS and are unaudited. Footnotes are set out on page 3.

Stronger revenues and EBITDA

- Consolidated sales revenue of \$20.7 billion was 9% higher than 2018 first half, excluding the \$0.8 billion contribution from the coking coal assets divested in 2018. Higher iron ore prices offset the impact of lower volumes and lower aluminium prices.
- Underlying EBITDA³ of \$10.3 billion was 19% higher than 2018 first half, excluding the \$0.6 billion contribution from coking coal. This increase reflected higher iron ore prices which more than compensated for lower volumes and higher costs.
- Effective tax rate on underlying earnings³ was 31%, three percentage points higher than in 2018 first half, primarily reflecting increased profits in Australia.
- Net earnings of \$4.1 billion, 6% lower than 2018 first half, mainly reflected the impairment of Oyu Tolgoi. See table on page 8.

Strong cash flow from operations

	First half 2019 US\$m	First half 2018 US\$m ⁷
Net cash generated from operating activities*	6,389	5,228
Capital expenditure ¹	(2,391)	(2,363)
Sales of property, plant and equipment	17	18
Lease principal payments	(136)	-
Free cash flow²	3,879	2,883
Disposals	46	402
Dividends paid to equity shareholders	(6,843)	(3,177)
Share buy-back	(988)	(1,501)
Non-cash impact from implementation of IFRS 16 Leases at 1 January 2019	(1,248)	-
Other	44	9
Increase in net debt⁴	(5,110)	(1,384)

*2019 first half operating cash flow of \$6,389m is shown net of \$856m of tax on the 2018 coking coal disposals. See page 3 for other footnotes.

- Cash generated from operating activities of \$6.4 billion, net of \$0.9 billion of tax relating to the 2018 coking coal disposals. The 22% increase was driven primarily by higher underlying EBITDA. Effective management of working capital helped to reduce the impact from higher prices.
- Capital expenditure¹ was \$2.4 billion, of which \$1.2 billion was on development projects and \$1.2 billion to sustain capacity at our operations.
- Free cash flow² of \$3.9 billion, up 35%, due to the higher operating cash flow and stable capex.
- \$6.8 billion of dividends reflected the 2018 final dividend and the special dividend paid in April 2019.
- \$1.0 billion of share buy-backs in Rio Tinto plc shares repurchased.
- Implementation of IFRS 16 Leases on 1 January 2019 increased net debt by \$1.2 billion.
- As a result of the above, net debt⁴ increased by \$5.1 billion to \$4.9 billion since 2018 year end.

Continued investment in growth projects and development

- At the Oyu Tolgoi underground copper/gold mine in Mongolia, Definitive Estimate¹⁰ for development capital spend and timeline now anticipated in the second half of 2020. See page 20.
- \$2.6 billion Koodaideri replacement iron ore mine progressed, with engineering, procurement and construction activities on schedule. Koodaideri will have a 43 Mt annual capacity, underpinning production of our Pilbara Blend™, with first tonnes in late 2021 and significant potential for future expansion with a phase 2 study underway.
- \$463 million investment in the Zulti South project at Richards Bay Minerals (RBM) in South Africa approved in 2019 first half, to sustain RBM's current capacity and extend mine life.
- \$287 million spend on exploration and evaluation, a 24% rise, mostly driven by increased activity at the Resolution copper project in Arizona and higher greenfield expenditure to underpin future growth projects. In April we committed \$302 million (\$166 million our share) of future expenditure to advance Resolution.
- Further encouraging drill results at the Winu project in Western Australia with 42 new drill holes and 11 rigs on site.¹¹

Guidance

- In 2019 we expect the run-rate from our mine-to-market programme⁸ to be around \$0.5 billion, despite weather impacts. This reflects operational challenges experienced in the Pilbara, which reduced our 2019 first half run-rate to \$0.2 billion. We now expect our mine-to-market productivity programme to deliver an additional free cash flow run-rate of \$1.0-1.5 billion (previously \$1.5 billion) from 2021. Delivery is based on the assumption that we increase iron ore volumes, subject to market conditions, and that raw material prices revert to those at the beginning of the programme in 2017, mainly in Aluminium.
- Capital expenditure¹ expected to be around \$6.0 billion in 2019 and around \$6.5 billion in 2020 and 2021. Each year includes sustaining capex, which we now expect to be around \$2.5 billion per year (previously \$2.0-2.5 billion per year).
- Effective tax rate on underlying earnings of approximately 30% in 2019.
- Pilbara unit cash costs of \$14-15 per wet metric tonne (excluding freight) in 2019.
- C1 unit costs at Rio Tinto Kennecott, Oyu Tolgoi and Escondida to average 110-120 US cents per pound in 2019.
- 2019 production guidance is unchanged from our Second Quarter Operations Review.

1 Capital expenditure is presented gross, before taking into account any cash received from disposals of property, plant and equipment (PP&E).

The following financial performance indicators - which are non-GAAP measures - are those management uses internally to assess performance. They are therefore considered relevant to readers of this document. They are presented here to give more clarity around the underlying business performance of the Group's operations.

2 Free cash flow is defined as net cash generated from operating activities less purchases of PP&E less lease principal payments plus sales of PP&E.

3 Net and underlying earnings relate to profit attributable to the owners of Rio Tinto. Underlying EBITDA and earnings are defined on page 13. Underlying earnings is reconciled to net earnings on page 72.

4 Net cash / debt is defined and reconciled to the balance sheet on page 49.

5 Net gearing ratio is defined as net debt divided by the sum of net debt and total equity at the end of each period.

6 Return on Capital Employed (ROCE) is defined as annualised underlying earnings excluding net interest divided by average capital employed (operating assets before net debt).

7 EBITDA margin is defined as Group underlying EBITDA divided by Product Group total revenues.

8 Mine-to-market productivity improvements refer to the additional free cash flow generated from post-tax operating cash cost improvements and post-tax volume gains from productivity programmes.

9 Refer to page 44 for pre-tax analysis of impairment charge.

10 Refer to market release on 16 July 2019 "Update on Oyu Tolgoi underground project".

11 For full details, see the Notice to the ASX dated 1 August 2019 ("Rio Tinto Exploration Update - Winu project") and accompanying information provided in accordance with the Table 1 checklist in The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 Edition). These materials are also available on riotinto.com.

Underlying EBITDA, underlying earnings by product group

	First half 2019 US\$m	First half 2018 US\$m	Change %
Underlying EBITDA			
Iron Ore	7,552	5,685	33 %
Aluminium	1,127	1,831	(38)%
Copper & Diamonds	1,213	1,360	(11)%
Energy & Minerals	954	1,008	(5)%
Other operations	(88)	(27)	(226)%
Product group total	10,758	9,857	9 %
Central pension costs, share-based payments and insurance	77	(83)	193 %
Restructuring, project and one-off costs	(175)	(177)	1 %
Other central costs	(272)	(299)	9 %
Exploration and evaluation	(138)	(100)	(38)%
Total	10,250	9,198	11 %
Underlying earnings			
Iron Ore	4,506	3,231	39 %
Aluminium	315	871	(64)%
Copper & Diamonds	348	450	(23)%
Energy & Minerals	341	464	(27)%
Other operations	(80)	(67)	(19)%
Product group total	5,430	4,949	10 %
Central pension costs, share-based payments and insurance	77	(54)	243 %
Restructuring, project and one-off costs	(119)	(39)	(205)%
Other central costs	(258)	(236)	(9)%
Exploration and evaluation	(109)	(86)	(27)%
Net interest	(89)	(118)	25 %
Total	4,932	4,416	12 %

Underlying EBITDA is a key financial indicator which management uses internally to assess performance. It excludes the same items that are excluded in arriving at underlying earnings. See page 11 for further detail and a reconciliation to profit on ordinary activities before finance items and tax.

Pre-tax Central pension costs, share-based payments and insurance were a \$77 million credit compared with an \$83 million charge in 2018 first half due to lower business unit captive insurance premiums held centrally.

Restructuring, project and one-off central costs were in line with 2018 first half, on a pre-tax basis.

Other central costs of \$272 million (pre-tax) were 9% lower than 2018 first half due to efficiency gains.

Commentary on financial results

To provide additional insight into the performance of our business, we report underlying EBITDA and underlying earnings. The principal factors explaining the movements in underlying EBITDA are set out in this table.

	US\$m
2018 first half underlying EBITDA	9,198
Prices	1,878
Exchange rates	386
Volumes and mix	(232)
General inflation	(150)
Energy	(25)
Operating cash cost movements	(481)
Higher exploration and evaluation spend	(55)
One-off items	297
Non-cash costs/other, including absence of EBITDA from coal operations divested in 2018	(566)
2019 first half underlying EBITDA	10,250

Momentum from higher iron ore prices

Commodity price movements in 2019 first half increased underlying EBITDA by \$1,878 million compared with 2018 first half. We have included a table of prices and exchange rates on page 71.

The Platts index for 62% iron fines was 31% higher on average compared with 2018 first half.

Average prices for copper and aluminium were down 11% and 17%, respectively, compared with 2018 first half. The mid-west premium for aluminium in the US averaged \$420 per tonne - 6% higher than in 2018 first half.

On 1 March 2018, the US government announced a 10% tariff on US imports of aluminium from Canada, which it implemented on 1 June 2018. On 19 May 2019, the tariff was removed following agreement between the US and Canadian governments.

Weaker Australian and Canadian dollars

Compared with 2018 first half, on average the US dollar strengthened by 8% against the Australian dollar, by 4% against the Canadian dollar and by 14% against the South African rand. Currency movements increased underlying EBITDA by \$386 million relative to 2018 first half.

Decline in iron ore volumes

Lower sales volumes decreased underlying EBITDA by \$232 million compared with 2018 first half, primarily driven by an 8% decline in iron ore shipments from the Pilbara where we experienced weather disruptions and mine operational challenges. These were partly offset by higher volumes from Iron Ore Company of Canada (IOC), increased bauxite shipments, higher gold volumes from Oyu Tolgoi and an improved product mix from our diamond operations.

Energy prices broadly stable

Marginally higher energy prices, on average, compared to 2018 first half reduced our underlying EBITDA by \$25 million. This was mainly due to the average price of bunker oil rising at our Marine operations by 10% in 2019 first half to \$477 per tonne.

Continued cost pressures

Our cash operating costs rose by \$481 million compared with 2018 first half, primarily reflecting an increase in iron ore unit costs. This was driven by a fire and weather-related events which reduced first half shipments by 14 million tonnes (100% basis). There was some respite on cost inflation for certain raw materials for Aluminium, in particular for caustic soda and petroleum coke albeit with a lag effect due to the pricing mechanism. However, this was partly offset by inflationary pressures on other costs.

Increased exploration spend at Resolution

We spent \$55 million more on exploration and evaluation compared with the first half of last year. This went to our highest value projects, particularly the Resolution copper project in Arizona.

One-off items

One-off items were \$297 million lower than in 2018 first half. This reflects the absence of the operational challenges in 2018 when we suspended operations for two months at Iron Ore Company of Canada before reaching a new labour agreement (\$236 million impact) and suspended production at Iron & Titanium, following a fatality at our Sorel-Tracy plant and labour disruptions at Richards Bay Minerals (\$69 million impact).

Non-cash costs/other

The movements in our non-cash costs and other items, which lowered EBITDA by \$566 million compared to 2018 first half, mainly reflected the sale of our coking coal businesses in 2018 which generated \$560 million of EBITDA in 2018 first half. It also includes the benefit to EBITDA of \$160 million of adopting IFRS16 Leases.

Net earnings

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

	US\$m
2018 first half net earnings	4,380
Total changes in underlying EBITDA	1,052
Decrease in depreciation and amortisation (pre-tax) in underlying earnings	15
Decrease in interest and finance items (pre-tax) in underlying earnings	126
Increase in tax on underlying earnings	(517)
Increase in underlying earnings attributable to outside interests	(160)
Total changes in underlying earnings	516
Changes in exclusions from underlying earnings:	
Movement in net impairment charges	(761)
Movement in gains on consolidation and gains on disposals	(146)
Movement in exchange differences and gains/losses on debt	(350)
Movements in inventory provision at Oyu Tolgoi	19
Movement in tax charges relating to planned divestments	472
2019 first half net earnings	4,130

Depreciation and amortisation, net interest and tax

Our depreciation and amortisation charge was broadly in line with 2018 first half, driven by the inclusion of depreciation on leases brought on to the balance sheet on adoption of IFRS 16, offset by the impact of the weaker Australian and Canadian dollars against the US dollar.

Interest and finance items (pre-tax) were \$126 million lower than 2018 first half. This was mainly due to the bond tender we completed in the first half of 2018, reducing our gross debt by a further \$1.94 billion equivalent and incurring \$94 million in early redemption costs. In addition, there was a lower level of net debt, on average in the period, and an increase in capitalised interest in the first half of 2019.

The 2019 first half effective corporate income tax rate on underlying earnings, excluding equity accounted units, was 31%, compared with 28% in 2018 first half. The effective tax rate on underlying earnings in Australia in both years was just over 30%. We anticipate an effective tax rate on underlying earnings of approximately 30% in 2019.

Items excluded from underlying earnings

Net impairment charges increased by \$761 million compared with 2018 first half, which mostly relate to the Oyu Tolgoi underground project. The Group has continued to progress work on the project throughout the first half of 2019 and on 16 July 2019 provided an update summarising preliminary estimates for increased project development expenditure, schedule delay to first sustainable production and a delay to the completion of the Definitive Estimate until the second half of 2020. These preliminary estimates indicated that first sustainable production could be delayed by 16 to 30 months compared with the original feasibility study guidance in 2016 and that development capital spend for the project may increase by US\$1.2 billion to US\$1.9 billion over the US\$5.3 billion previously disclosed. These matters have been identified as an impairment trigger and we carried out an assessment of the recoverable amount of the project. This has resulted in an impairment charge, net of

tax and non-controlling interests, of US\$0.8 billion. On page 44 there is a detailed explanation of the impairment process.

In 2018 first half, we recognised a \$98 million post-tax charge, relating to the carrying value of the ISAL aluminium smelter in Iceland following its reclassification to assets held for sale. In 2019 first half, we recognised a further \$86 million post-tax charge as these assets were reclassified back out of assets held for sale.

In 2019 first half there were no net gains on consolidation and disposal of interests in businesses. In 2018 first half, we realised net gains of \$146 million (post-tax) primarily relating to the formation of the Elysis joint venture (JV) in Canada. We created this JV in May 2018 with Alcoa to develop and commercialise a carbon-free aluminium smelting process and recognised the gain for the fair value uplift on forming the JV.

In 2019 first half, we recognised non-cash exchange and derivative gains of \$38 million. This was mainly on US dollar debt in non-US dollar functional currency Group companies, intragroup balances, and on the revaluation of certain derivatives which do not qualify for hedge accounting. These modest gains compared with 2018 first half gains of \$0.4 billion, giving rise to a negative year-on-year movement of \$0.4 billion. The exchange gains are largely offset by currency translation losses recognised in equity. The quantum of US dollar debt is largely unaffected and we will repay it from US dollar sales receipts.

Profit

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 2019 first half totalled \$4.1 billion (2018 first half: \$4.4 billion). We recorded a profit in 2019 first half of \$2.9 billion (2018 first half: \$4.5 billion) of which a loss of \$1.2 billion (2018 first half profit: \$119 million) was attributable to non-controlling interests.

Net earnings, underlying earnings and underlying EBITDA

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

	2019 first half US\$m	2018 first half US\$m
Underlying earnings	4,932	4,416
Items excluded from underlying earnings		
Impairment charges	(859)	(98)
Net gains on consolidation and disposal of interests in businesses	-	146
Foreign exchange and derivative gains/(losses) on US dollar net debt and intragroup balances and derivatives not qualifying for hedge accounting	38	388
Tax charge relating to expected divestments	-	(472)
Reversal of inventory provision at Oyu Tolgoi	19	-
Net earnings	4,130	4,380

The explanation of excluded items is on page 6. On pages 72 to 73 there is a detailed reconciliation from underlying earnings to net earnings, including pre-tax amounts and additional explanatory notes. The differences between underlying EBITDA, EBITDA and net earnings are set out in this table.

	2019 first half US\$m	2018 first half US\$m
Underlying EBITDA	10,250	9,198
Net gains on consolidation and disposal of interests in businesses	-	176
Reversal of inventory provision at Oyu Tolgoi	75	-
Gains on embedded commodity derivatives not qualifying for hedge accounting (including exchange)	42	149
EBITDA	10,367	9,523
Depreciation and amortisation in subsidiaries excluding capitalised depreciation	(2,059)	(2,019)
Impairment charges, net of reversals	(2,349)	(123)
Depreciation and amortisation in equity accounted units	(299)	(354)
Finance items in subsidiaries	(298)	(52)
Taxation in subsidiaries	(2,255)	(2,233)
Taxation and finance items in equity accounted units	(176)	(243)
Less profit attributable to non-controlling interests	1,199	(119)
Net earnings	4,130	4,380

Cash flow

We generated \$6.4 billion in net cash from our operating activities, 22% higher than in 2018 first half. This is net of the \$0.9 billion tax payment relating to the 2018 coking coal divestments. The increase in cash flow was primarily driven by higher iron ore prices and a reduced impact on working capital from higher prices, due to active management.

We invested \$2.4 billion in capital expenditure, consistent with 2018 first half. These included our Oyu Tolgoi underground copper mine in Mongolia and early works for our Koodaideri replacement mine which will be a new production hub in the Pilbara region of Western Australia to sustain existing production in our iron ore system.

We generated \$3.9 billion of free cash flow, 35% higher than in 2018 first half, in line with our higher operating cash flow and stable capital expenditure. In 2019 first half, our mine-to-market productivity programme run-rate was \$0.2 billion, impacted by weather and mine operational challenges at our iron ore operations.

We paid \$6.8 billion in dividends to our shareholders, comprising the 2018 final dividend and the 2018 special dividend. We also repurchased \$1.0 billion of our shares on-market in the UK as part of our ongoing programme.

Balance sheet

Our net debt of \$4.9 billion increased by \$5.1 billion in the first half of 2019, reflecting payment of the final and special dividends of \$6.8 billion and \$1.0 billion of the ongoing share buy-back, partly offset by our strong free cash flow. It also reflects a non-cash increase of \$1.2 billion following the implementation of IFRS 16 from 1 January 2019. The introduction of IFRS 16 also led to an increase in EBITDA of approximately \$160 million as operating lease payments are no longer charged to cash operating costs. The impact on net earnings, after an increase in depreciation and interest on leases, is not significant.

Our net gearing ratio (net debt to total capital) increased to 10% at 30 June 2019 (31 December 2018: -1%).

Total financing liabilities at 30 June 2019 were \$14.3 billion (see page 49) and the weighted average maturity was around 10 years. At 30 June 2019, approximately 72% of Rio Tinto's total borrowings were at floating interest rates. The maximum amount, within non-current borrowings, maturing in any one calendar year was \$1.8 billion, which matures in 2025.

Cash and cash equivalents plus other short-term cash investments at 30 June 2019 were \$9.4 billion (31 December 2018: \$13.3 billion).

Our shareholder returns policy

At the end of each financial period, the board determines an appropriate total level of ordinary dividend per share, taking 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 40-60% of underlying earnings in aggregate through the cycle.

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

Acknowledging the cyclical nature of the industry, in periods of strong earnings and cash generation, it is the board's intention to supplement the ordinary dividends with additional returns to shareholders.

	US\$ billion	US cents per share
2019 interim returns		
Ordinary interim announced today, to be paid in September 2019	2.5	151.0
Additional returns		
Special dividend, to be paid in September 2019	1.0	61.0
Combined total is 70% of 2019 first half underlying earnings	3.5	212.0

We determine dividends in US dollars. We declare and pay Rio Tinto plc dividends in pounds sterling and Rio Tinto Limited dividends in Australian dollars. The 2019 interim dividend and the special dividend were converted at exchange rates applicable on 31 July 2019 (the latest practicable date prior to the declaration of the dividend). ADR holders receive dividends at the declared rate in US dollars.

	2019 interim	2018 interim
Ordinary dividend per share		
Rio Tinto Group		
US cents per share	151.00	127.00
Rio Tinto plc		
UK pence per share	123.32	96.82
Rio Tinto Limited		
Australian cents per share	219.08	170.84
Special dividend per share		
Rio Tinto Group		
US cents per share	61.00	-
Rio Tinto plc		
UK pence per share	49.82	-
Rio Tinto Limited		
Australian cents per share	88.50	-

Both the 2019 interim dividend and the special 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.

We will pay the 2019 interim dividend and the special dividend on 19 September 2019 to holders of ordinary shares and ADRs on the register at the close of business on 9 August 2019. The ex-dividend date for both the 2019 interim dividend and the special dividend for Rio Tinto Limited, Rio Tinto plc and Rio Tinto plc ADR shareholders is 8 August 2019.

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

sterling and Australian dollar exchange rates five business days before the dividend payment date. Rio Tinto plc and Rio Tinto Limited shareholders must register their currency elections by 29 August 2019.

We will operate our Dividend Reinvestment Plans for both the 2019 interim dividend and the special dividend - see our website (riotinto.com) for details. Rio Tinto plc and Rio Tinto Limited shareholders' election notice for the Dividend Reinvestment Plans must be received by 29 August 2019. Purchases under the Dividend Reinvestment Plan are made on or as soon as practicable after the dividend payment date and at prevailing market prices. There is no discount available.

Rio Tinto financial information by business unit

	Rio Tinto interest %	Gross revenue ^(a)		EBITDA ^(b)		Net earnings ^(c)	
		for the 6 months ended		for the 6 months ended		for the 6 months ended	
		30 June 2019 US\$m	30 June 2018 US\$m	30 June 2019 US\$m	30 June 2018 US\$m	30 June 2019 US\$m	30 June 2018 US\$m
Iron Ore							
Pilbara	(d)	11,039	9,113	7,528	5,626	4,548	3,202
Dampier Salt	68.4	128	123	38	29	14	9
Evaluation projects/other		41	57	(14)	30	(56)	20
Total Iron Ore		11,208	9,293	7,552	5,685	4,506	3,231
Aluminium							
Bauxite	(e)	1,182	1,207	472	452	231	246
Alumina		1,455	1,605	461	435	247	222
Intrasegment		(425)	(447)	(2)	(3)	(1)	(2)
Bauxite & Alumina		2,212	2,365	931	884	477	466
Primary Metal		2,490	3,328	306	917	(14)	437
Pacific Aluminium		1,112	1,265	(54)	151	(96)	55
Inter-segment and other		(1,261)	(1,450)	28	(40)	20	(33)
Integrated operations		4,553	5,508	1,211	1,912	387	925
Other product group Items		502	589	(144)	(166)	(113)	(129)
Product group operations		5,055	6,097	1,067	1,746	274	796
Evaluation projects/other		45	51	60	85	41	75
Total Aluminium		5,100	6,148	1,127	1,831	315	871
Copper & Diamonds							
Rio Tinto Kennecott	100.0	892	851	425	343	171	107
Escondida	30.0	1,061	1,271	568	790	213	316
Grasberg joint venture	(f)	–	–	–	(5)	–	(13)
Oyu Tolgoi and Turquoise Hill	(g)	735	587	306	202	52	38
Diamonds	(h)	271	323	69	132	(5)	55
Product group operations		2,959	3,032	1,368	1,462	431	503
Evaluation projects/other		–	–	(155)	(102)	(83)	(53)
Total Copper & Diamonds		2,959	3,032	1,213	1,360	348	450
Energy & Minerals							
Rio Tinto Coal Australia	(i)	–	837	–	560	–	342
Iron Ore Company of Canada	58.7	1,075	495	526	122	171	16
Rio Tinto Iron & Titanium	(j)	983	857	339	229	144	60
Rio Tinto Borates	100.0	304	324	98	107	54	60
Uranium	(k)	146	201	39	14	13	6
Product group operations		2,508	2,714	1,002	1,032	382	484
Simandou iron ore project	(l)	–	–	(6)	(6)	(3)	(3)
Evaluation projects/other		31	27	(42)	(18)	(38)	(17)
Total Energy & Minerals		2,539	2,741	954	1,008	341	464
Other operations							
Intersegment transactions	(m)	10	9	(88)	(27)	(80)	(67)
		(7)	(6)	–	–	–	–
Product group total		21,809	21,217	10,758	9,857	5,430	4,949
Central pension costs, share-based payments and insurance				77	(83)	77	(54)
Restructuring, project and one-off costs				(175)	(177)	(119)	(39)
Central costs				(272)	(299)	(258)	(236)
Exploration and evaluation				(138)	(100)	(109)	(86)
Net interest						(89)	(118)
Underlying EBITDA/earnings				10,250	9,198	4,932	4,416
Items excluded from underlying EBITDA/earnings		–	(10)	117	325	(802)	(36)
EBITDA/net earnings				10,367	9,523	4,130	4,380
Reconciliation to Group income statement							
Share of equity accounted unit sales and intra-subsiary/equity accounted unit sales		(1,087)	(1,293)				
Depreciation and amortisation in subsidiaries excluding capitalised depreciation				(2,059)	(2,019)		
Impairment charges				(2,349)	(123)		
Depreciation and amortisation in equity accounted units				(299)	(354)		
Taxation and finance items in equity accounted units				(176)	(243)		
Consolidated sales revenue/profit on ordinary activities before finance items and taxation		20,722	19,914	5,484	6,784		

Rio Tinto financial information by business unit continued

	Rio Tinto interest %	Capital expenditure ⁽ⁿ⁾		Depreciation and amortisation		Operating assets ^(o)	
		for the 6 months ended		for the 6 months ended		As at	
		30 June 2019 US\$m	30 June 2018 US\$m	30 June 2019 US\$m	30 June 2018 US\$m	30 June 2019 US\$m	31 December 2018 US\$m
Iron Ore							
Pilbara	(d)	663	485	817	869	14,427	14,486
Dampier Salt	68.4	6	3	9	10	150	165
Evaluation projects/other		–	–	–	–	2	2
Total Iron Ore		669	488	826	879	14,579	14,653
Aluminium							
	(e)						
Bauxite		242	480	112	78	2,681	2,494
Alumina		114	79	96	97	2,481	2,721
Intrasegment		–	–	–	–	(21)	(20)
Bauxite & Alumina		356	559	208	175	5,141	5,195
Primary Metal		303	272	312	311	9,890	9,306
Pacific Aluminium		52	54	77	72	1,148	1,156
Inter-segment and other		–	–	–	–	799	789
Total Aluminium		711	885	597	558	16,978	16,446
Copper & Diamonds							
Rio Tinto Kennecott	100.0	179	158	216	205	1,910	1,864
Escondida	30.0	147	159	237	287	2,951	3,057
Grasberg joint venture	(f)	–	20	–	20	–	–
Oyu Tolgoi and Turquoise Hill	(g)	651	593	109	114	5,954	6,072
Diamonds	(h)	23	38	77	50	312	267
Product group operations		1,000	968	639	676	11,127	11,260
Evaluation projects/other		2	1	3	3	152	129
Total Copper & Diamonds		1,002	969	642	679	11,279	11,389
Energy & Minerals							
Rio Tinto Coal Australia	(i)	–	42	–	34	–	(837)
Iron Ore Company of Canada	58.7	73	59	84	79	827	975
Rio Tinto Iron & Titanium	(j)	95	86	99	107	3,489	3,390
Rio Tinto Borates	100.0	17	21	30	29	525	518
Uranium	(k)	3	3	1	2	(480)	(406)
Product group operations		188	211	214	251	4,361	3,640
Simandou iron ore project	(l)	–	–	–	–	21	15
Evaluation projects/other		–	–	–	–	42	41
Total Energy & Minerals		188	211	214	251	4,424	3,696
Other operations	(m)	2	8	80	17	(178)	(442)
Product group total		2,572	2,561	2,359	2,384	47,082	45,742
Intersegment transactions						152	129
Net assets of disposal groups held for sale	(p)					217	440
Other items		25	23	36	19	(3,031)	(2,880)
Less: equity accounted units		(223)	(239)	(299)	(354)	–	–
Total		2,374	2,345	2,096	2,049	44,420	43,431
Add back: Proceeds from disposal of property, plant and equipment		17	18				
Total capital expenditure per cash flow statement		2,391	2,363				
Less: Net (debt)/cash						(4,855)	255
Equity attributable to owners of Rio Tinto						39,565	43,686

Notes to financial information by business unit

Business units are classified according to the Group's management structure. Certain comparative amounts have been recast to appropriately represent changes in management responsibility. Effective from the first half of 2019, Dampier Salt has moved from the Energy & Minerals Product Group to the Iron Ore Product Group.

- (a) Gross sales revenue includes the sales revenue of equity accounted units on a proportionately consolidated basis (after adjusting for sales to subsidiaries) in addition to consolidated sales. Consolidated sales revenue includes subsidiary sales to equity accounted units which are not included in gross sales revenue.
- (b) EBITDA of subsidiaries and the Group's share of EBITDA relating to equity accounted units represents profit before: tax, net finance items, depreciation and amortisation charged to the income statement in the period. Underlying EBITDA excludes the EBITDA impact of the same items that are excluded from underlying earnings.
- (c) Represents profit after tax for the period attributable to the owners of the Rio Tinto Group. Business unit earnings are stated before finance items but after the amortisation of discount related to provisions. Earnings attributed to business units do not include amounts that are excluded in arriving at underlying earnings.
- (d) Pilbara represents the Group's 100% holding in Hamersley, 50% holding of Hope Downs Joint Venture and 65% holding of Robe River Iron Associates. The Group's net beneficial interest in Robe River Iron Associates is 53% as 30% is held through a 60% owned subsidiary and 35% is held through a 100% owned subsidiary.
- (e) Presented on an integrated operations basis, splitting activities between Bauxite & Alumina, Primary Metal, Pacific Aluminium and Other integrated operations (which in total reflect the results of the integrated production of aluminium) and Other product group items, which relate to other commercial activities.
- (f) Through a joint venture agreement with Freeport-McMoRan Inc. (Freeport), we were entitled to 40% of material mined above an agreed threshold as a consequence of expansions and developments of the Grasberg facilities since 1998 (until 21 December 2018). On 21 December 2018, we sold our entire interest in the Grasberg mine to PT Indonesia Asahan Aluminium (Persero) (Inalum).
- (g) Our interest in Oyu Tolgoi is held indirectly through our 50.8% investment in Turquoise Hill Resources Ltd (TRQ), where TRQ's principal asset is its 66% investment in Oyu Tolgoi LLC, which owns the Oyu Tolgoi copper-gold mine.
- (h) Includes our interests in Argyle (100%) and Diavik (60%).
- (i) Includes our 82% interest in the Hail Creek coal mine (until 1 August 2018), our 80% interest in the Kestrel underground coal mine (until 1 August 2018) and interests in the Winchester South (until 1 June 2018) and Valeria development projects (until 1 August 2018).

On 1 June 2018, we sold our entire 75% interest in the Winchester South coal development project in Queensland, Australia, to Whitehaven Coal Limited for US\$200 million.

On 1 August 2018, we sold our entire 82% interest in the Hail Creek coal mine and 71.2% interest in the Valeria coal development project in Queensland, Australia to Glencore, for US\$1.7 billion.

On 1 August 2018, we sold our entire 80% interest in the Kestrel underground coal mine in Queensland, Australia to a consortium comprising private equity manager EMR Capital (EMR) and PT Adaro Energy Tbk (Adaro), an Indonesian listed coal company for US\$2.25 billion.
- (j) Includes our interests in Rio Tinto Fer et Titane (100%), QIT Madagascar Minerals (QMM, 80%) and Richards Bay Minerals (attributable interest of 74%).

Notes to financial information by business unit continued

- (k) Includes our interests in Energy Resources of Australia (68.4%) and Rössing Uranium Limited (Rössing) (68.6%). On 26 November 2018, we entered into a binding agreement with China National Uranium Corporation Limited (CNUC) to sell our entire 68.6% interest in the Rössing mine in Namibia, subject to certain conditions. The sale completed on 16 July 2019.
- (l) Simfer Jersey Limited, a company incorporated in Jersey in which the Group has a 53% interest, has an 85% interest in Simfer S.A., the company that manages the Simandou mining project in Guinea. The Group therefore has a 45.05% indirect interest in Simfer S.A. These entities are consolidated as subsidiaries and together referred to as the Simandou iron ore project.
- (m) Other Operations include our 100% interest in the Gove alumina refinery, Rio Tinto Marine and, with effect from the first half of 2019, the remaining operating assets of Rio Tinto Coal Australia. These include provisions for onerous contracts, as at 30 June 2019, in relation to rail infrastructure capacity, partly offset by financial assets and receivables relating to contingent royalties and disposal proceeds. Refer to note (i).
- (n) 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. The details provided include 100% of subsidiaries' capital expenditure and Rio Tinto's share of the capital expenditure of joint operations and equity accounted units.
- (o) Operating assets of subsidiaries is comprised of net assets excluding post-retirement assets and liabilities, net of tax, and before deducting net debt. Operating assets are stated after the deduction of non-controlling interests - these are calculated by reference to the net assets of the relevant companies (ie inclusive of such companies' debt and amounts due to or from Rio Tinto Group companies).
- (p) Assets and liabilities held for sale at 30 June 2019 include our interest in Rössing Uranium Limited.

Assets and liabilities held for sale at 31 December 2018 include our interest in Rössing Uranium Limited, the ISAL smelter, the Aluchemie anode plant, and the Alufluor aluminium fluoride plant.

Review of operations

Iron Ore

2019 first half results	First half 2019	First half 2018	Change
Pilbara production (million tonnes - Rio Tinto share)	129.7	140.5	(8)%
Pilbara production (million tonnes - 100%)	155.7	168.7	(8)%
Pilbara shipments (million tonnes - Rio Tinto share)	129.6	140.1	(8)%
Pilbara shipments (million tonnes - 100%)	154.6	168.8	(8)%
Salt production (000 tonnes - Rio Tinto share) ¹	2,579	3,176	(19)%
Gross sales revenue (US\$ millions)	11,208	9,293	21 %
Underlying EBITDA (US\$ millions)	7,552	5,685	33 %
Pilbara underlying FOB EBITDA margin ²	72%	67%	
Underlying earnings (US\$ millions)	4,506	3,231	39 %
Net cash generated from operating activities (US\$ millions)	5,258	4,269	23 %
Capital expenditure (US\$ millions)	(669)	(488)	37 %
Free cash flow (US\$ millions)	4,565	3,780	21 %

1 To reflect a change in management responsibility, Dampier Salt is now reported within Iron Ore. Prior year numbers have been restated accordingly. Iron Ore Company of Canada and the Simandou iron ore project in Guinea continue to be reported within Energy & Minerals.

2 The Pilbara underlying Free on Board (FOB) EBITDA margin is defined as Pilbara underlying EBITDA divided by Pilbara revenues, excluding freight revenue.

Financial performance

We benefited from robust demand for our high-quality products driven by strong demand from China and constrained seaborne supply. However, our first half production and shipments were affected by significant disruptions from weather events, a fire at one of our ports and mine operational challenges.

Underlying EBITDA of \$7.6 billion was 33% higher than 2018 first half, reflecting higher prices which were partially offset by higher unit costs. The Platts index for 62% iron fines (CFR) was 31% higher on average compared with 2018 first half, which increased our EBITDA by \$2.7 billion relative to 2018 first half.

2019 first half Pilbara unit cash costs were \$14.6 per tonne (2018 first half: \$13.4 per tonne). The fire and weather-related events reduced first half shipments by 14 million tonnes (100% basis), increasing unit costs by around \$1.2 per tonne. Higher salaries, rising fuel prices and cyclical maintenance compared with 2018 were mostly offset by a weaker Australian dollar.

We have continued investing in productivity and automation, and expect 50% of our truck fleet to be fully autonomous by the end of 2019. Deployments are complete at seven of our sites, with Hope Downs 1 and Marandoo in transition. AutoHaul is now fully operational.

Our Pilbara operations delivered an underlying EBITDA margin of 72%, compared with 67% in 2018 first half.

We priced approximately 77% of our sales with reference to the current month average index; 16% with reference to the prior quarter's average index lagged by one month; 5% with reference to the current quarter average; and 2% on the spot market. Approximately 33% of our sales were made on an FOB basis with the remainder sold including freight.

We achieved an average iron ore price of \$78.5 per wet metric tonne on an FOB basis (2018 first half: \$57.9 per wet metric tonne). This equates to \$85.3 per dry metric tonne (2018 first half: \$63.0 per dry metric tonne). Pilbara Blend sales included an additional 3.9 million tonnes of alternate products in 2019 first half.

Gross sales revenue for our Pilbara operations included freight revenue of \$0.6 billion (2018 first half: \$0.8 billion).

Net cash generated from operating activities of \$5.3 billion was 23% higher than 2018 first half, driven by the same trends as underlying EBITDA.

Free cash flow for our Pilbara operations of \$4.6 billion, 21% higher than 2018 first half, reflected the strong realised pricing partly offset by royalties, taxes and higher capital spend. This was largely sustaining capital, but also included Koodaideri early works.

Review of operations

Pilbara operations produced 155.7 million tonnes (Rio Tinto share 129.7 million tonnes), 8% lower than 2018 first half. Significant disruptions were caused by Tropical Cyclone Veronica, and a fire at our Cape Lambert A port in the first quarter. The impacts of the cyclone continued into the second quarter, with repairs to the Cape Lambert A port facilities impacting Robe Valley and Yandicoogina shipments and operations. All repairs are now complete.

As announced on 19 June 2019, we are experiencing mine operational challenges, particularly at our Greater Brockman hub. This has seen shortfalls in planned material movement and impacted mine sequencing both in the Greater Brockman hub and in the broader system. We will increase waste material movement over 2019 and 2020 to improve mine performance and pit sequencing. Cost guidance (below) includes these additional mining activities.

New projects and growth options

The \$2.6 billion Koodaideri mine is progressing to plan with engineering, procurement and construction activities on schedule, including the ramp-up of the mine bulk earthworks and commencement of rail bulk earthworks. We expect first ore from Koodaideri in late 2021, consistent with previous guidance. It will incorporate a processing plant and infrastructure, including a 166-kilometre rail line connecting the mine to our existing infrastructure network. Once complete, the initial mine development will have an annual capacity of 43 million tonnes.

The Robe River Joint Venture sustaining production projects (West Angelas C&D and Mesa B, C and H at Robe Valley) are progressing through the necessary environmental and heritage approval process. Mesa H environmental and heritage approvals have experienced some delays, with contingency plans being assessed in case required. Consistent with previous guidance, first ore from these projects is anticipated in 2021.

2019 guidance

In 2019, we expect our Pilbara shipments to be 320 to 330 million tonnes (100% basis), subject to weather. Major rail maintenance is scheduled to occur in October, and is reflected in our existing guidance.

In 2019, we expect our Pilbara unit cash costs to be \$14-15 per wet metric tonne on an FOB basis, which incorporates costs for the additional waste movement in the mines (~\$0.25 per tonne) in the second half and the overall reduction in shipments.

Aluminium

2019 first half results	First half 2019	First half 2018	Change
Bauxite production (000 tonnes - Rio Tinto share)	26,171	25,931	1 %
Alumina production (000 tonnes - Rio Tinto share)	3,886	3,988	(3)%
Aluminium production (000 tonnes - Rio Tinto share) ¹	1,599	1,600	-
Gross sales revenue (US\$ millions)	5,100	6,148	(17)%
Underlying EBITDA (US\$ millions)	1,127	1,831	(38)%
Underlying EBITDA margin (integrated operations)	27%	35%	
Underlying earnings (US\$ millions)	315	871	(64)%
Net cash generated from operating activities (US\$ millions)	1,043	1,137	(8)%
Capital expenditure - excluding EAUs ² (US\$ millions)	(635)	(806)	(21)%
Free cash flow (US\$ millions)	391	327	20 %

¹ To allow production numbers to be compared on a like-for-like basis, production from asset divestments completed in 2018 have been excluded from the Rio Tinto share of prior year production data. Financial data above includes the results of divested assets up to the date of sale.

² Equity accounted units

Financial performance

Our aluminium business was stable from an operational perspective, but suffered from price declines, in particular in aluminium metal.

Underlying EBITDA of \$1.1 billion declined by 38% compared with 2018 first half. A weaker pricing environment, in particular for primary metal, was the principal driver for the decline, reducing our underlying EBITDA by \$0.8 billion compared with 2018 first half. This was partly offset by volume, mix and cost gains delivered through productivity improvements. Bauxite volumes rose following the completion of Amrun with third party sales up 8%. There was some respite on cost inflation for certain raw materials, in particular for caustic soda and petroleum coke albeit with a lag effect due to the pricing mechanism. However, this was partly offset by inflationary pressures on other costs.

We achieved an average realised aluminium price of \$2,174 per tonne (2018 first half : \$2,547 per tonne). This comprised the LME price, a market premium and a value-added product (VAP) premium. The cash LME price averaged \$1,826 per tonne, 17% lower than 2018 first half. In our key US market, the mid-West premium rose 6% to \$420 per tonne. VAP represented 54% of the primary metal we sold (2018 first half: 58%) and generated attractive product premiums averaging \$242 per tonne of VAP sold (2018 first half: \$222 per tonne). A 10% tariff on aluminium imports into the United States under Section 232, which was effective for Canadian imports, was paid until the tariffs were removed on 19 May 2019.

Although we are broadly balanced in alumina, approximately 2.2 million tonnes of our legacy alumina sales contracts are exposed to a fixed linkage to the LME price. These contracts date back to 2005 or earlier, and the majority expire between 2023 and 2030. The negative impact on EBITDA of these legacy contracts was \$0.15 billion in 2019 first half. This was broadly in line with 2018 first half.

Despite the pressures, we maintained our position as a leading business in the sector, with an EBITDA margin from integrated operations of 27%.

Net cash from operating activities decreased by 8%, mainly due to lower EBITDA from weaker pricing which we partly offset through productivity improvements and favourable movements in working capital. Our free cash flow increased by 20%, mainly due to favourable working capital movements and lower capital expenditure following completion of the Amrun project in late 2018.

Review of operations

Central to our performance has been our continuous drive to gradually increase (“creep”) the capacity of our assets through productivity. We also continued to realise value from cost improvement and value-added product initiatives, particularly on increasing our average product premium aligned with our value over volume strategy.

Bauxite production of 26.2 million tonnes was 1% higher than 2018 first half. Production at managed operations increased by 3%, with the ramp-up of Amrun progressing despite weather impacting production and shipments in the first half. This was partly offset by lower production from the non-managed Porto Trombetas (MRN) JV in Brazil.

Our production performance enabled us to increase shipments of bauxite to third parties by 8% to 18.3 million tonnes, reinforcing our position as a leading global supplier in the seaborne bauxite trade.

Alumina production was 3% lower than 2018 first half due primarily to production disruptions following major maintenance activities at QAL and the lower bauxite supply from MRN impacting production at Vaudreuil.

Aluminium production of 1.6 million tonnes was in line with 2018 first half. Excluding the non-managed Becancour smelter in Canada, where a lock-out constrained operations, aluminium production in the first half was 1% higher than the corresponding period in 2018, reflecting continued productivity improvement.

On 2 July 2019, management and unions at the Becancour smelter agreed to a new labour arrangement which resulted in the restart of operations at the end of July, with full ramp-up expected in the first half of 2020.

New projects and growth options

The Amrun bauxite mine on the Cape York Peninsula in north Queensland continues to ramp up and is expected to reach its full capacity production rate of 22.8 million tonnes a year from 2019.

The \$0.7 billion expansion of the Sangaredi bauxite mine in Guinea is now complete, increasing the annual capacity of Compagnie des Bauxites de Guinée (CBG) to 18.5 million tonnes¹. The ramp-up to full capacity rates was slower than expected, but is now delivering at target run-rates.

At the \$0.5 billion Kemano project in Kitimat, British Columbia, where we are constructing a second tunnel at our wholly-owned hydropower facility, the tunnel boring machine has excavated a total of 828 metres as at 30 June 2019. Current progress is slightly behind schedule, but cost forecasts remain on budget.

2019 production guidance

We expect our share of production in 2019 to be between 56 and 59 million tonnes of bauxite, 8.1 to 8.4 million tonnes of alumina and 3.2 to 3.4 million tonnes of aluminium.

¹ 100% basis. Rio Tinto's share of capex and production is 45%.

Copper & Diamonds

2019 first half results	First half 2019	First half 2018	Change
Mined copper production (000 tonnes - Rio Tinto share)	281.0	296.1	(5)%
Refined copper production (000 tonnes - Rio Tinto share)	130.6	117.9	11 %
Diamonds production (000 carats - Rio Tinto share)	8,277	9,241	(10)%
Gross sales revenue (US\$ millions)	2,959	3,032	(2)%
Underlying EBITDA (US\$ millions)	1,213	1,360	(11)%
Underlying EBITDA margin (product group operations)	46%	48%	
Underlying earnings (US\$ millions)	348	450	(23)%
Net cash generated from operating activities (US\$ millions) ¹	775	838	(8)%
Capital expenditure - excluding EAUs ² (US\$ millions)	(855)	(810)	6 %
Free cash flow (US\$ millions)	(90)	28	

¹ Net cash generated from operating activities excludes the operating cash flows of equity accounted units (Escondida) but includes dividends from the equity accounted units

² Equity accounted units

Financial performance

A strong operational performance was maintained at our assets, notably at Rio Tinto Kennecott which continues to deliver productivity improvements despite weather challenges in the first quarter of 2019, and at Argyle and Diavik, which had strong ore processing throughput rates.

The resulting financial performance was impacted by decreases of 11% in average copper prices to 280 US cents per pound and of 1% in the average gold price to \$1,307 per ounce compared to 2018 first half. These price declines, together with weaker diamond pricing and provisional pricing movements, resulted in a \$237 million negative impact to underlying EBITDA compared to 2018 first half.

The increase in our copper evaluation expenditure was primarily on Resolution as we advanced our copper project in Arizona.

Notwithstanding the combined negative impact of \$290 million in price declines and increased evaluation and other expenditure, underlying EBITDA of \$1.2 billion was \$147 million or 11% lower than 2018 first half. The lower price impacts were offset by increased sales volumes of copper and lower costs linked to productivity improvements at our managed operations.

We generated \$0.8 billion in cash from our operating activities, an 8% decrease on 2018 first half. This included \$315 million of dividends from Escondida, compared with \$405 million received in 2018 first half. Free cash flow of \$(90) million, reflected a 6% increase in net capital expenditure to \$855 million, mainly relating to activities at the Oyu Tolgoi underground project.

Review of operations

Mined copper production was 5% lower than 2018 first half, attributable to lower copper grades at Escondida, partly offset by higher production from Rio Tinto Kennecott and Oyu Tolgoi open pit.

Refined copper production was 11% higher, reflecting a strong smelter performance from Rio Tinto Kennecott.

Rio Tinto Kennecott

Mined copper production was 8% up on 2018 first half despite lower grades. Productivity improved and plant throughput increased.

Refined copper was 22% higher than 2018 first half reflecting smelter performance and improved mining rates.

Escondida

Mined copper production from our 30% stake in the Escondida mine was 13% lower than 2018 first half, mainly due to lower copper grades feeding the concentrators.

Oyu Tolgoi

Mined copper production from the open pit was 9% higher than 2018 first half, reflecting higher copper grades and recovery partly offset by lower plant throughput due to the processing of harder ore.

Diamonds

Diamond production was 10% lower than 2018 first half. At Argyle, production was 13% less than 2018 first half, due to lower recovered grade, partly offset by stronger mining rates. At Diavik, production was 1% lower, with lower recovered grades partially offset by higher ore processing throughput.

Oyu Tolgoi underground project*

The Oyu Tolgoi underground project ("the Project") continued to progress in 2019 towards its path to become one of the largest copper mines in the world. Since February 2019, key infrastructure, such as the control room facility and the jaw crusher system, are now complete and construction of shafts 3 and 4 is progressing well. The commissioning of shaft 2 remains on track for October 2019.

As previously advised, enhanced geotechnical information and data modelling suggests that there may be some stability risks identified with the approved mine design and so a number of other mine design options are also under consideration to complete the Project. Studies to date indicate that these options may result in some of the planned critical underground infrastructure, such as the mid-access drive and the ore handling system, being relocated or removed. Options relating to the sequence of crossing the panel boundaries during mining operations are also being analysed.

These options are being evaluated to determine the final design of the first panel of mining, Panel 0, and this work is anticipated to continue until early 2020. Given the further technical work which is needed, the Definitive Estimate, which will include the final estimate of cost and schedule for the remaining underground project, is now expected to be delivered in the second half of 2020, reflecting the preferred mine design approach.

All options under consideration present a pathway to sustainable first production, and have different cost and schedule implications. To date, these have been defined to a level of accuracy associated with a Conceptual Study or Order of Magnitude Study, and, therefore, significantly more work is required to complete the final assessment.

Preliminary information now suggests that, depending on which mine design options are adopted, first sustainable production could be achieved between May 2022 and June 2023, a delay of 16 to 30 months compared to the original feasibility study guidance in 2016. This range includes contingency of up to eight months reflecting the unexpected and challenging geotechnical issues, complexities in the construction of shaft 2 and the detailed work still required to reach a more precise estimate.

Preliminary estimates for development capital spend for the Project, depending on the outcome of the work described above, is now \$6.5 billion to \$7.2 billion, an increase of \$1.2 billion to \$1.9 billion from the \$5.3 billion previously disclosed. These preliminary ranges incorporate a range of productivity assumptions and remain subject to change prior to completion of the Definitive Estimate.

At the end of 2018, we announced the signing of the Power Source Framework Agreement between Oyu Tolgoi and the government of Mongolia. This agreement is a binding framework and pathway for the construction of a power plant at Tavan Tolgoi and sets out an amended timetable for Oyu Tolgoi to meet its obligation to source power domestically as set out in the 2009 Investment Agreement. Discussions continue with the Government of Mongolia to define the funding principles and other details. A tender process has been initiated for potential EPC construction contracts.

Other new projects and growth options

We continue to progress stripping activities at the \$0.9 billion south wall pushback project at Rio Tinto Kennecott. We expect to access higher, more consistent grade ore from this project in late 2020. This will offset grade variability over the longer term.

On 15 April 2019, we announced a further \$302 million commitment (\$166 million our share) of additional expenditure to advance our Resolution Copper project in Arizona. The investment will fund additional drilling,

ore-body studies, infrastructure improvements and permitting activities as we progress the project to the final stage of permitting. The sinking of shaft 9 is progressing well.

2019 guidance

Guidance for our share of mined copper production for 2019 is unchanged at between 550,000 and 600,000 tonnes. Refined copper production guidance is between 220,000 and 250,000 tonnes. Diamond production guidance for 2019 is between 15 and 17 million carats.

Guidance for C1 unit costs in 2019 at Rio Tinto Kennecott, Oyu Tolgoi and Escondida remains unchanged with an average expected of 110-120 US cents per pound.

**As described above, and as disclosed in a Notice to the ASX/LSE on 16 July 2019, the level of accuracy of these estimates is preliminary in nature and subject to a range of variables, including the timing of commissioning of shaft 2, which is currently scheduled for October 2019, in line with previous guidance. The confidence level of these estimates is at a level associated with a Conceptual or Order of Magnitude Study, and further work is required between now and the second half of 2020 to refine the mine design options and study them to a level of confidence and accuracy associated with Feasibility Study quality estimates.*

Energy & Minerals

2019 first half results	First half 2019	First half 2018	Change
Iron ore pellets and concentrates production ¹ (000 tonnes - Rio Tinto share)	5,012	3,236	55 %
Titanium dioxide slag production (000 tonnes - Rio Tinto share)	599	525	14 %
Borates production (000 tonnes - Rio Tinto share)	253	256	(1) %
Uranium production (000 lbs - Rio Tinto share)	3,357	3,046	10 %
Gross sales revenue (US\$ millions)	2,539	2,741	(7) %
Underlying EBITDA (US\$ millions)	954	1,008	(5) %
Underlying EBITDA margin (product group operations)	40%	38%	
Underlying earnings (US\$ millions)	341	464	(27) %
Net cash generated from operating activities (US\$ millions)	680	575	18 %
Capital expenditure (US\$ millions)	(188)	(211)	(11) %
Free cash flow (US\$ millions)	481	358	34 %

¹ To reflect a change in management responsibility, Dampier Salt is now reported within Iron Ore. Prior year numbers have been restated accordingly. Iron Ore Company of Canada and the Simandou iron ore project in Guinea continue to be reported within Energy & Minerals.

Financial performance

The business staged a strong recovery in 2019 first half driven by significantly higher prices for iron ore pellets and concentrate and titanium dioxide feedstocks together with increased volumes at both Rio Tinto Iron & Titanium and at Iron Ore Company of Canada.

Underlying EBITDA of \$1.0 billion was 5% lower than 2018 first half, but 113% higher excluding the 2018 first half contribution from the coking coal assets divested in 2018.

A higher price environment, in particular for iron ore pellets and concentrate, titanium dioxide feedstocks and metallics, boosted EBITDA by \$169 million. We benefited from an 87% increase in sales volumes at Iron Ore Company of Canada compared with 2018 first half when we suspended operations due to a two-month strike. We also saw an improvement in operational performance at our titanium dioxide operations following the disruptions in 2018 first half.

Gross sales revenue of \$2.5 billion was 33% higher than 2018 first half on a like-for-like basis, excluding the 2018 contribution from coking coal. This reflected the increase in iron ore and titanium dioxide feedstock volumes and higher prices.

We generated net cash of \$0.7 billion from our operating activities and \$0.5 billion of free cash flow, reflecting the stronger pricing environment and our improved operational performance. In 2018 first half our performance was impacted by operational disruptions at Iron Ore Company of Canada and Rio Tinto Iron & Titanium and also includes the divested coking coal business. Excluding the 2018 contribution from coking coal, both operating cash flow and free cash flow were \$0.5 billion higher than 2018 first half.

Review of operations

Energy

Uranium production was 10% higher than 2018 first half. Energy Resources of Australia continued to process existing low-grade stockpiles, and production was 11% higher with higher grade and recoveries partly offset by lower plant throughput. Production at Rössing Uranium was 9% higher due to higher mill grades and recoveries.

On 26 November 2018, we announced that we had entered into a binding agreement with China National Uranium Corporation Limited for the sale of our entire 68.62% stake in Rössing Uranium. Approval has now been received from the Namibian Competition Commission and final completion occurred in July 2019.

Iron Ore Company of Canada (IOC)

IOC production of pellets and concentrate was significantly higher than 2018 first half which was impacted by a two-month labour strike. The 55% increase was achieved despite adverse weather in the first quarter and a flooding incident in June 2019.

Total sales of pellets and concentrates were 8.2 million tonnes (our share 4.8 million tonnes), 87% higher than 2018 first half.

Minerals

Titanium dioxide feedstock production was 14% higher than 2018 first half, reflecting improved operational performance following challenges faced in the corresponding period of 2018.

Eight of nine furnaces at Rio Tinto Fer et Titane (RTFT) are currently in operation, with three of four furnaces currently in operation at Richards Bay Minerals (RBM). Reconstruction of the currently idled fourth furnace at RBM commenced in July, with the furnace expected to be in operation by the end of 2019. A decision on whether to re-start the remaining idled furnace at RTFT will be based on maximising value over volume.

Production of borates were 1% lower, with production aligned to customer demand.

New projects and growth options

On 8 April 2019, we announced the approval of the construction of the Zulti South project at RBM in South Africa for \$463 million (our share \$343 million). First production is scheduled for late-2021.

We are continuing our pre-feasibility study at the Jadar lithium-borate project in Serbia to establish the economic business case for the project and to advance the environmental and socioeconomic impact assessments.

Rio Tinto and Chinalco, who respectively own 45.05% and 39.95% of Simandou, continue to work with the government of Guinea to explore options to realise value from the world-class iron ore deposit. The government of Guinea owns a 15% stake in the project.

2019 production guidance

Guidance for our share of 2019 production is 10.7 to 11.3 million tonnes of iron ore pellets and concentrates from IOC, 0.5 million tonnes of B₂O₃ equivalent production and 1.2 to 1.4 million tonnes of titanium dioxide slag production.

Other items (pre-tax)

	First half 2019	First half 2018
Central pensions and insurance (US\$ millions)	77	(83)
Restructuring, project and one-off costs (US\$ millions)	(175)	(177)
Central costs (US\$ millions)	(272)	(299)
	(370)	(559)

Pre-tax Central pension costs, share-based payments and insurance were a \$77 million credit compared with a \$83 million charge in 2018 first half due to lower business unit captive insurance premiums held centrally.

Restructuring, project and one-off central costs were in line with 2018 first half.

Other central costs of \$272 million (pre-tax) were 9% lower than 2018 first half due to efficiency gains.

Exploration and evaluation

	First half 2019	First half 2018
Central exploration expense (US\$ millions - pre-tax)	(138)	(100)

We have an extensive global exploration programme. In 2019 first half we explored in 18 countries looking for eight commodities. Expenditure on exploration and evaluation in 2019 first half was \$287 million, of which \$138 million relates to the exploration and evaluation of our greenfield programmes and \$149 million to our product groups, mostly copper. We have had some early success in copper exploration in the Pilbara, Western Australia, at our Winu project¹ where phase 2 drilling is now underway. The majority of our projects this year are in the early stages of drilling.

¹ For full details, see the Notice to ASX dated 1 August 2019 ("Rio Tinto Exploration Update - Winu project") and accompanying information provided in accordance with the Table 1 checklist in The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 Edition). These materials are also available on riotinto.com.

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. Please use them with care.

	Average published price/exchange rate for 2019 first half	US\$ million impact on full year 2019 underlying EBITDA of a 10% change in prices/exchange rates
Aluminium	\$1,826/t	462
Copper	280 US\$/lb	281
Gold	\$1,307/oz	61
Iron ore (62% Fe FOB)	\$84.9/dmt	1,862
Australian dollar against the US dollar	0.71	550
Canadian dollar against the US dollar	0.75	345
Oil (Brent)	\$66/bbl	68

The impact of a \$100 per tonne change in each of the input costs below is expected to have the following impact on our Canadian¹ aluminium smelting unit cash cost² of \$1,406 per tonne in 2019 first half:

	US\$/t
Alumina (FOB)	191
Green petroleum coke (FOB)	34
Calcined petroleum coke (FOB)	30
Coal tar pitch (FOB)	7

¹ Canadian smelters include all fully-owned smelters in Canada (Alma, AP60, Arvida, Grande-Baie, Kitimat and Laterrière), as well as Rio Tinto's share of the Becancour and Alouette smelters.

² The smelting unit cash cost refers to all costs which have been incurred before casting, excluding depreciation but including corporate allocations and with alumina at market price, to produce one metric tonne of primary aluminium.

Capital projects

We have a programme of high-quality projects across a broad range of commodities

Projects (Rio Tinto 100% owned unless otherwise stated)	Total approved capital cost (100% unless otherwise stated)	Approved capital remaining to be spent from 1 July 2019	Status/Milestones
Completed in 2019 first half			
Investment in the Compagnie des Bauxites de Guinée (CBG) bauxite mine to expand capacity from 14.5 to 18.5 million tonnes a year	\$0.3bn (RT share)		- Approved in 2016. We produced first ore in the fourth quarter of 2018, with operations now running at target run-rates.
Ongoing and approved			
Iron ore			
Investment in West Angelas and the Robe Valley in the Pilbara region of Western Australia to sustain production capacity	\$0.8bn (RT share)	\$0.8bn (RT share)	Approved in October 2018, the investments will enable us to sustain production of our Pilbara Blend™ and Robe Valley products. Mesa H environmental and heritage approvals have experienced some delays, with contingency plans being assessed in case required. Construction commenced in 2019 and first ore is expected in 2021.
Investment in Koodaideri, a new production hub in the Pilbara region of Western Australia, to sustain existing production in our iron ore system	\$2.6bn	\$2.5bn	Approved in November 2018, the investment incorporates a processing plant and infrastructure including a 166-kilometre rail line connecting the mine to our existing network. Engineering, procurement and construction activities are on schedule and we expect first production in late 2021. Once complete, the mine will have an annual capacity of 43 million tonnes.
Aluminium			
Investment in a second tunnel at the 1000MW Kemano hydropower facility at Kitimat, British Columbia, Canada	\$0.5bn	\$0.2bn	Approved in 2017. Project completion is targeted for late 2020. Current progress is slightly behind schedule, but cost forecasts remain on budget. The project will ensure the long-term reliability of the power supply to the modernised Kitimat smelter.
Copper & Diamonds			
Investment to extend mine life at Rio Tinto Kennecott, US, beyond 2019	\$0.9bn	\$0.4bn	Funding for the continuation of open pit mining via the push back of the south wall: the project largely consists of simple mine stripping activities.
Development of the Oyu Tolgoi underground mine in Mongolia (Rio Tinto 34%)	\$5.3bn*	\$2.5bn*	The project was approved in May 2016. A number of other mine design options are under consideration which have different cost and schedule implications. These options have been defined to a level of accuracy associated with a Conceptual Study or Order of Magnitude Study. First sustainable production could be achieved between May 2022 and June 2023, including up to 8 months contingency. Preliminary estimates for development capital are \$6.5 billion to \$7.2 billion. *Subject to the outcomes of the Definitive Estimate.
Energy & Minerals			
Development of the Zulti South project at Richards Bay Minerals (RBM) in South Africa (Rio Tinto 74%), to sustain current capacity and extend mine life.	\$0.5bn	\$0.5bn	Approved in April 2019, the investment will underpin RBM's supply of zircon and ilmenite over the life of mine. Construction is scheduled to start in mid-2019, subject to the granting of all necessary permits, with first commercial production expected in late 2021. The investment will be self-funded from RBM's cash flows, with no additional debt or recourse to Rio Tinto.

DIRECTORS' REPORT

for the half year ended 30 June 2019

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 2019 and likely future developments are given on pages 1 to 26. Important events that have occurred during the period and up until the date of this report are set out below.

Financial

On 9 April 2019, Rio Tinto published its latest Taxes paid report detailing the \$6.6 billion of taxes and royalties paid globally in 2018, up from \$5.1 billion in 2017. The report also outlined Rio Tinto's direct economic contribution of \$42.8 billion during 2018. Australia accounted for the largest portion of the taxes and royalties paid (\$4.8 billion), with significant amounts also paid in Canada (\$386 million), Chile (\$332 million), the United States (\$331 million), Mongolia (\$308 million), Europe (\$146 million) and Africa (\$132 million).

On 28 May 2019, Rio Tinto announced that it had published its report on payments to governments made by the company and its subsidiary undertakings for the year ended 31 December 2018 as required under the UK's Report on Payments to Governments Regulations 2014 (as amended in December 2015). Rio Tinto paid US\$6.6 billion of taxes and royalties and a further US\$1.3 billion on behalf of its employees during 2018.

Operations

On 27 February 2019, Rio Tinto announced to the Australian Securities Exchange ("**ASX**") that it had discovered copper-gold mineralisation at the Winu project in the Yeneena Basin of the Paterson Province in Western Australia.

On 28 February 2019, Rio Tinto disclosed in its 2018 annual report and announced to ASX significant changes in estimates of Mineral Resources for Pilbara iron ore deposits in Western Australia, compared to the previous estimates in the 2017 annual report.

On 8 March 2019, Rio Tinto announced the completion of commissioning of the \$1.9 billion (\$A2.6 billion) Amrun bauxite mine on the Cape York Peninsula in Queensland, Australia. The mine and associated processing and port facilities will replace production from Rio Tinto's depleting East Weipa mine and increase annual bauxite export capacity by around 10 million tonnes, at a time when higher-grade bauxite is becoming scarcer globally.

On 1 April 2019, Rio Tinto announced that Rio Tinto's iron ore operations in the Pilbara, Western Australia, were progressively resuming following the passing of Tropical Cyclone Veronica. However, initial inspections uncovered some damage to the Cape Lambert A port facility. As a result, Rio Tinto declared force majeure on certain contracts and continued to work with customers to minimise disruption in supply.

On 8 April 2019, Rio Tinto announced its approval of the next stage in the development of Richards Bay Minerals (RBM) in South Africa through the construction of the Zulti South project. The \$463million (Rio Tinto share \$343 million) investment will sustain RBM's current capacity and extend mine life.

On 15 April 2019, Rio Tinto announced its commitment of \$302 million of additional capital to advance its Resolution Copper project in the US state of Arizona. The investment will fund additional drilling, ore-body studies, infrastructure improvements and permitting activities as Rio Tinto looks to progress the project to the final stage of the project's permitting phase.

On 6 June 2019, Rio Tinto made a further announcement to ASX regarding copper-gold mineralisation at the Winu project in the Yeneena Basin of the Paterson Province in Western Australia and provided additional data on the intercepts for the eleven diamond drill holes reflecting drilling to the end of 2018.

On 12 June 2019, Rio Tinto disclosed additional information in relation to its global tailings facilities. That disclosure built on the detailed information provided on each of the company's global tailings facilities on 20 February 2019, when Rio Tinto also published its Group Procedure and its Standard for 'Management of tailings and water storage facilities', which was introduced in August 2015.

On 19 June 2019, Rio Tinto announced that Rio Tinto Iron Ore was experiencing mine operational challenges, particularly in the Greater Brockman hub in the Pilbara. In light of these challenges, there was a review of mine

plans, resulting in guidance of Pilbara shipments (100% basis) for 2019 being revised to between 320 million tonnes and 330 million tonnes (previously between 333 million tonnes and 343 million tonnes).

On 16 July 2019, Rio Tinto provided an update on the schedule and cost of the Oyu Tolgoi underground project ('the Project') in Mongolia. See page 20 for further detail.

People

On 17 April 2019 Rio Tinto announced that Group executive Joanne Farrell will leave Rio Tinto on 30 September 2019, after nearly 32 years with the Company. Ms Farrell will take long service leave until the end of March 2020 when she will retire.

On 1 July 2019 Rio Tinto announced the appointment of Barbara Levi to succeed Philip Richards as Group executive, Group General Counsel. Ms Levi, who is currently Group Legal Head, M&A and Strategic Transactions for Novartis, will join Rio Tinto on 1 January 2020. Mr Richards will retire from Rio Tinto on 31 December 2019.

Rio Tinto plc 2019 Annual General Meeting ("AGM")

At Rio Tinto plc's AGM on 10 April 2019, Resolution 19 ("Authority to purchase Rio Tinto plc shares") was passed with less than 80% of votes in favour and Shining Prospect (a subsidiary of the Aluminium Corporation of China ("Chinalco")) voted against. Chinalco has not sold any Rio Tinto plc shares and now has a holding of over 14% given its non-participation in Rio Tinto's significant share buy-back programmes over the last three years. This places Chinalco close to the 14.99% threshold agreed with the Australian Government at the time of Chinalco's original investment in 2008.

Directors

The directors serving on the boards of Rio Tinto plc and Rio Tinto Limited as at 30 June 2019 were:

	Notes	Date of appointment
Chairman		
Simon Thompson	(R and N)	1 April 2014
Executive directors		
Jean-Sébastien Jacques, chief executive		17 March 2016
Jakob Stausholm, chief financial officer		3 September 2018
Non-executive directors		
Sam Laidlaw (senior independent director)	(R, N and S)	10 February 2017
Megan Clark	(R, N and S)	20 November 2014
David Constable	(A and N)	10 February 2017
Simon Henry	(A, N and S)	1 April 2017
Michael L'Estrange	(N and S)	1 September 2014
Simon McKeon	(A, R and N)	1 January 2019

Notes

- (A) Audit Committee
- (R) Remuneration Committee
- (N) Nominations Committee
- (S) Sustainability Committee

Ann Godbehere stepped down from the board on 9 May 2019, having been a director since 9 February 2010. Sam Laidlaw succeeded Ann Godbehere as Senior Independent Director and Simon Henry succeeded Ann Godbehere as chair of the Audit Committee.

Moya Greene stepped down from the board on 26 June 2019, having been a director since 17 September 2018.

Dividend

The 2018 final dividend and a special dividend were paid on 18 April 2019 to holders of Rio Tinto plc and Rio Tinto Limited ordinary shares and Rio Tinto plc ADR holders. The 2018 final dividend, equivalent to 180 US cents per share, and special dividend, equivalent to 243 US cents per share, were determined by the board on 27 February 2019. Rio Tinto plc shareholders received 135.96 pence per share for the final dividend and 183.55 pence per share for the special dividend and Rio Tinto Limited shareholders received 250.89 Australian cents per share for the final dividend and 338.70 Australian cents per share for the special dividend, based on the applicable exchange rates on 26 February 2019. Rio Tinto plc ADR holders received 180 US cents per ADR for the final dividend and 243 US cents per ADR for the special dividend.

The 2019 interim dividend, equivalent to 151 US cents per share, and the special dividend, equivalent to 61 US cents per share, will be paid on 19 September 2019 to Rio Tinto Limited, Rio Tinto plc and Rio Tinto plc ADR shareholders on the register at the close of business on 9 August 2019. The ex-dividend date for both the 2019 interim dividend and the special dividend for Rio Tinto Limited, Rio Tinto plc and Rio Tinto plc ADR shareholders is 8 August 2019. Rio Tinto plc shareholders will receive 123.32 pence per share for the interim dividend and 49.82 pence per share for the special dividend and Rio Tinto Limited shareholders will receive 219.08 Australian cents per share for the interim dividend and 88.50 Australian cents per share for the special dividend, based on the applicable exchange rates on 31 July 2019. ADR holders receive dividends at the declared rate in US dollars.

Principal risks and uncertainties

The principal risks and uncertainties that could materially affect Rio Tinto's results and operations are set out on pages 67 to 72 of the 2018 Annual report and are listed under the risk factor headings below. The Group's view of its principal risks and uncertainties for the remaining six months of the financial year remains substantially unchanged. There may be additional risks unknown to Rio Tinto and other risks, currently believed to be immaterial, which could turn out to be material. These risks, whether they materialise individually or simultaneously, could significantly affect the Group's business and financial results.

The Group will continue to monitor external areas of uncertainty and threat closely as well as remain vigilant on internal controls, and incorporate any further developments as part of the full-year assessment of principal risks and uncertainties.

Market risks:

Commodity prices, driven by demand and supply for the Group's products, vary outside of expectations over time.

Exchange rate variations and geopolitical issues may offset or exacerbate this risk. Anticipating and responding to market movements is inherently uncertain and outcomes may vary.

China's growth pathway could impact demand for the Group's products outside of expectations.

Financial risks:

External events and internal discipline may impact Group liquidity.

Strategic risks:

Rio Tinto's ability to secure planned value by successfully executing divestments and acquisitions may vary.

The Group's ability to deliver projects successfully may vary.

Strategic partnerships play a material role in delivering the Group's production, cash and market positioning, and these may not always develop as planned.

Health, safety, environment and community (HSEC) risks:

Our operations and projects are inherently hazardous with the potential to cause illness or injury, damage to the environment, disruption to a community or a threat to personal security.

Resources risks:

The success of the Group's exploration activity may vary. In addition, estimates of ore reserves are based on uncertain assumptions that, if changed, could result in the need to restate ore reserves and mine plans.

Operations, projects and people risks:

Operational excellence is derived from high operational and human productivity, which requires quality people, processes and systems.

Attracting and retaining talent as the company and industry evolves presents a constant challenge.

Stakeholder risks:

The Group's operations are located across a number of jurisdictions, which exposes the Group to a wide range of economic, political, societal and regulatory environments.

Governance risks:

The Group's reputation and regulatory licences are dependent upon appropriate business conduct and are threatened by actual or perceived breaches of law, reputation or our code of conduct.

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

PricewaterhouseCoopers, 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 66 and forms part of this report.

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

Simon Thompson

Chairman

1 August 2019

Forward-looking statements

This announcement 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 announcement, 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 are levels of actual production during any period, levels of demand and market prices, the ability to produce and transport products profitably, the impact of foreign currency exchange rates on market prices and operating costs, operational problems, political uncertainty and economic conditions in relevant areas of the world, the actions of competitors, activities by governmental authorities such as changes in taxation or regulation and such other risk factors 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 announcement. 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 announcement 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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Group income statement

	Six months to 30 June 2019 US\$m	Six months to 30 June 2018 US\$m
Consolidated operations		
Consolidated sales revenue	20,722	19,914
Net operating costs (excluding items shown separately)	(12,818)	(13,472)
Impairment charges ^(a)	(2,349)	(123)
Net gains on consolidation and disposal of interests in businesses ^(b)	-	176
Exploration and evaluation costs	(287)	(232)
Profit relating to interests in undeveloped projects ^(b)	8	195
Operating profit	5,276	6,458
Share of profit after tax of equity accounted units	208	326
Profit before finance items and taxation	5,484	6,784
Finance items		
Net exchange gains on US external debt and intragroup balances	104	385
Net losses on derivatives not qualifying for hedge accounting	(109)	(14)
Finance income	175	100
Finance costs ^(c)	(273)	(332)
Amortisation of discount	(195)	(191)
	(298)	(52)
Profit before taxation	5,186	6,732
Taxation	(2,255)	(2,233)
Profit for the period	2,931	4,499
- attributable to owners of Rio Tinto (net earnings)	4,130	4,380
- attributable to non-controlling interests	(1,199)	119
Basic earnings per share^(d)	252.5c	251.6c
Diluted earnings per share^(d)	250.7c	249.9c

(a) Refer to Impairment charges note on page 44.

(b) Refer to Acquisitions and disposals note on page 46.

(c) Finance costs in the income statement include hedging adjustments and are net of amounts capitalised of US\$166 million (30 June 2018: US\$141 million).

Rio Tinto completed a bond buy-back programme in April 2018 for US\$1.9 billion (nominal value). The early redemption of these bonds accelerated the recognition of future interest payments associated with them. Included in finance costs in the six months ended 30 June 2018 is a net charge of US\$94 million attributable to early redemption of these bonds.

(d) For the purpose of calculating basic earnings per share, the weighted average number of Rio Tinto plc and Rio Tinto Limited shares outstanding during the period was 1,635.6 million (30 June 2018: 1,740.9 million), being the average number of Rio Tinto plc shares outstanding of 1,265.1 million (30 June 2018: 1,328.9 million), plus the average number of Rio Tinto Limited shares outstanding of 370.5 million (30 June 2018: 412.0 million). The profit figures used in the calculation of basic and diluted earnings per share are the profits attributable to owners of Rio Tinto.

For the purpose of calculating diluted earnings per share, the effect of dilutive securities is added to the weighted average number of shares. This effect is calculated under the treasury stock method.

Group statement of comprehensive income

	Six months to 30 June 2019 US\$m	Six months to 30 June 2018 US\$m
Profit after tax for the period	2,931	4,499
Other comprehensive (loss)/income		
Items that will not be reclassified to profit or loss:		
Actuarial (losses)/gains on post-retirement benefit plans	(648)	617
Changes in the fair value of equity investments held at fair value through other comprehensive income	(6)	(7)
Tax relating to these components of other comprehensive income	171	(159)
	(483)	451
Items that have been/may be subsequently reclassified to profit or loss:		
Currency translation adjustment ^(a)	269	(2,304)
Fair value movements:		
- Cash flow hedge (losses)/gains	(47)	95
- Cash flow hedge (gains)/losses transferred to the income statement	(7)	18
Net change in costs of hedging ^(b)	14	(29)
Tax relating to these components of other comprehensive income	3	(28)
Share of other comprehensive income/(loss) of equity accounted units, net of tax	11	(39)
Other comprehensive loss for the period, net of tax	(240)	(1,836)
Total comprehensive income for the period	2,691	2,663
- attributable to owners of Rio Tinto	3,890	2,640
- attributable to non-controlling interests	(1,199)	23

(a) Excludes a currency translation loss of US\$31 million for the period ended 30 June 2019 (30 June 2018: loss of US\$231 million) arising on Rio Tinto Limited's share capital, which is recognised in the Group statement of changes in equity. Refer to Group statement of changes in equity on page 39.

(b) As part of the bond buy-back programme in the period ended 30 June 2018, cross currency interest rate swaps hedging the bonds repurchased were closed out resulting in the reclassification of US\$3 million cost of hedging to the income statement and recognised within finance costs.

Group cash flow statement

	Six months to 30 June 2019 US\$m	Six months to 30 June 2018 US\$m
Cash flows from consolidated operations^(a)	9,111	7,495
Dividends from equity accounted units	318	418
Cash flows from operations	9,429	7,913
Net interest paid ^{(b) (f)}	(250)	(338)
Dividends paid to holders of non-controlling interests in subsidiaries	(57)	(5)
Tax paid	(2,733)	(2,342)
Net cash generated from operating activities	6,389	5,228
Cash flows from investing activities		
Purchase of property, plant and equipment and intangible assets	(2,391)	(2,363)
Disposals of subsidiaries, joint ventures, unincorporated joint operations and associates ^(c)	46	402
Purchases of financial assets ^(d)	(47)	(1,063)
Sales of financial assets	7	12
Sales of property, plant and equipment and intangible assets	17	18
Net funding of equity accounted units	(12)	(3)
Acquisitions of subsidiaries, joint ventures and associates	-	(5)
Other investing cashflows	5	-
Net cash used in investing activities	(2,375)	(3,002)
Cash flows before financing activities	4,014	2,226
Cash flows from financing activities		
Equity dividends paid to owners of Rio Tinto	(6,843)	(3,177)
Proceeds from additional borrowings	142	19
Repayment of borrowings ^(b)	(99)	(2,093)
Lease principal payments ^(f)	(136)	-
Proceeds from issue of equity to non-controlling interests	43	38
Own shares purchased from owners of Rio Tinto	(988)	(1,501)
Other financing cash flows	-	(45)
Net cash flows used in financing activities	(7,881)	(6,759)
Effects of exchange rates on cash and cash equivalents	(34)	(20)
Net decrease in cash and cash equivalents	(3,901)	(4,553)
Opening cash and cash equivalents less overdrafts	10,889	10,547
Closing cash and cash equivalents less overdrafts^(e)	6,988	5,994
(a) Cash flows from consolidated operations		
Profit after tax for the period	2,931	4,499
Adjustments for:		
- Taxation	2,255	2,233
- Finance items	298	52
- Share of profit after tax of equity accounted units	(208)	(326)
- Net gains on consolidation and disposal of interests in businesses	-	(176)
- Impairment charges	2,349	123
- Depreciation and amortisation ^(f)	2,096	2,049
- Provisions (including exchange differences on provisions)	338	390
Utilisation of other provisions	(237)	(214)
Utilisation of provision for post-retirement benefits	(87)	(138)
Change in inventories	(23)	(463)
Change in trade and other receivables	52	137
Change in trade and other payables	(401)	(442)
Other items ^(g)	(252)	(229)
	9,111	7,495

Group cash flow statement continued

- (b) Rio Tinto completed a US\$1.9 billion (nominal value) bond buy-back programme in April 2018. The notes purchased and redeemed were cancelled. Net interest paid in the period ended 30 June 2018 included US\$80 million, being the payment of the premiums and the accelerated interest associated with the bond redemption.
- (c) Refer to Acquisitions and disposals note on page 46.
- (d) During the six months to 30 June 2019, the Group invested a further US\$29 million (30 June 2018: US\$1.0 billion) in a separately managed portfolio of fixed income instruments. Purchases and sales of these securities are reported on a net cash flow basis within 'Purchases of financial assets'.
- (e) Closing cash and cash equivalents less overdrafts for the purposes of the cash flow statement differs from cash and cash equivalents on the Group balance sheet as per the following reconciliation:

Closing cash and cash equivalents less overdrafts	30 June 2019 US\$m	31 December 2018 US\$m	30 June 2018 US\$m
Balance per Group balance sheet	6,861	10,773	5,989
Bank overdrafts repayable on demand (unsecured)	(3)	(1)	–
Cash and cash equivalents included in assets held for sale	130	117	5
Balance per Group cash flow statement	6,988	10,889	5,994

- (f) Refer to pages 59 to 62 for the impact of transition to IFRS 16 'Leases' on 1 January 2019 and for the period ended 30 June 2019.
- (g) Includes settlement of currency forward contracts related to tax and dividend payments not designated in a hedge relationship of US\$172 million (30 June 2018: gains of US\$152 million mainly relating to derivatives embedded in operational contracts and not designated in a hedge relationship).

Group balance sheet

	30 June 2019 US\$m	31 December 2018 US\$m
Non-current assets		
Goodwill	919	912
Intangible assets	2,645	2,779
Property, plant and equipment ^(a)	56,349	56,361
Investments in equity accounted units	4,216	4,299
Inventories	167	152
Deferred tax assets	3,141	3,137
Trade and other receivables	1,542	1,585
Tax recoverable	6	8
Other financial assets (including loans to equity accounted units)	902	814
	69,887	70,047
Current assets		
Inventories	3,584	3,447
Trade and other receivables	3,127	3,179
Tax recoverable	148	77
Other financial assets (including loans to equity accounted units)	2,759	2,692
Cash and cash equivalents	6,861	10,773
	16,479	20,168
Assets of disposal groups held for sale ^(b)	386	734
Total assets	86,752	90,949
Current liabilities		
Borrowings and other financial liabilities ^(a)	(2,003)	(1,073)
Trade and other payables	(6,380)	(6,600)
Tax payable ^(a)	(1,415)	(1,842)
Provisions including post-retirement benefits	(1,099)	(1,056)
	(10,897)	(10,571)
Non-current liabilities		
Borrowings and other financial liabilities ^(a)	(13,321)	(12,847)
Trade and other payables	(762)	(841)
Tax payable ^(a)	(369)	(348)
Deferred tax liabilities	(3,524)	(3,673)
Provisions including post-retirement benefits	(13,410)	(12,552)
	(31,386)	(30,261)
Liabilities of disposal groups held for sale ^(b)	(169)	(294)
Total liabilities	(42,452)	(41,126)
Net assets	44,300	49,823
Capital and reserves		
Share capital ^(c)		
- Rio Tinto plc	209	211
- Rio Tinto Limited	3,446	3,477
Share premium account	4,313	4,312
Other reserves	8,923	8,661
Retained earnings ^(a)	22,674	27,025
Equity attributable to owners of Rio Tinto	39,565	43,686
Attributable to non-controlling interests	4,735	6,137
Total equity	44,300	49,823

Group balance sheet continued

- (a) Refer to pages 59 to 63 for the impact of transition to new accounting standards; IFRS 16 'Leases' and IFRIC 23 'Uncertainty over Income Tax Treatments' on 1 January 2019 and as at 30 June 2019.
- (b) Assets and liabilities held for sale at 30 June 2019 include our interest in Rössing Uranium Limited.

Assets and liabilities held for sale at 31 December 2018 include our interest in Rössing Uranium Limited, the ISAL smelter, the Aluchemie anode plant, and the Alufluor aluminium fluoride plant.
- (c) At 30 June 2019, Rio Tinto plc had 1,260.3 million ordinary shares in issue and held by the public, and Rio Tinto Limited had 371.2 million shares in issue and held by the public. No shares in Rio Tinto Limited were held by Rio Tinto plc at 30 June 2019 (31 December 2018: nil). As required to be disclosed under the ASX Listing Rules, the net tangible assets per share amounted to US\$22.07 (31 December 2018: US\$24.25).

Group statement of changes in equity

Period ended

30 June 2019

	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		
Opening balance	3,688	4,312	8,661	27,025	43,686	6,137	49,823
Adjustment for transition to new accounting standards ^(a)	-	-	-	(113)	(113)	(2)	(115)
Restated opening balance	3,688	4,312	8,661	26,912	43,573	6,135	49,708
Total comprehensive income for the period ^(b)	-	-	229	3,661	3,890	(1,199)	2,691
Currency translation arising on Rio Tinto Limited's share capital	(31)	-	-	-	(31)	-	(31)
Dividends	-	-	-	(6,843)	(6,843)	(199)	(7,042)
Share buy-back ^(c)	(2)	-	2	(1,133)	(1,133)	-	(1,133)
Own shares purchased from Rio Tinto shareholders to satisfy share options ^(d)	-	-	-	(8)	(8)	-	(8)
Change in equity held by Rio Tinto	-	-	-	45	45	(45)	-
Treasury shares reissued and other movements	-	1	-	-	1	-	1
Equity issued to holders of non-controlling interests	-	-	-	-	-	43	43
Employee share options and other IFRS 2 charges to the income statement	-	-	31	40	71	-	71
Closing balance	3,655	4,313	8,923	22,674	39,565	4,735	44,300

	Six months to 30 June 2019 US\$m	Six months to 30 June 2018 US\$m
Dividends per share: ordinary - paid during the period	180.0c	180.0c
Dividends per share: special - paid during the period	243.0c	0.0c
Dividends per share: ordinary proposed in the announcement of the results for the period	151.0c	127.0c
Dividends per share: special proposed in the announcement of the results for the period	61.0c	0.0c

(a) The impact of transition to new accounting standards; IFRS 16 'Leases' and IFRIC 23 'Uncertainty over Income Tax Treatments' on 1 January 2019 is discussed on pages 59 to 63.

(b) Refer to Group statement of comprehensive income for further details.

(c) Total amount of US\$1,133 million includes own shares purchased from owners of Rio Tinto plc as per the cash flow statement of US\$988 million adjusted for the movement in a financial liability recognised in respect of irrevocable contracts in place as at 30 June 2019 and 31 December 2018 to cover the share buy-back programme.

(d) Net of contributions received from employees for share options.

Group statement of changes in equity continued

Period ended

30 June 2018

	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		
Opening balance	4,360	4,306	12,284	23,761	44,711	6,404	51,115
Adjustment for transition to new accounting standards ^(a)	-	-	10	(179)	(169)	-	(169)
Restated opening balance	4,360	4,306	12,294	23,582	44,542	6,404	50,946
Total comprehensive income for the period ^(b)	-	-	(2,188)	4,828	2,640	23	2,663
Currency translation arising on Rio Tinto Limited's share capital	(231)	-	-	-	(231)	-	(231)
Dividends	-	-	-	(3,177)	(3,177)	(154)	(3,331)
Share buy-back ^(c)	(4)	-	4	(1,444)	(1,444)	-	(1,444)
Own shares purchased from Rio Tinto shareholders to satisfy share options ^(d)	-	-	(26)	(56)	(82)	-	(82)
Change in equity held by Rio Tinto	-	-	-	28	28	(28)	-
Treasury shares reissued and other movements	-	5	-	-	5	-	5
Equity issued to holders of non-controlling interests	-	-	-	-	-	38	38
Employee share options and other IFRS 2 charges to the income statement	-	-	24	28	52	-	52
Transfers and other movements	-	-	34	(34)	-	-	-
Closing balance	4,125	4,311	10,142	23,755	42,333	6,283	48,616

- (a) The impact of transition to new accounting standards; IFRS 9 'Financial Instruments' and IFRS 15 'Revenue from contracts with customers' on 1 January 2018 is discussed in note 45 of the 2018 Annual Report.
- (b) Refer to Group statement of comprehensive income for further details.
- (c) Total amount of US\$1,444 million includes own shares purchased from owners of Rio Tinto plc as per the cash flow statement of US\$1,501 million adjusted for the movement in a financial liability recognised in respect of irrevocable contracts in place as at 30 June 2018 and 31 December 2017 to cover the share buy-back programme.
- (d) Net of contributions received from employees for share options.

Reconciliation with Australian Accounting Standards

The Group's financial statements have been prepared in accordance with IFRS as defined on page 57, which differs in certain respects from the version of IFRS that is applicable in Australia, referred to as Australian Accounting Standards ('AAS').

Prior to 1 January 2004, the Group's financial statements were prepared in accordance with 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\$379 million at 30 June 2019 (31 December 2018: US\$379 million).

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

Geographical analysis (by destination)

Consolidated sales revenue by destination ^(a)	Six months to 30 June 2019 %	Six months to 30 June 2018 % ^(b)	Six months to 30 June 2019 US\$m	Six months to 30 June 2018 US\$m ^(b)
China	49.8%	44.9%	10,321	8,946
Asia (excluding China and Japan)	11.2%	11.6%	2,331	2,316
United States of America	13.7%	15.4%	2,834	3,058
Japan	8.7%	10.1%	1,793	2,019
Europe (excluding UK)	7.1%	8.8%	1,466	1,745
Canada	4.0%	3.4%	821	671
Australia	1.6%	1.8%	325	353
UK	0.5%	0.6%	115	117
Other	3.4%	3.4%	716	689
Consolidated sales revenue	100.0%	100.0%	20,722	19,914

The financial information by business unit and the geographic analysis of sales by destination satisfy the disclosure requirements of IFRS 8 'Operating Segments' for interim financial statements and also provide additional voluntary disclosure which the Group considers is useful to the users of the financial statements.

- (a) Consolidated sales revenue by geographical destination is based on the ultimate country of destination of the product, if known. If the eventual destination of the product sold through traders is not known then revenue is allocated to the location of the product at the time when the risks and rewards of ownership are transferred. Rio Tinto is domiciled in both the UK and Australia.
- (b) The 30 June 2018 comparatives have been amended to correct the allocation of sales revenue by destination. This resulted in a decrease in sales to the United States of America and the UK by US\$59 million and US\$56 million respectively with a corresponding increase in sales to Europe (excluding UK) of US\$45 million, Canada of US\$37 million and Other countries of US\$33 million.

Product analysis (by revenue type)

Consolidated sales revenue by product	Six months to 30 June 2019			Six months to 30 June 2018		
	Revenue from contracts with customers US\$m	Other revenue ^(a) US\$m	Consolidated sales revenue US\$m	Revenue from contracts with customers US\$m ^(b)	Other revenue ^(a) US\$m	Consolidated sales revenue US\$m
Iron ore ^(b)	11,571	543	12,114	9,633	(61)	9,572
Aluminium	5,057	(29)	5,028	6,027	38	6,065
Copper	1,061	11	1,072	1,077	5	1,082
Coal	-	-	-	835	5	840
Industrial minerals ^(b)	1,117	(6)	1,111	1,064	-	1,064
Gold	393	-	393	228	-	228
Diamonds	271	-	271	323	-	323
Other ^(b)	732	1	733	740	-	740
Consolidated sales revenue	20,202	520	20,722	19,927	(13)	19,914
Share of equity accounted unit sales and intra-subsiary/equity accounted unit sales			1,087			1,293
Gross sales revenue			21,809			21,207

Product analysis (by revenue type) continued

- (a) Certain of the Group's products may be provisionally priced at the date revenue is recognised. The change in value of the provisionally priced receivables is based on relevant forward market prices and is included in 'Other revenue' above.
- (b) The 30 June 2018 comparatives have been amended to correct the allocation of sales revenue by product. The most significant impacts are an increase in Other products revenues of US\$39 million and a decrease in Iron ore revenues of US\$36 million.

Impairment charges

	Pre-tax	Taxation	Non-controlling	Net	Net
	HY 2019	HY 2019	interest	amount	amount
	US\$m	US\$m	HY 2019	HY 2019	HY 2018
			US\$m	US\$m	US\$m
Aluminium - ISAL Smelter	(109)	23	-	(86)	(98)
Copper & Diamonds - Oyu Tolgoi	(2,240)	(39)	1,506	(773)	-
Total impairment charge	(2,349)	(16)	1,506	(859)	(98)

Aluminium - ISAL Smelter

In 2018, we reached agreement with Hydro to sell the ISAL Smelter in Iceland, our 53.3% interest in the Aluchemie anode plant in the Netherlands and our 50% share in the Aluminium fluoride plant in Sweden. The anticipated headline sales price of US\$345 million was lower than the carrying value of these assets leading us to recognise an impairment charge of US\$123 million in the period ended 30 June 2018. This was based on a fair value less cost of disposal (FVLCD) model, against property, plant and equipment and acquired software. Subsequently, Hydro withdrew its offer.

At 30 June 2019, these assets no longer meet the accounting criteria to be classified as assets held for sale. Accordingly these non-current assets have been tested for impairment as at 30 June 2019. The recoverable amount for the cash-generating units have been calculated based on the IAS 36 value-in-use methodology by reference to the net present value of post-tax cash flows expressed in real terms and discounted at 6.9 per cent. These were US\$302 million for the cash-generating unit comprising ISAL and Aluchemie and US\$46 million for Alufluor. This has resulted in a pre-tax impairment charge of US\$109 million allocated to property, plant and equipment in the ISAL and Aluchemie cash-generating unit.

Copper and Diamonds - Oyu Tolgoi

As disclosed in the 2018 financial statements, during the year ended 31 December 2018 the Group observed a deterioration in some internal and external indicators of value for the Oyu Tolgoi cash-generating unit (CGU) and therefore prepared an assessment of recoverable amount. The net present value of post-tax cash flows at that time for the Oyu Tolgoi CGU, based on the IAS 36 fair value less costs of disposal (FVLCD) methodology, exceeded the carrying value and, as such, no impairment charge was recognised in 2018 (see note 1 and note 6 to the 2018 financial statements).

The determination of recoverable amount at 31 December 2018 incorporated a nine-month delay in the schedule to sustainable production, the updates relating to the Power Source Framework Agreement and an estimate for the financial impact of a potential further delay in the commissioning of the primary production shaft.

As noted at that time, more comprehensive geotechnical data that had become available as the underground development continued indicated that potentially significant changes to the design of some future elements of the development would be needed. As detailed design work was underway, and given the very early status of that work, no adjustments were made to the recoverable amount for these matters at 31 December 2018.

The Group has continued to progress work on the project throughout the first half of 2019 and on 16 July 2019 provided an update on the Oyu Tolgoi underground project summarising preliminary estimates for increased project development expenditure, schedule delay to first sustainable production, and a delay to completion of the Definitive Estimate until the second half of 2020. These preliminary estimates indicated that first sustainable production could be delayed by 16 to 30 months compared with the original feasibility study guidance in 2016 and that development capital spend for the project may increase by between US\$1.2 billion and US\$1.9 billion in excess of the US\$5.3 billion previously disclosed.

These matters have been identified as an impairment trigger and an assessment of the recoverable amount for the cash-generating unit based on the IAS 36 FVLCD methodology has been prepared as at 30 June 2019.

Impairment charges continued

The recoverable amount of the Oyu Tolgoi CGU is classified as level 3 under the fair value hierarchy. In arriving at FVLCD as at 30 June 2019, post-tax cash flows expressed in real terms have been estimated over the current life of mine plus anticipated future expansions utilising mineral resources, and discounted using a post-tax real discount rate of 8.3 per cent (31 December 2018: 8.0 per cent). The mineral resources incorporate almost 2 billion tonnes of ore, which contributes approximately 20 per cent to the total recoverable amount.

The recoverable amount has been determined to be US\$8.3 billion on a post-tax basis and has resulted in a pre-tax impairment charge of US\$2.2 billion (100 per cent basis) allocated to mining properties and the underground development assets under construction. The net adjustment to tax is represented by an increase to deferred tax assets of US\$320 million for the temporary difference corresponding to the impairment and a decrease in deferred tax assets of US\$359 million for tax losses that are now expected to expire without utilisation. The post-tax impairment charge of US\$2.3 billion is allocated 66 per cent to non-controlling interests and the remaining 34 per cent to Rio Tinto shareholders (US\$0.8 billion) in proportion to the equity ownership interest in the project.

The recoverable amount has been calculated taking into account a number of mine design options. As studies progress, this will lead to the selection of a preferred development option with detailed cost scheduling and production assumptions, which may lead to a change in recoverable amount. The recoverable amount also includes high-level risk adjustments to net cash flows to reflect the inherent uncertainty of assumptions for development capital, schedule and mineral resources.

Together with development capital, scheduling and production assumptions, other critical assumptions in the determination of recoverable amount include discount rate and commodity prices. To illustrate the sensitivity of the recoverable amount to movements in these assumptions, an increase to the discount rate by 1 per cent with all other inputs remaining constant would reduce the recoverable amount by US\$1.5 billion. A decrease in forecast copper prices by 10 per cent throughout the life of the mine would reduce the recoverable amount by US\$2.2 billion while an increase of 10 per cent would increase the recoverable amount by US\$2.1 billion.

Acquisitions and disposals

30 June 2019

Acquisitions

There were no material acquisitions during the six months ended 30 June 2019.

Disposals

There were no material disposals during the six months ended 30 June 2019.

Disposal proceeds received in the six months to 30 June 2019 include proceeds of US\$26 million arising from working capital adjustments on the sale of the Hail Creek coal mine, which completed in 2018. The remainder represents cash proceeds of US\$20 million received in respect of the non-contingent royalty receivable from Yancoal Australia Limited on the sale of Coal & Allied Industries Limited, which completed in 2017. Proceeds of US\$60 million were received in the six months to 30 June 2018 in respect of the same arrangement.

Disposals announced but not completed as at 30 June 2019

On 26 November 2018, we announced that we had entered into a binding agreement with China National Uranium Corporation Limited for the sale of our entire 68.62% stake in Rössing Uranium. The transaction completed on 16 July 2019 for an initial cash payment of US\$6.5 million and a contingent payment of up to US\$100 million. The sale included Rössing's cash on hand at the date of disposal, which will be reflected in net proceeds on the sale of subsidiaries. At 30 June 2019, Rössing's cash on hand amounted to US\$130 million. A loss of approximately US\$300 million will be recognised at the date of completion, including the loss that will be recycled from the currency translation reserve on sale of the business.

30 June 2018

Acquisitions

On 10 May 2018, we created a joint venture, Elysis, with Alcoa and other partners to develop and commercialise a carbon-free aluminium smelting process. We are treating this as an acquisition for accounting purposes. We have accounted for our interest in Elysis using the equity method with the initial purchase price allocation based on an independent valuation. We invested US\$5 million and contributed patents and licensed intellectual property (IP) to the venture. The patents and the IP had no carrying value; however, on formation of the arrangement, they were recorded at fair value to reflect the contributions of the other parties in the joint venture. This value was US\$171 million (US\$141 million after tax).

Disposals

On 1 June 2018, we disposed of our entire 75% interest in the Winchester South coal development project in Queensland, Australia to Whitehaven Coal Limited for US\$200 million. This comprised US\$150 million cash which was received in 2018 and recognised within 'net cash generated from operating activities' within the cash flow statement and an unconditional cash payment of US\$50 million due in June 2019. A gain on disposal of US\$195 million was recognised within 'profit relating to interests in undeveloped projects' in the income statement. The deferred payment was received on 3 June 2019 and included within 'net cash generated from operating activities' within the cash flow statement.

Disposals announced but not completed as at 30 June 2018

On 10 January 2018, we received a binding offer from Liberty House to acquire the Dunkerque aluminium smelter in northern France for US\$500 million, subject to final adjustments. The transaction completed on 14 December 2018 and we received net cash proceeds of US\$385 million.

Acquisitions and disposals continued

On 26 February 2018, Rio Tinto received a binding offer from Hydro of US\$345 million, subject to final adjustments, to acquire Rio Tinto's ISAL smelter in Iceland, its 53.3% share in the Aluchemie anode plant in the Netherlands and its 50% share in the Aluminium fluoride plant in Sweden. At 30 June 2019, following the withdrawal in 2018 of the offer by Hydro to acquire these assets, they no longer meet the accounting criteria to be classified as assets held for sale.

On 20 March 2018, we entered into a binding agreement with Glencore for the sale of our entire interest in the Hail Creek coal mine (82%) and the Valeria coal development project (71.2%) in Queensland, Australia, for US\$1.7 billion. The sale completed on 1 August 2018.

On 27 March 2018, we entered into a binding agreement with a consortium comprising private equity manager EMR Capital (EMR) and PT Adaro Energy Tbk (Adaro), an Indonesian listed coal company, for the sale of our entire 80.0% interest in the Kestrel underground coal mine in Queensland, Australia, for US\$2.25 billion. In the first half of 2018, we received non-refundable deposits of US\$338 million in respect of this sale. The sale completed on 1 August 2018.

Except for ISAL, all transactions were completed in the second half of 2018. At 30 June 2018, our interests in these assets were classified as held for sale.

Prima facie tax reconciliation

	Six months to 30 June 2019 US\$m	Six months to 30 June 2018 US\$m
Profit before taxation	5,186	6,732
Deduct: share of profit after tax of equity accounted units	(208)	(326)
Parent companies' and subsidiaries' profit before tax	4,978	6,406
Prima facie tax payable at UK rate of 19 per cent (2018: 19 per cent)	946	1,217
Higher rate of tax on Australian underlying earnings	710	553
Impact of items excluded in arriving at underlying earnings ^(a) :		
– Impairment charges ^(b)	462	(2)
– Net gains on consolidation and disposal of interests in businesses	–	(3)
– Exchange and gains/losses on derivatives	(7)	20
– Tax charge relating to expected divestments ^(c)	–	472
– Reversal of inventory provision at Oyu Tolgoi	5	–
Other tax rates applicable outside the UK and Australia on underlying earnings	(19)	(55)
Amounts under/(over) provided in prior years	92	(71)
Other items	66	102
Total taxation charge^(d)	2,255	2,233

- (a) The impact for each item includes the effect of tax rates applicable outside the UK.
- (b) The tax impact of impairment includes the write down of deferred tax in respect of prior year tax losses in Mongolia and recognition of deferred tax on impaired assets. Refer to the impairment charges note on page 44.
- (c) Capital gains tax in respect of the Australian coal disposals became chargeable upon signing of the sales agreements during the period to 30 June 2018. The amount excluded from underlying earnings related to tax on the gains on the disposal of Hail Creek and Kestrel which were recognised in the second half of 2018; amounts relating to Winchester South and Valeria were included within underlying earnings, since they were undeveloped properties.
- (d) This tax reconciliation relates to the Group's parent companies, subsidiaries and joint operations, and excludes equity accounted units. The Group's share of profit of equity accounted units is net of tax charges of US\$118 million (30 June 2018: US\$185 million).

Consolidated net (debt)/cash

Period ended 30 June 2019	Financing liabilities ^(b)			Other assets		Net (debt)/cash
	Borrowings excluding overdrafts ^(a)	Lease Liabilities	Debt-related derivatives (included in Other financial assets/liabilities)	Cash/ overdrafts ^(b)	Other Investments ^(c)	
	US\$m	US\$m	US\$m	US\$m	US\$m	US\$m
Analysis of changes in consolidated net debt						
Opening balance	(12,707)	(44)	(288)	10,772	2,522	255
Adjustment for transition to new accounting standards ^(d)	–	(1,248)	–	–	–	(1,248)
Foreign exchange adjustment	5	(4)	(7)	(34)	–	(40)
Cash movements excluding exchange movements	(43)	136	–	(3,867)	29	(3,745)
Other non-cash movements ^(e)	(217)	(39)	162	(13)	30	(77)
Closing balance	(12,962)	(1,199)	(133)	6,858	2,581	(4,855)

- (a) Borrowings excluding overdrafts (including lease liabilities) of US\$14,161 million at 30 June 2019 (31 December 2018: US\$12,751 million) differ from total borrowings and other financial liabilities of US\$15,324 million (31 December 2018: US\$13,920 million) on the balance sheet as they exclude overdrafts of US\$3 million (31 December 2018: US\$1 million), other current financial liabilities of US\$901 million (31 December 2018: US\$761 million) and other non-current financial liabilities of US\$259 million (31 December 2018: US\$407 million).
- (b) The opening balance at 1 January 2019 included bank overdrafts of US\$1 million which are classified as financial liabilities on the balance sheet. At 30 June 2019 there were US\$3 million overdrafts. Other non-cash movements represents the elimination of cash movements during the period in respect of assets held for sale which are included in the cash flow statement.
- (c) Other investments comprise US\$2,581 million (31 December 2018: US\$2,522 million) of highly liquid financial assets held in managed investment funds classified as held at fair value through profit or loss.
- (d) The impact of transition to new accounting standards on 1 January 2019 is discussed on pages 59 to 63.
- (e) Other movements in lease liabilities include the net impact of additions, modifications and terminations during the period.

Financial instruments disclosures

Except where stated, the information given below relates to the financial instruments of the parent companies and their subsidiaries and joint operations, and excludes those of equity accounted units.

Fair values disclosure of financial instruments

The carrying amounts and fair values of all of the Group's financial instruments which are not carried at an amount which approximates their fair value at 30 June 2019 and 31 December 2018 are shown in the following table. The fair values of the Group's cash and loans to equity accounted units approximate their carrying values as a result of their short maturity or because they carry floating rates of interest.

	30 June 2019 ^(a)		31 December 2018	
	Carrying value US\$m	Fair value US\$m	Carrying value US\$m	Fair value US\$m
Short term borrowings	(842)	(846)	(312)	(312)
Medium-term and long-term borrowings	(12,123)	(13,864)	(12,440)	(13,554)

(a) The carrying value and fair value at 30 June 2019 excludes lease liabilities. This reflects the amendments made to IFRS 7 upon implementation of IFRS 16.

Borrowings with a carrying value of US\$7.7 billion (31 December 2018: US\$7.5 billion) relate to listed bonds. These have a fair value of US\$9.0 billion (31 December 2018: US\$8.3 billion) calculated using level 1 observable market price inputs.

Borrowings with a carrying value of US\$4.2 billion (31 December 2018: US\$4.2 billion) relate to Oyu Tolgoi project finance and have a fair value of US\$4.7 billion (31 December 2018: US\$4.6 billion). The fair value of these borrowings has been calculated using level 3 valuation inputs including a market yield, the variability of which is considered a reasonable indicator of fair value movements on amounts outstanding under the project finance facility, over the pre-completion period. Post-completion, the fair value has been estimated with reference to the annual interest rate on each tranche of the facility, and consideration of factors that could indicate a change in the credit assessment of Oyu Tolgoi LLC as a counterparty to project finance. These considerations include in-country risk relating to the Oyu Tolgoi project, and the assumed date of transition from pre-completion to post-completion.

The 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.

Fair values disclosure of financial instruments continued

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

The table below shows the financial instruments carried at fair value by valuation method in accordance with IFRS 9 at 30 June 2019:

	Total US\$m	Level 1 ^{(a)(i)} US\$m	Level 2 ^{(b)(i)} US\$m	Level 3 ^{(c)(i)} US\$m	Held at amortised cost US\$m
Assets					
Cash and cash equivalents ^(d)	6,861	4,196	–	–	2,665
Investments in equity shares and funds	136	102	–	34	–
Other investments, including loans ^(e)	2,841	2,603	–	219	19
Trade and other receivables ^(f)	3,052	16	1,189	–	1,847
	12,890	6,917	1,189	253	4,531
Derivatives (net)					
Forward contracts: designated as hedges ^(g)	11	–	–	11	–
Forward contracts and option contracts, not designated as hedges ^(g)	416	–	38	378	–
Derivatives related to net debt ^(h)	(134)	–	(134)	–	–
Liabilities					
Trade and other payables	(5,207)	–	(54)	–	(5,153)
	7,976	6,917	1,039	642	(622)

The table below shows the financial instruments carried at fair value by valuation method in accordance with IFRS 9 at 31 December 2018:

	Total US\$m	Level 1 ^{(a)(i)} US\$m	Level 2 ^{(b)(i)} US\$m	Level 3 ^{(c)(i)} US\$m	Held at amortised cost US\$m
Assets					
Cash and cash equivalents ^(d)	10,773	7,994	–	–	2,779
Investments in equity shares and funds	130	92	–	38	–
Other investments, including loans ^(e)	2,782	2,544	–	232	6
Trade and other receivables ^(f)	3,007	20	972	–	2,015
	16,692	10,650	972	270	4,800
Derivatives (net)					
Forward contracts and option contracts: designated as hedges ^(g)	8	–	–	8	–
Forward contracts and option contracts, not designated as hedges ^(g)	334	–	(25)	359	–
Derivatives related to net debt ^(h)	(288)	–	(288)	–	–
Liabilities					
Trade and other financial payables	(5,552)	–	(39)	–	(5,513)
	11,194	10,650	620	637	(713)

Fair values disclosure of financial instruments continued

- (a) Valuation is based on unadjusted quoted prices in active markets for identical financial instruments. This category includes listed investments in equity shares and funds.
- (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.
- (c) Valuation is based on inputs for the asset or liability that are not based on observable market data (unobservable inputs).
- (d) Cash and cash equivalents include money market funds which are treated as fair value through profit or loss ('FVPL') under IFRS 9 with the fair value movements going into finance income.
- (e) Other investments, including loans, comprise: cash deposits in rehabilitation funds, government bonds, managed investment funds and royalty receivables. The royalty receivables are valued based on future expected output as well as future expected commodity prices.
- (f) Trade receivables include provisionally priced receivables. Revenue is initially based on forward market selling prices for the quotation periods stipulated in the contracts. Changes between the provisional price and the final price are recorded separately within 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 2019, US\$1,065 million (31 December 2018: US\$889 million) of provisionally priced receivables were recognised.
- (g) Level 3 financial instruments primarily consist of electricity purchase contracts linked to the LME and Mid West premium prices with terms expiring between 2025 and 2030 (31 December 2018: 2025 and 2030). These contracts are measured using discounted cash flows and option model valuation techniques and have a net fair value of US\$384 million at 30 June 2019 (31 December 2018: US\$338 million).
- (h) Interest rate and currency interest rate swaps are valued using applicable market quoted swap yield curves adjusted for relevant basis and credit default spreads. Currency interest rate swap valuations also use market quoted foreign exchange rates. A discounted cash flow approach is applied to the cash flows derived from the inputs to determine fair value.
- (i) There were no material transfers between Level 1 and Level 2 or between Level 2 and Level 3 for the six months to 30 June 2019 or the year to 31 December 2018.

Fair values disclosure of financial instruments continued

Level 3 Financial instruments

The table below shows the summary of changes in the fair value of the Group's Level 3 financial assets and financial liabilities for the six months to 30 June 2019 and the year ended 31 December 2018.

Level 3 Financial assets and liabilities	30 June 2019
	US\$m
Opening balance	637
Currency translation adjustments	2
Total realised gains included in:	
– net operating costs	8
Total unrealised gains included in:	
– net operating costs	17
Total unrealised losses transferred into other comprehensive income	(10)
Additions	2
Disposals/maturity of financial instruments	(14)
Closing balance	642
Total gains included in the income statement for assets and liabilities held at end of period	11

Sensitivity analysis in respect of level 3 financial instruments

Forward contracts and options whose fair value is determined using unobservable inputs are calculated using appropriate discounted cash flow and option model valuation techniques.

The most significant unobservable input relates to the aluminium price. After using the 10 year LME forward curve, prices are then flat lined and increased by projected inflation beyond the curve up to the date of expiry of each contract. The range of unobservable aluminium market prices are US\$2,473 per metric tonne in 2029 to US\$2,556 per metric tonne in 2030. A 10 per cent increase in the unobservable pricing assumption would result in a US\$17 million (31 December 2018: US\$22 million) decrease in carrying value. A 10 per cent decrease would result in a US\$2 million (31 December 2018: US\$14 million) increase in carrying value.

The Group continues to hold royalty assets from the sale of its coal assets in prior periods. The value is determined using level 3 unobservable inputs. The main unobservable input is the long-term coal price used over the life of the royalty assets. A 15 per cent increase in the coal forward price would result in a US\$195 million increase in the carrying value (31 December 2018: US\$181 million). A 15 per cent decrease would result in a US\$39 million decrease in the carrying value (31 December 2018: US\$95 million).

Other disclosures

Capital commitments at 30 June 2019

Capital commitments, excluding the Group's share of joint venture capital commitments, were US\$3,230 million (31 December 2018: US\$2,283 million). Capital commitments include open purchase orders for managed operations and expenditure on major projects authorised to date by the Rio Tinto Investment Committee for non-managed operations. On a legally enforceable basis capital commitments would be approximately US\$0.5 billion (31 December 2018: US\$0.4 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\$127 million (31 December 2018: US\$116 million).

Contingent liabilities (subsidiaries and joint operations)

Contingent liabilities, indemnities and other performance guarantees were US\$166 million at 30 June 2019 (31 December 2018: US\$317 million).

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 in the balance sheet, where the likelihood of the guarantees or indemnities being called is assessed as possible rather than probable or remote. There were no material contingent liabilities arising in relation to the Group's joint ventures and associates.

In October 2017, Rio Tinto announced that it had been notified by the US Securities and Exchange Commission (SEC) that the SEC had filed a complaint in relation to Rio Tinto's disclosures and timing of the impairment of Rio Tinto Coal Mozambique (RTCM). The impairment was reflected in Rio Tinto's 2012 year-end accounts. The SEC alleges that Rio Tinto, a former chief executive, Tom Albanese, and a former chief financial officer, Guy Elliott, committed violations of the anti-fraud, reporting, books and records and internal control provisions of the federal securities law by not accurately disclosing the value of RTCM and not impairing it when Rio Tinto published its 2011 year-end accounts in February 2012 or its 2012 interim results in August 2012. In October 2017, an associated US class action was commenced on behalf of securities holders.

In March 2018, the Australian Securities and Investments Commission (ASIC) filed civil proceedings in the NSW District Registry of the Federal Court of Australia against Rio Tinto Limited, Albanese, and Elliott. On 1 May 2018, ASIC expanded its proceedings. ASIC alleges that Rio Tinto committed violations of the disclosure, accounting, and misleading or deceptive conduct provisions of the Corporations Act by making misleading or deceptive statements related to RTCM in its 2011 Annual report and its 2012 interim financial statements, not complying with accounting standards in respect of its 2012 interim financial statements, and not disclosing an impairment of RTCM in its 2012 interim financial statements. ASIC further alleges Albanese and Elliott breached their duties as directors or officers, and failed to take all reasonable steps to comply with relevant accounting requirements.

Rio Tinto believes that the SEC case and the ASIC proceedings are unwarranted and that, when all the facts are considered by the courts, the claims will be rejected. Rio Tinto will defend the allegations vigorously.

In addition, Rio Tinto continues to co-operate fully with relevant authorities in connection with their investigations in relation to contractual payments totalling US\$10.5 million made to a consultant who had provided advisory services in 2011 on the Simandou project in Guinea. In August 2018, the court dismissed a related US class action commenced on behalf of securities holders.

The outcomes of these matters remain uncertain, but they could ultimately expose the Group to material financial cost. The board is giving these matters its full and proper attention and a dedicated board committee continues to monitor the progress of these matters.

The Group continues to monitor developments in relation to EU State Aid investigations including the EU Commission's State Aid investigation into the UK's Controlled Foreign Company (CFC) tax regime. On 25 April 2019, the European Commission released its decision in relation to the group company finance exemption in the UK's CFC rules finding that the exemption constitutes unlawful state aid if the exempted profits arise in connection with UK activity. The UK Government disagrees with the findings and has appealed against the decision to the European Court. Having analysed the latest decision, the Group does not currently consider that any provision is required in relation to EU State Aid.

Related party matters

Purchases and sales relate largely to amounts charged by equity accounted units for toll processing of alumina and purchases of bauxite and aluminium. Details of the Group's principal equity accounted units are given in the 2018 Annual report.

	Six months to 30 June 2019 US\$m	Six months to 30 June 2018 US\$m
Income statement items		
Purchases from equity accounted units	(529)	(551)
Sales to equity accounted units	141	310
Cash flow statement items		
Dividends from equity accounted units	318	418
Net funding of equity accounted units	(12)	(3)
Balance sheet items		
	30 June 2019 US\$m	31 December 2018 US\$m
Investments in equity accounted units ^(a)	4,216	4,299
Loans to equity accounted units	40	38
Trade and other receivables: amounts due from equity accounted units	267	278
Trade and other payables: amounts due to equity accounted units	(223)	(223)

(a) Investments in equity accounted units include quasi equity loans.

Rio Tinto plc has provided a number of guarantees in relation to various pension funds. Subject to certain conditions, Rio Tinto plc would pay any contributions due from Group companies participating in these funds in the event that the companies fail to meet their contribution requirements.

Events after the balance sheet date

On 16 July 2019, we announced the completion of the sale of our entire 68.62% stake in Rössing Uranium to China National Uranium Corporation Limited. Rössing Uranium was treated as an asset held for sale at 30 June 2019. Refer to 'Disposals announced but not completed as at 30 June 2019' within the Acquisitions and disposals note for further detail.

Basis of preparation

The condensed consolidated interim financial statements included in this interim report have been prepared in accordance with International Accounting Standard ('IAS') 34 'Interim financial reporting' as adopted by the European Union ('EU'), the Disclosure Guidance and Transparency Rules sourcebook ('DTR') of the Financial Conduct Authority ('FCA') applicable to interim financial reporting and an Order under section 340 of the Australian Corporations Act 2001 issued by the Australian Securities and Investments Commission on 14 December 2015.

These condensed consolidated interim financial statements represent a 'condensed set of financial statements' as referred to in the DTR issued by the FCA. 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 2018 and any public announcements made by the Group during the interim reporting period. In addition, the impact of newly adopted accounting standards (IFRS 16 'Leases' and IFRIC 23 'Uncertainty over Income Tax Treatments') which became applicable for the current reporting period and required the Group to change its accounting policies are disclosed on pages 59 to 63.

The 2018 annual financial statements were prepared on a going concern basis in accordance with the Companies Act 2006 applicable to companies reporting under International Financial Reporting Standards and in accordance with applicable UK law, applicable Australian law as amended by the Australian Securities and Investments Commission Order dated 14 December 2015 and Article 4 of the European Union IAS regulation and in accordance with:

- International Financial Reporting Standards as issued by the International Accounting Standards Board (IASB) and interpretations issued from time to time by the IFRS Interpretations Committee (IFRS IC) both as adopted by the European Union and which were mandatory for EU reporting as at 31 December 2018; and
- International Financial Reporting Standards as issued by the IASB and interpretations issued from time to time by the IFRS IC which were mandatory as at 31 December 2018.

These condensed consolidated financial statements are unaudited and do not constitute statutory accounts as defined in Section 434 of the United Kingdom Companies Act 2006. The financial information for the year to 31 December 2018 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.

Accounting policies

The condensed consolidated interim financial statements have been drawn up 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 2018, and in the corresponding interim period, except for changes in accounting requirements set out below, all of which were effective as at 1 January 2019 without restatement of prior years. This basis of accounting is referred to as 'IFRS' in this report.

The Group adopted IFRS 16 'Leases', IFRIC 23 'Uncertainty over Income Tax Treatments' and a number of other minor amendments to IFRS on 1 January 2019. All of these pronouncements have been endorsed by the European Union ('EU'). Information on the transition impact of these new pronouncements is included in the 'Change in Accounting Policies' section below.

The Group has not early adopted any amendments, standards or interpretations that have been issued but are not yet effective.

Critical accounting judgments have been updated to reflect the additional judgments made following adoption of IFRIC 23 at 1 January 2019 as follows:

Areas of judgment in the application of accounting policies:

- Uncertain tax positions - technical interpretation of tax law and evaluation of outcomes in the determination of whether multiple or binary scenarios are the appropriate basis for provision measurement.

Other than as a result of implementing IFRIC 23, the critical accounting judgements and key sources of estimation uncertainty for the half year are the same as those disclosed in the Group's consolidated financial statements for the year ended 31 December 2018.

The financial information by business unit and the geographic analysis of sales by destination provided on pages 11 to 14 and 42 of this press release respectively, satisfy the disclosure requirements of IFRS 8 'Operating Segments' for interim financial statements and also provide additional voluntary disclosure which the Group considers is useful to the users of the financial statements.

International financial reporting standards mandatory beyond 2019

The Group disclosed information relating to standards and pronouncements mandatory beyond 2019 in the financial statements for the year ended 31 December 2018, and continues to evaluate the impact of these pronouncements.

Changes in accounting policies

This note explains the impact of the adoption of IFRS 16 'Leases' and IFRIC 23 'Uncertainty over Income Tax Treatments' on the Group's financial statements and also discloses the new accounting policies applied from 1 January 2019, where these differ from those applied in prior periods. Prior period accounting policies are disclosed in note 1 to the 2018 Annual Report. The adoption of other minor changes to IFRS applicable to 2019 did not have a significant impact on the Group's financial statements.

The impact on Equity attributable to owners of Rio Tinto as at 1 January 2019 from the adoption of IFRS 16 and IFRIC 23 is as follows:

	US\$m
Equity attributable to owners of Rio Tinto at 31 December 2018	43,686
IFRS 16 net impact from recognising lease liabilities, right-of-use-assets and other items after tax	(69)
IFRIC 23 recognition of provisions for uncertain tax position on a weighted average basis	(44)
Restated equity attributable to owners of Rio Tinto as at 1 January 2019	43,573

IFRS 16 'Leases' - Accounting policy applied from 1 January 2019

IFRS 16 'Leases' applies to the recognition, measurement, presentation and disclosure of leases. Certain leases are exempt from the standard, including leases to explore for or use minerals, oil, natural gas and similar non-regenerative resources. The Group does not apply IFRS 16 to arrangements which fall within the scope of IAS 38 'Intangible Assets'.

A significant proportion by value of the Group's lease arrangements relate to dry bulk vessels and offices. Other leases include land and non-mining rights, warehouses, equipment and vehicles. The majority of lease terms are negotiated through the Group's procurement function, although agreements contain a wide range of different terms and conditions.

The Group recognises all lease liabilities and corresponding right of use assets, with the exception of short-term (12 months or fewer) and low value leases, on the balance sheet. Lease liabilities are recorded at the present value of: fixed payments; variable lease payments that depend on an index or rate; amounts payable under residual value guarantees; and extension options expected to be exercised. Where a lease contains an extension option which the Group can exercise without negotiation, lease payments for the extension period are included in the liability if the Group is reasonably certain that it will exercise the option. Variable lease payments not dependent on an index or rate are excluded from the calculation of lease liabilities. Payments are discounted at the incremental borrowing rate of the lessee, unless the interest rate implicit in the lease can be readily determined. For lease agreements relating to vessels and properties, non-lease components are excluded from the projection of future lease payments and recorded separately within operating costs on a straight-line basis. The right of use asset, resulting from a lease arrangement, at initial recognition reflects the lease liability, initial direct costs and any lease payments made before the commencement date of the lease less any lease incentives and, where applicable, provision for dismantling and restoration.

The Group recognises depreciation of right of use assets and interest on lease liabilities in the income statement over the lease term. Repayments of lease liabilities are separated into a principal portion (presented within financing activities) and interest portion (which the Group presents in operating activities) in the cash flow statement. Payments made before the commencement date are included within financing activities unless they in substance represent investing cash flows, for example where pre-commencement cash flows are significant relative to aggregate cash flows of the leasing arrangement.

Right of use assets are included in the review for impairment of property, plant and equipment and intangible assets with finite lives, if there is an indication that the carrying amount of the cash generating unit may not be recoverable.

Impact of transition to IFRS 16 'Leases'

The Group implemented the standard as at 1 January 2019. For contracts in place at this date, the Group continued to apply its existing definition of leases under the previous standards, IAS 17 'Leases' and IFRIC 4 'Determining Whether an Arrangement Contains a Lease' ('grandfathering'), instead of reassessing whether existing contracts were or contained a lease at the date of application of the new standard.

For transition, as permitted by IFRS 16, the Group applied the modified retrospective approach to existing operating leases which are capitalised under the new standard (i.e. retrospectively, with the cumulative effect recognised at the date of initial application as an adjustment to the opening balance of retained earnings with no restatement of comparative information in the financial statements). For existing finance leases, the carrying amounts before transition represented the 31 December 2018 values assigned to the right of use asset and lease liability.

The Group made the following additional choices, as permitted by IFRS 16, for existing operating leases:

- not to bring leases with 12 months or fewer remaining to run as at 1 January 2019 (including reasonably certain options to extend) on balance sheet. Costs for these items will continue to be expensed directly to the income statement.
- for all leases, the lease liability was measured at 1 January 2019 as the present value of any future lease payments discounted using the appropriate incremental borrowing rate. The carrying value of the right of use asset for property, vessels and certain other leases was generally measured as if the lease had been in place since commencement date. For all other leases the right of use asset was measured as equal to the lease liability and adjusted for any accruals or prepayments already on the balance sheet. The Group also excluded any initial direct costs (e.g. legal fees) from the measurement of the right of use assets at transition.
- an impairment review was required on right of use assets at initial application of the standard. The Group elected to rely on its onerous lease assessments under IAS 37 'Provisions, Contingent Liabilities and Contingent Assets', as at 31 December 2018 as permitted by IFRS 16. Any existing onerous lease provisions were adjusted against the right of use asset carrying value upon transition.
- to apply the use of hindsight when reviewing the lease arrangements for determination of the measurement or term of the lease under the retrospective option.
- to separate non-lease components from lease components for vessels and properties for the first time as part of the transition adjustment.
- in some cases, to apply a single discount rate to a portfolio of leases with reasonably similar characteristics.

Impact of transition to IFRS 16 'Leases' continued

The impact of transition to IFRS 16 on the Group's 1 January 2019 balance sheet is an increase in lease liabilities (debt) of US\$1,248 million, an increase in right of use assets/net investments in leases of US\$1,067 million, net adjustments to other assets and liabilities of US\$110 million, and a charge of US\$69 million to retained earnings.

The weighted average incremental borrowing rate applied to the Group's lease liabilities recognised on the balance sheet at 1 January 2019 is 4.7%.

The most significant differences between the Group's undiscounted non-cancellable operating lease commitments of US\$1,717 million at 31 December 2018 and lease liabilities upon transition of US\$1,292 million are set out below:

	US\$m
Operating lease commitments reported as at 31 December 2018 under IAS 17	1,717
Exclude/deduct	
Leases expiring in 12 months or fewer	(130)
Committed leases not commenced (undiscounted)	(133)
Components excluded from the lease liability (undiscounted)	(169)
Include/add	
Cost of reasonably certain extensions (undiscounted)	324
Other	103
Sub total	1,712
Effect of discounting on payments included in the calculation of the lease liability (excluding finance lease balances)	(420)
Lease liability opening balance reported as at 1 January 2019 under IFRS 16	1,292

The Group's activities as a lessor are not material and hence there is not a significant impact on the financial statements on adoption of IFRS 16. As the Group has some property sub lease arrangements, these were reassessed for classification purposes as operating or finance leases at transition.

Implementation, presentation and impact of IFRS 16 information for the six months ended 30 June 2019

The following amounts were recorded in the condensed interim financial statements for the six months ended 30 June 2019:

	US\$m	Included within
Income statement		
Depreciation and amortisation	(114)	Net operating costs
Cash flow statement		
Lease principal payments	(136)	Cash flows from financing activities
Lease interest paid	(24)	Net interest paid
Balance sheet		
Right of use assets:		
- carrying value	961	Property, plant and equipment
Lease liabilities:		
- current	(260)	Borrowings and other financial
- non-current	(939)	liabilities

The Group has implemented a lease accounting system which is used for the majority of the Group's leases. A separate contract-linked system is in use for the Group's shipping leases.

Contracts signed, or amended, after 1 January 2019 are assessed against the lease identification criteria under IFRS 16. This may increase or decrease the number of contracts which are deemed to be leases compared with assessments of similar arrangements under IAS 17. Practical application of IFRS 16 continues to develop and the Group continues to monitor this.

EBITDA, as disclosed in the Financial Information by Business Unit on page 11 increased as the operating lease cost previously charged against EBITDA under IAS 17 has been replaced under IFRS 16 with charges for depreciation and interest which are excluded from EBITDA (although included in earnings). Short-term, low value and variable leasing costs and non-lease components associated with vessels and property continue to be charged against EBITDA.

Operating cash flows increased under IFRS 16 as the element of cash paid attributable to the repayment of principal is included in financing cash flow. The net increase/decrease in cash and cash equivalents remains unchanged.

IFRIC 23 ‘Uncertainty over Income Tax Treatments’ - Accounting policy applied from 1 January 2019

IFRIC 23 changed the method of calculating provisions for uncertain tax positions. The Group previously recognised provisions based on the most likely amount of the liability, if any, for each separate uncertain tax position. The interpretation requires a probability weighted average approach to be taken in situations where there is a wide range of possible outcomes. For tax issues with a binary outcome, the most likely amount method remains in use.

The Group has implemented the interpretation retrospectively, with the cumulative impact of application recognised at 1 January, 2019 without restatement of comparatives. The effect of this was an increase to provision for uncertain tax positions of US\$44 million.

Upon implementation of IFRIC 23, the Group changed its accounting policy for current tax (refer to note 1(m) to the 2018 Annual Report) to reflect adoption of the probability weighted approach:

- Current tax is the tax expected to be payable on the taxable income for the year calculated using rates that have been enacted or substantively enacted at the balance sheet date. It includes adjustments for tax expected to be payable or recoverable in respect of previous periods. Where the amount of tax payable or recoverable is uncertain, Rio Tinto establishes provisions based on either: the Group’s judgment of the most likely amount of the liability or recovery; or, when there is a wide range of possible outcomes, a probability weighted average approach.

Implementation of the interpretation did not result in any changes to the Group’s accounting policy for deferred tax.

Going concern

After making enquiries and having reassessed the principal risks, the directors considered it appropriate to adopt the going concern basis of accounting in preparing the interim financial information.

Non-GAAP measures

The Group presents certain non-GAAP financial measures, including underlying earnings, which are reconciled to directly comparable IFRS financial measures on page 72 of this report. These non-GAAP measures are used internally 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 alongside those measures.

Directors' statement of responsibility

In the directors' opinion:

The condensed consolidated interim financial statements on pages 33 to 64 including the notes have been prepared in accordance with IAS 34 'Interim Financial Reporting' as adopted by the European Union, the Disclosure Guidance and Transparency Rules sourcebook ('DTR') of the Financial Conduct Authority in the United Kingdom, applicable accounting standards and the Australian Corporations Act 2001 as modified by an order of the Australian Securities and Investments Commission issued on 14 December 2015, using the most appropriate accounting policies for Rio Tinto's business and 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 2019 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 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.

Jean-Sébastien Jacques

Chief executive
1 August 2019

Simon Thompson

Chairman
1 August 2019

Auditor's Independence Declaration

As lead auditor for the review of Rio Tinto Limited for the half-year ended 30 June 2019, I declare that to the best of my knowledge and belief, there have been:

- a) no contraventions of the auditor independence requirements of the *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 during the period.

Debbie Smith
Partner

PricewaterhouseCoopers
Brisbane
1 August 2019

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Independent auditors' review report of PricewaterhouseCoopers LLP to Rio Tinto plc and PricewaterhouseCoopers to the members of Rio Tinto Limited

For the purpose of this report, the terms 'we' and 'our' denote PricewaterhouseCoopers LLP in relation to UK legal, professional and regulatory responsibilities and reporting obligations to Rio Tinto plc and PricewaterhouseCoopers in relation to Australian legal, professional and regulatory responsibilities and reporting obligations to the members of Rio Tinto Limited.

The interim financial statements, as defined below, consolidate the accounts of Rio Tinto plc and Rio Tinto Limited and their respective subsidiaries (the "Group") and include the Group's share of joint arrangements and associates.

Report on the interim financial information

We have reviewed the Group's interim financial information (the "interim financial statements") in the Group's Interim Results 2019 (the "interim report") for the 6 month period ended 30 June 2019.

Conclusion of PricewaterhouseCoopers LLP for Rio Tinto plc

Based on our review, nothing has come to our attention that causes us to believe that the interim financial statements are not prepared, in all material respects, in accordance with International Accounting Standard 34, 'Interim Financial Reporting', as adopted by the European Union and the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority.

Conclusion of PricewaterhouseCoopers for Rio Tinto Limited

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 and the directors' declaration of Rio Tinto Limited are not in accordance with the *Corporations Act 2001* in Australia as amended by the Australian Securities and Investments Commission Order dated 14 December 2015 (the 'ASIC Order' described in the Australian Corporations Act - Summary of ASIC relief in the 2018 Annual Report), including:

- giving a true and fair view of the Group's financial position as at 30 June 2019 and of its performance for the half-year ended on that date; and
- complying with International Accounting Standard 34, 'Interim Financial Reporting' as adopted by the European Union and the *Corporations Regulations 2001* in Australia.

Independence

In conducting our review, we have complied with the independence requirements of the *Corporations Act 2001* in Australia.

What we have reviewed

The interim financial statements comprise:

- the Group balance sheet as at 30 June 2019;
- the Group income statement for the period then ended;
- the Group statement of comprehensive income for the period then ended;
- the Group cash flow statement for the period then ended;
- the Group statement of changes in equity for the period then ended; and
- the explanatory notes to the interim financial statements (including the financial information by business unit).

PricewaterhouseCoopers has also reviewed the directors' declaration set out on page 65 in relation to Australian regulatory requirements.

The interim financial statements included in the interim report have been prepared in accordance with International Accounting Standard 34, 'Interim Financial Reporting', as adopted by the European Union, the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority and the *Corporations Act 2001* in Australia as amended by the ASIC Order.

As disclosed in the basis of preparation in the interim financial statements, the financial reporting framework that has been applied in the preparation of the full annual financial statements of the Group is applicable law, International Financial Reporting Standards as issued by the International Accounting Standards Board and International Financial Reporting Standards as adopted by the European Union.

Responsibilities for the interim report and the review

Our responsibilities and those of the directors

The interim report, including the interim financial statements, is the responsibility of, and has been approved by, the directors. The directors are responsible for preparing the interim report in accordance with the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority and the *Corporations Act 2001* in Australia as amended by the ASIC Order and for such internal control as the directors determine necessary to enable the preparation of interim financial statements that are free from material misstatement, whether due to fraud or error.

Our responsibility is to express a conclusion on the interim financial statements and the directors' declaration in the interim report based on our review. PricewaterhouseCoopers LLP have prepared this review report, including the conclusion, for and only for Rio Tinto plc for the purpose of the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority and PricewaterhouseCoopers have prepared this review report, including the conclusion, for and only for Rio Tinto Limited and its members for the purpose of the *Corporations Act 2001* in Australia as amended by the ASIC Order and for no other purpose. We do not, in giving this conclusion, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

As the auditors of the Group, ISRE (UK&I) 2410 and ASRE 2410 require that we comply with the ethical requirements relevant to the audit of the annual financial statements and financial report.

What a review of interim financial statements involves

We conducted our review in accordance with International Standard on Review Engagements (UK and Ireland) 2410, 'Review of Interim Financial Information Performed by the Independent Auditor of the Entity' issued by the Auditing Practices Board for use in the United Kingdom and the Australian Auditing Standard on Review Engagements ASRE 2410 'Review of a Financial Report Performed by the Independent Auditor of the Entity'. A review of interim financial information consists of making enquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures.

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, we do not express an audit opinion.

We have read the other information contained in the interim report and considered whether it contains any apparent misstatements or material inconsistencies with the information in the interim financial statements.

PricewaterhouseCoopers LLP
Chartered Accountants
London
1 August 2019
in respect of Rio Tinto plc

Debbie Smith
Partner

PricewaterhouseCoopers
Chartered Accountants
Brisbane
1 August 2019
in respect of Rio Tinto Limited

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Professional Standards Legislation

Summary financial data in Australian dollars, Sterling and US dollars

30 June 2019 A\$m	30 June 2018 A\$m	30 June 2019 £m	30 June 2018 £m		30 June 2019 US\$m	30 June 2018 US\$m
30,880	27,481	16,854	15,410	Gross sales revenue	21,809	21,207
29,341	25,805	16,014	14,471	Consolidated sales revenue	20,722	19,914
7,343	8,724	4,008	4,892	Profit before tax from continuing operations	5,186	6,732
4,150	5,830	2,265	3,269	Profit for the period from continuing operations	2,931	4,499
5,848	5,676	3,192	3,183	Net earnings attributable to Rio Tinto shareholders	4,130	4,380
14,514	11,919	7,921	6,684	Underlying EBITDA	10,250	9,198
6,983	5,722	3,811	3,209	Underlying earnings ^(a)	4,932	4,416
357.5	326.0	195.1	182.8	Basic earnings per ordinary share ^(b)	252.5	251.6
427.0	328.7	233.0	184.3	Basic underlying earnings per ordinary share ^{(a) (b)}	301.5	253.6
				Dividends per share to Rio Tinto shareholders ^(c)		
250.89c	228.53c	135.96p	129.43p	- paid ordinary dividend	180.00c	180.00c
338.70c	-	183.55p	-	- paid special dividend	243.00c	-
219.08c	170.84c	123.32p	96.82p	- proposed interim ordinary dividend	151.00c	127.00c
88.50c	-	49.82p	-	- proposed interim special dividend	61.00c	-
5,684	2,885	3,102	1,618	Cash flow before financing activities	4,014	2,226
30 June 2019 A\$m	31 December 2018 A\$m	30 June 2019 £m	31 December 2018 £m		30 June 2019 US\$m	31 December 2018 US\$m
(6,936)	364	(3,829)	201	Net (debt)/cash	(4,855)	255
56,522	62,409	31,205	34,398	Equity attributable to Rio Tinto shareholders	39,565	43,686

(a) Underlying earnings exclude impairment charges and exchange impacts totalling US\$802 million (30 June 2018: impairment charges and other net losses totalling US\$36 million)

(b) Basic earnings per ordinary share and basic underlying earnings per ordinary share do not recognise the dilution resulting from share options on issue.

(c) The Australian dollar and Sterling amounts are based on the US dollar amounts, retranslated at average or closing rates as appropriate, except for the dividends which are the actual amounts paid or payable.

Metal prices and exchange rates

	Six months to 30 June 2019	Six months to 30 June 2018	Increase/ (Decrease) H1-19 Vs. H1-18	Year to 31 December 2018
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Metal prices - average for the period

Copper - US cents/lb	280c	315c	(11)%	297c
Aluminium - US\$/tonne	\$1,826	\$2,209	(17)%	\$2,110
Gold - US\$/troy oz	\$1,307	\$1,318	(1)%	\$1,269

Average exchange rates against the US dollar

Sterling	1.29	1.38	(6)%	1.34
Australian dollar	0.71	0.77	(8)%	0.75
Canadian dollar	0.75	0.78	(4)%	0.77
Euro	1.13	1.21	(7)%	1.18
South African rand	0.070	0.081	(14)%	0.076

Period end exchange rates against the US dollar

Sterling	1.27	1.31	(3)%	1.27
Australian dollar	0.70	0.74	(5)%	0.70
Canadian dollar	0.76	0.75	1 %	0.73
Euro	1.14	1.16	(2)%	1.14
South African rand	0.071	0.072	(2)%	0.069

Availability of this report

This report is available on the Rio Tinto website (www.riotinto.com).

Reconciliation of net earnings to underlying earnings

Exclusions from underlying earnings	Pre-tax HY2019 US\$m	Taxation HY2019 US\$m	Non- controlling interests HY2019 US\$m	Net amount HY2019 US\$m	Net amount HY2018 US\$m
Impairment charges ^(a)	(2,349)	(16)	1,506	(859)	(98)
Net gains on consolidation and disposal of interests in businesses ^(b)	-	-	-	-	146
Exchange and derivative gains/(losses):					
- Exchange gains on US dollar net debt, intragroup balances and derivatives ^(c)	99	(10)	5	94	294
- Losses on currency and interest rate derivatives not qualifying for hedge accounting ^(d)	(91)	20	(4)	(75)	(13)
- Gains on commodity derivatives not qualifying for hedge accounting ^(e)	29	(10)	-	19	107
Tax charge relating to expected divestments ^(f)	-	-	-	-	(472)
Reversal of inventory provision at Oyu Tolgoi ^(g)	75	(19)	(37)	19	-
Total excluded from underlying earnings	(2,237)	(35)	1,470	(802)	(36)
Net earnings	5,186	(2,255)	1,199	4,130	4,380
Underlying earnings	7,423	(2,220)	(271)	4,932	4,416

Underlying earnings are reported by Rio Tinto to provide greater understanding of the underlying business performance of its operations. Underlying earnings and net earnings both represent amounts attributable to owners of Rio Tinto.

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

- Net gains/(losses) on disposal and consolidation of interests in businesses.
- Impairment charges and reversals.
- Profit/(loss) after tax from discontinued operations.
- Certain exchange and derivative gains and losses (as defined in the table above).

Exclusions from underlying earnings relating to equity accounted units are stated after tax and included in the column 'Pre-tax'. Items (a) to (g) below are excluded from net earnings in arriving at underlying earnings.

- (a) Refer to Impairment charges note on page 44.
- (b) Refer to Acquisitions and disposals note on page 46.
- (c) Exchange gains on external US dollar net debt and intragroup balances for the period ended 30 June 2019 comprise post-tax foreign exchange gains on US dollar denominated net debt in non-US dollar functional currency companies of US\$47 million and post-tax gains of US\$47 million on intragroup balances, primarily as a result of the strengthening of the Canadian dollar against the US dollar.

Exchange gains/(losses) on external US dollar net debt and intragroup balances for the period ended 30 June 2018 comprise of post-tax foreign exchange losses on US dollar denominated net debt in non-US dollar functional currency companies of US\$238 million and post-tax gains of US\$532 million on intragroup balances, primarily as a result of the Australian and Canadian dollars both weakening against the US dollar.

Reconciliation of net earnings to underlying earnings continued

- (d) Valuation changes on currency and interest rate derivatives, which are ineligible for hedge accounting, other than those embedded in commercial contracts, and the currency revaluation of embedded US dollar derivatives contained in contracts held by entities whose functional currency is not the US dollar.
- (e) Valuation changes on commodity derivatives embedded in commercial contracts and other financial commodity derivatives, that are ineligible for hedge accounting, but for which there will be an offsetting change in future Group earnings.
- (f) Capital gains tax in respect of the Australian coal disposals became chargeable upon signing of the sales agreements during the period to 30 June 2018. The associated gains on disposal and the balance of taxes payable were recognised when the sales transactions completed on 1 August 2018. The amount of US\$472 million excluded from underlying earnings related to gains on the disposal of Hail Creek and Kestrel. Amounts relating to the undeveloped properties, Winchester South and Valeria, were included within underlying earnings.
- (g) As a result of increased uncertainty over timing of production from the Oyu Tolgoi underground project (refer to Impairment charges note on page 44, we now expect to utilise low value stockpiles sooner than previously expected. The net realisable value provision held in respect of these inventories has therefore been written back as at 30 June 2019, resulting in post tax income of US\$19 million (Rio Tinto share). This has been excluded from underlying earnings, consistent with the related impairment charge recognised in the period.