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Focus on people and sustainability

**Safety Performance**

- Rio Tinto AIFR
- ICMM (23 companies) AIFR

**Health and Safety**

- 3 fatalities in 2018; 2 workplace related, 1 security incident
- CRM* a strong focus with 1.4 million verifications in 2018
- White Ribbon accreditation in Australia

**Environment**

- Successful divestment of Grasberg and sale of coal
- First TCFD* report released – includes 2°C scenario analysis
- GHG* emissions intensity reduced by 2.5% YoY, and 29% below 2008 baseline

---

* Critical Risk Management, Taskforce on Climate Related Financial Disclosures, Green House Gas
With active or inactive tailings storage facilities, including 3 non-managed operational sites and 4 legacy sites.

Active or inactive, with an additional 36 facilities closed or under rehabilitation.

**Construction type:**

<table>
<thead>
<tr>
<th>Construction Type</th>
<th>Upstream</th>
<th>Centreline</th>
<th>Downstream</th>
<th>Other*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facilities</strong></td>
<td>21</td>
<td>14</td>
<td>24</td>
<td>41</td>
</tr>
<tr>
<td><strong>Active</strong></td>
<td>19</td>
<td>10</td>
<td>16</td>
<td>36</td>
</tr>
<tr>
<td><strong>Inactive</strong></td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td><strong>Closed</strong></td>
<td>17</td>
<td>3</td>
<td>5</td>
<td>11</td>
</tr>
</tbody>
</table>

*Other includes Single embankment, No embankment – excavated storage facility, No embankment – dry stack, Lake discharge. Active includes tailings storage facilities under construction.
Three levels of assurance for managing tailings and water storage

1st level
- Site processes
  - Effective design, inspection and monitoring

2nd level
- Surface Mining Centre of Excellence
  - Technical risk reviews

3rd level
- Audit

Audit of control effectiveness
- Group Internal Audit working with external auditors
  - Assures systems for risk management, internal control and governance are effective

Group review
- Assurance to the Rio Tinto Standard
  - Business conformance audits and HSEC reviews
  - Review by subject matter experts external to the asset

Operations management
- Effective facility design (Engineer of Record / Design Engineer)
- Comprehensive operational controls
  - Independent external review undertaken at least every two years
A strong 2018

**Financial performance**

$18.1bn
EBITDA* on margin of 42%

$11.8bn
Operating cash flows

$8.6bn
Disposal proceeds***
– Divested coking coal, Grasberg and Dunkerque

**Balance sheet**

$0.3bn
Net cash at Dec-2018
– Adjusted net debt of $8.0 billion**
– No bond maturities until 2020

**Value creation**

$13.5bn
Total shareholder cash returns

$2.9bn
Development capital investment
– Approval of Koodaideri and Robe River replacement iron ore mines

19%
Return on capital employed****

* Underlying EBITDA | ** Adjusted net debt of $8.0 billion includes return of Grasberg/Dunkerque proceeds, previously announced buy-backs, Australian tax lag, and leasing accounting standard change | *** Pre-tax proceeds | **** Return on Capital Employed (ROCE) is defined as underlying earnings excluding net interest divided by average capital employed (operating assets before net debt)
Our strong balance sheet gives us resilience and flexibility

Net debt

<table>
<thead>
<tr>
<th>Year</th>
<th>Adjusted net debt</th>
<th>EBITDA</th>
<th>Gearing ratio</th>
<th>Credit rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>9.6</td>
<td>0.7x</td>
<td>0.7x</td>
<td>S&amp;P A-</td>
</tr>
<tr>
<td>2017</td>
<td>7.0*</td>
<td>0.4x</td>
<td>0.4x</td>
<td>Moody's Baa1</td>
</tr>
<tr>
<td>2018</td>
<td>(0.3)</td>
<td>(0.0x)</td>
<td>(1%)</td>
<td>A-</td>
</tr>
<tr>
<td>2018 adjusted</td>
<td>8.0</td>
<td>0.4x</td>
<td>0.4x</td>
<td>A</td>
</tr>
</tbody>
</table>

Net cash of $0.3 billion

Committed cash outflows for 2019 will result in adjusted net debt of $8.0 billion**:

- $4.0 billion return of Grasberg and Dunkerque proceeds via special dividend
- $1.7 billion in buy-backs previously announced in 2018
- $0.4 billion for lag in Australian tax payments
- $0.9 billion coal disposal tax payment
- New leasing accounting standard to come into effect from January 2019, increases net debt by $1.2 billion (non-cash)

* Adjusted Dec-2017 net debt of $7 billion included announced buy-backs relating to the Coal & Allied proceeds and the Australian tax lag
** Numbers are rounded to the closest $0.1bn
*** As at February-2019
**** Gearing ratio = net debt / (net debt + equity)
Increased portfolio value and performance

Completed ~$12bn disposals since 2015

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grasberg</td>
<td></td>
</tr>
<tr>
<td>Kitimat wharf &amp; land</td>
<td></td>
</tr>
<tr>
<td>Qld coking coal</td>
<td></td>
</tr>
<tr>
<td>Aluminium Dunkerque</td>
<td></td>
</tr>
<tr>
<td>Coal &amp; Allied</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

And strengthened the portfolio:

- Increase in CuEq CAGR of 1.4% *
  - Driven by a 3.4% increase in CuEq CAGR across our remaining portfolio

- Increased ROCE by 10pp from 2015-2018

- Reduced net debt by $14 billion since Dec-2015

* 2015 – 2018
Consistent, disciplined capital allocation
Investment and shareholder returns delivered from operating cash flow

$46bn (2016-18)

$34bn Cash flow from operations

$46bn (2016-18)

$12bn Sustaining capex

$7bn Growth capex

$6bn Dividends paid

$12bn Buy-backs

$3bn Buy-backs from disposals

$6bn* 2019 special dividend and buy-backs

+ $3bn 2018 final dividend to be paid in Apr-19

$14bn Reduction in net debt

Numbers have been rounded to the nearest $bn

* Comprises $4 billion of special dividends and $1.7 billion of on-market Plc buy-backs by 28 February 2020.
Near-term maturities further reduced in 2018

Gross debt reduced by $2.3 billion in 2018 to ~$13 billion

$1.9 billion nominal value of bonds purchased in 2018

Average outstanding debt maturity of corporate bonds at ~13 years (~ 11 years for all Group debt)

No bond maturities until 2020

31 December 2018 debt maturity profile*

Gross Debt

2018 debt reductions

*Numbers based on year-end accounting value

The debt maturity profile does not show the result of capitalised operating leases that was adopted by the group effective 1 January 2019
Commodity specific price drivers in 2018

**Iron Ore (-4%)**
- Solid growth in global steel production, including Chinese crude steel production of ~930Mt
- China’s structural policy-driven demand for higher grade products
- Disrupted seaborne supply (~40Mt)

**Aluminium (+7%)**
- Robust global demand growth of ~4%
- Volatility in supply surrounding potential Rusal sanctions
- Trade tariffs and uncertainty

**Copper (+6%)**
- Macro headwinds affected demand in H2
- Limited supply disruption of ~3%

* Dry metric tonne, FOB basis  ** Average LME price
2019 outlook

Global economic growth
- Momentum slowing
- Volatility and risk of trade war is ongoing

China’s GDP growth
- Decelerating as expected
- Introducing stimulus measures to encourage infrastructure investment and support the private sector

Global GDP

China tipped to continue stimulus as growth slows

Global trade

US-China trade war: who has the upper hand?

White House: Trump weighing possibilities on China Trade Deadline

As the clock ticks, there's a path to a 'win-win' outcome in US - China trade talks

Source: Rio Tinto, Oxford Economics
Strong and consistent EBITDA

Underlying EBITDA

$ billion

<table>
<thead>
<tr>
<th>Component</th>
<th>2017 Underlying EBITDA</th>
<th>Price</th>
<th>Exchange Rates</th>
<th>Energy</th>
<th>CPI</th>
<th>Flexed 2017 Underlying EBITDA</th>
<th>Volumes &amp; Mix</th>
<th>Raw Material Cost Headwinds</th>
<th>Other Cash Costs*</th>
<th>One-offs and Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal EBITDA</td>
<td>18.6</td>
<td>1.2</td>
<td>0.2</td>
<td>0.3</td>
<td>(0.4)</td>
<td>0.9</td>
<td>0.9</td>
<td>(0.3)</td>
<td>(0.2)</td>
<td>0.9</td>
</tr>
<tr>
<td>EBITDA excl. Coal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Other cash costs include movements in Central costs and Exploration & Evaluation costs. All variances exclude coal.

Coal EBITDA

EBITDA excl. Coal
Productivity accelerating in 2019

Post-tax mine-to-market (M2M) productivity programme

$ billion (free cash flow)

- 2018 run rate: 0.4
- 2018 additional: 0.3
- 2018 cost headwinds: 0.3
- 2018 run rate: 0.4
- 2019 additional*: 0.6
- 2019 target run rate: 1.0

2018 M2M additional free cash flow fully offset by raw material cost headwinds, primarily related to Aluminium

2018 invested in capabilities and technology for future productivity

2018 run rate of $0.4 billion with additional $0.6 billion M2M free cash flow expected in 2019

Maintain M2M free cash flow target of $1.5 billion run-rate from 2021

* Based on consensus prices and exchange rates
Disciplined capital allocation

1. Essential sustaining capex
2. Ordinary dividends
3. Iterative cycle of

- Further cash returns to shareholders
- Compelling growth
- Debt management
Disciplined ramp-up of investments

Capital expenditure profile
$ billion

Maintained sustaining capital guidance of $2.0 to $2.5 billion per year, including:
- Iron Ore sustaining capex of ~$1 billion per year

Pilbara replacement capital includes Koodaideri and Robe River mine developments from 2019

All capital decisions go through rigorous evaluation and challenge

Development capital delivers 2% CAGR (2019 – 2023)
Investing through the cycle
2% CAGR** from an extensive pipeline of growth options

World Class Resource Base and Established Exploration Programme

6 Brownfield exploration programmes
- Pilbara Iron Ore
- Oyu Tolgoi Copper
- Cape York Bauxite
- Bingham Canyon Copper
- Other minerals

64 Greenfield exploration programmes
- Pilbara Iron Ore
- Copper (inc. Winu)
- Diamonds
- Bauxite
- Other minerals

Pre-Feasibility & Feasibility

- Arvida, AP60
- Kennecott: SPB Slice 2*
- Selective U/G Project*
- Western Range, WTS 2*
- Zulti South*
- Resolution
- Koodaideri Stage 2
- Jadar

Execution

- OT Underground
- Koodaideri*
- Mesas B, C, H, West Angelas C&D*
- Kennecott Southwall Pushback*

$231m spent on exploration in 2018

* Denotes mainly replacement tonnes | ** CuEq CAGR from 2019 – 2023
Discovery of copper-gold mineralisation in Western Australia

Early success in copper at Winu*:

- Copper-gold mineralisation intersected
- Mineralisation close to surface 50-100m
- 1.4 km of strike length open to North, South and East
- Located in Western Australia and 100% owned
- Extensive drilling to continue in 2019
- High quality exploration targets emerging

*For full details, see the Notice to ASX dated 27 February 2019 ("Rio Tinto Exploration Update – copper-gold mineralisation discovered in the Paterson Province in the far east Pilbara region of Western Australia") 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.
Strong base for future growth and profitability

Safety is our priority #1

Consistent financial discipline

$29bn*
Returned to shareholders in 3 years, cash generative assets and strong balance sheet

Attractive growth opportunities

2% CuEq
Annual growth rate to 2023 from broad pipeline of growth opportunities

Operating efficiency

$1.5bn
Free cash flow per year from 2021 delivered through our productivity programme

World-class portfolio

19% ROCE
Through a simplified portfolio of long life, low cost assets

21st century mining company

Zero
Coal or oil production plus a leading position in technology and automation

* Including 2016-2018 cash returns, 2018 final dividend, 2019 buy-backs and special dividend
## Net earnings reconciliation

<table>
<thead>
<tr>
<th>($bn)</th>
<th>Reported</th>
<th>Underlying</th>
<th>Exclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBITDA</td>
<td>23.3</td>
<td>18.1</td>
<td>5.1*</td>
</tr>
<tr>
<td>Depreciation &amp; Amortisation</td>
<td>(4.6)</td>
<td>(4.6)</td>
<td>0.0</td>
</tr>
<tr>
<td>Impairment charges</td>
<td>(0.1)</td>
<td>0.0</td>
<td>(0.1)</td>
</tr>
<tr>
<td>Finance items</td>
<td>(0.1)</td>
<td>(0.7)</td>
<td>0.6</td>
</tr>
<tr>
<td>Tax</td>
<td>(4.5)</td>
<td>(3.7)</td>
<td>(0.8)</td>
</tr>
<tr>
<td>Non-controlling interests</td>
<td>(0.3)</td>
<td>(0.3)</td>
<td>(0.0)</td>
</tr>
<tr>
<td><strong>Net Earnings</strong></td>
<td><strong>13.6</strong></td>
<td><strong>8.8</strong></td>
<td><strong>4.8</strong></td>
</tr>
</tbody>
</table>

**Exclusions from underlying EBITDA:**
- gains on disposal of businesses and land (Kitimat), and gain on formation of Elysis JV
- gains on embedded commodity derivatives
- offset by increases to closure provisions at Argyle and ERA

Impairment charges relate mainly to ISAL and excluded from underlying earnings

Finance items are reported net of exchange gains on net debt and intragroup which are excluded from underlying earnings. Underlying finance costs are lower than 2017 on lower net debt

Tax rate on underlying earnings of 29%. The tax rate on net earnings is 23% due to non-taxable gains on disposal

* Numbers have been rounded to the nearest $0.1bn

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Iron Ore
continued delivery from a world-class asset

<table>
<thead>
<tr>
<th>Operating metrics</th>
<th>2018</th>
<th>2017 comparison</th>
<th>2019 guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average realised price*</td>
<td>$62.8 / t</td>
<td>- 3%</td>
<td></td>
</tr>
<tr>
<td>Shipments (100% basis)</td>
<td>338mt</td>
<td>+ 2%</td>
<td>338-350Mt</td>
</tr>
<tr>
<td>Operating cost / t**</td>
<td>$13.3 / t</td>
<td>- 0%</td>
<td>$13-14 / t</td>
</tr>
</tbody>
</table>

**Financial metrics ($bn)**

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>18.5</td>
<td>+ 1%</td>
<td></td>
</tr>
<tr>
<td>EBITDA</td>
<td>11.3</td>
<td>- 2%</td>
<td></td>
</tr>
<tr>
<td>Margin (FOB)</td>
<td>68%</td>
<td>+ 0pp</td>
<td></td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>8.3</td>
<td>- 2%</td>
<td></td>
</tr>
<tr>
<td>Sustaining capex</td>
<td>0.9</td>
<td>+ 67%</td>
<td>~1.0</td>
</tr>
<tr>
<td>Replacement and growth capex</td>
<td>0.4</td>
<td>- 43%</td>
<td></td>
</tr>
<tr>
<td>ROCE</td>
<td>42%</td>
<td>+ 1pp</td>
<td></td>
</tr>
</tbody>
</table>

Shipments increased 2%
Maintained EBITDA margin
Strong demand for our 62% Pilbara Blend product
Full deployment of AutoHaul™ in December 2018
Koodaideri Phase 1 approved for $2.6 billion

* Dry metric tonne, FOB basis | ** Unit costs are based on operating costs included in EBITDA and exclude royalties (state and third party), sustaining capital, tax and interest
Aluminium
stable operations squeezed by raw material costs

<table>
<thead>
<tr>
<th>Operating metrics</th>
<th>2018</th>
<th>2017 comparison</th>
<th>2019 guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average aluminium price*</td>
<td>$2,470 / t</td>
<td>+ 11%</td>
<td></td>
</tr>
<tr>
<td>Average bauxite price**</td>
<td>$38.7 / t</td>
<td>+ 6%</td>
<td></td>
</tr>
<tr>
<td>Average alumina price***</td>
<td>$474 / t</td>
<td>+ 34%</td>
<td></td>
</tr>
<tr>
<td>Production – bauxite</td>
<td>50.4mt</td>
<td>- 1%</td>
<td>56-59Mt</td>
</tr>
<tr>
<td>Production – alumina</td>
<td>8.0Mt</td>
<td>- 2%</td>
<td>8.1-8.4Mt</td>
</tr>
<tr>
<td>Production – aluminium</td>
<td>3.5Mt</td>
<td>- 3%</td>
<td>3.2-3.4Mt</td>
</tr>
<tr>
<td>Canadian smelters – hot metal cash costs****</td>
<td>$1,533 / t</td>
<td>+ 15%</td>
<td>Refer to p41</td>
</tr>
</tbody>
</table>

**Financial metrics ($bn)**

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017 comparison</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>12.2</td>
<td>+ 11%</td>
<td></td>
</tr>
<tr>
<td>EBITDA</td>
<td>3.1</td>
<td>- 10%</td>
<td></td>
</tr>
<tr>
<td>Margin (integrated operations)</td>
<td>32%</td>
<td>- 3pp</td>
<td></td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>2.3</td>
<td>- 12%</td>
<td></td>
</tr>
<tr>
<td>Sustaining capex</td>
<td>0.8</td>
<td>+ 33%</td>
<td></td>
</tr>
<tr>
<td>Replacement and growth capex</td>
<td>0.9</td>
<td>+ 32%</td>
<td></td>
</tr>
<tr>
<td>ROCE</td>
<td>8%</td>
<td>- 2pp</td>
<td></td>
</tr>
</tbody>
</table>

1% primary metal productivity creep****

Raw material and energy inflation impacted EBITDA by $0.5 billion

Volatility in markets from tariffs and sanctions:
- increase in mid-west premium effectively offset tariff increase
- Alumina market upside capped by legacy contracts - $0.5 billion

Amrun completed ahead of schedule and below budget

Completed disposals:
- Dunkerque Aluminium divestment completed for $0.4 billion, net of completion adjustments
- Surplus land at Kitimat for $0.6 billion

* Realised price, including VAP and mid-west premium | ** Realised price, dry metric tonne, FOB basis
*** Platts Alumina PAX FOB Australia | **** Excluding Becancour and Dunkerque smelters
***** Operating costs defined as hot metal cash costs for the Canadian smelters (alumina at market price)
Copper & Diamonds
strong operational performance

<table>
<thead>
<tr>
<th>Operating metrics</th>
<th>2018</th>
<th>2017 comparison</th>
<th>2019 guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper price</td>
<td>297 c/lb</td>
<td>+ 6%</td>
<td></td>
</tr>
<tr>
<td>Production – mined copper</td>
<td>634kt</td>
<td>+ 33%</td>
<td>550-600kt</td>
</tr>
<tr>
<td>Production – refined copper</td>
<td>275kt</td>
<td>+ 39%</td>
<td>220-250kt</td>
</tr>
<tr>
<td>Production – diamonds</td>
<td>18.4Mct</td>
<td>- 15%</td>
<td>15-17Mct</td>
</tr>
<tr>
<td>Unit cost*</td>
<td>109 c/lb</td>
<td>- 21%</td>
<td>110-120 c/lb</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial metrics ($bn)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>6.5</td>
<td>+ 34%</td>
<td></td>
</tr>
<tr>
<td>EBITDA</td>
<td>2.8</td>
<td>+ 46%</td>
<td></td>
</tr>
<tr>
<td>Margin</td>
<td>43%</td>
<td>+ 4pp</td>
<td></td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>2.1</td>
<td>+ 25%</td>
<td></td>
</tr>
<tr>
<td>Sustaining capex</td>
<td>0.3</td>
<td>+ 32%</td>
<td></td>
</tr>
<tr>
<td>Replacement and growth capex</td>
<td>1.6</td>
<td>+ 35%</td>
<td></td>
</tr>
<tr>
<td>ROCE</td>
<td>9%</td>
<td>+ 7pp</td>
<td></td>
</tr>
</tbody>
</table>

Improved performance at Escondida
– Resulting in $786 million of dividends received

Significant productivity improvements delivered at Kennecott

OT underground project
– Progressed well in 2018
– Signed the Power Agreement with the Government of Mongolia
– Reviewing the existing schedule

Successful divestment of Grasberg for $3.5 billion

Completion of the A21 pipe at Diavik

* Unit costs for Kennecott, OT and Escondida utilise the C1 unit cost calculation where Rio Tinto has chosen Adjusted Operating Costs as the appropriate cost definition. C1 costs are direct costs incurred in mining and processing, plus site G&A, freight and realisation and selling costs. Any by-product revenue is credited against costs at this stage.
Energy & Minerals*

a challenging year

<table>
<thead>
<tr>
<th>Operating metrics</th>
<th>2018</th>
<th>2017 comparison</th>
<th>2019 guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>IOC pellets</td>
<td>$114 / t</td>
<td>+ 5%</td>
<td></td>
</tr>
<tr>
<td>TiO₂**</td>
<td>$647 / t</td>
<td>+ 18%</td>
<td></td>
</tr>
<tr>
<td>Production – IOC</td>
<td>9.0mt</td>
<td>- 20%</td>
<td>11.3-12.3Mt</td>
</tr>
<tr>
<td>Production – TiO₂</td>
<td>1.1Mt</td>
<td>- 15%</td>
<td>1.2-1.4Mt</td>
</tr>
<tr>
<td>Production – Borates</td>
<td>0.5Mt</td>
<td>- 1%</td>
<td>0.5Mt</td>
</tr>
</tbody>
</table>

Financial metrics ($bn)

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>4.7</td>
<td>- 5%</td>
<td></td>
</tr>
<tr>
<td>EBITDA</td>
<td>1.3</td>
<td>- 18%</td>
<td></td>
</tr>
<tr>
<td>Margin</td>
<td>28%</td>
<td>- 4pp</td>
<td></td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>0.9</td>
<td>- 19%</td>
<td></td>
</tr>
<tr>
<td>Sustaining capex</td>
<td>0.3</td>
<td>- 6%</td>
<td></td>
</tr>
<tr>
<td>Replacement and growth capex</td>
<td>0.1</td>
<td>+ 142%</td>
<td></td>
</tr>
<tr>
<td>ROCE</td>
<td>8%</td>
<td>- 2pp</td>
<td></td>
</tr>
</tbody>
</table>

* All numbers exclude coal operations which were disposed  ** Excluding Upgraded Slag (UGS)

Production instability at RTIT an opportunity to improve in 2019
- 2 furnaces currently being rebuilt at Rio Tinto Fer et Titane

Portfolio simplification through divestments of coking coal and Rössing Uranium

Full recovery from strike at IOC
The industry fundamentals are robust with Rio Tinto leading the way

Capex / Depreciation and amortisation*

Gearing (Net debt / (Net debt + equity))*

* Diversifieds peer group includes BHP, Glencore, Vale and Anglo American (Excludes Rio Tinto). Net debt for gearing calculated as current and non-current borrowings, less cash.

Source: FactSet. The principal difference between Rio Tinto’s H2 2018 net cash of $0.3bn and the above view of H2 2018 net debt is due to the treatment of highly liquid financial assets held in managed investment funds.
Superior cash returns declared of $13.5 billion in 2018

2018 cash returns declared to shareholders
$ billion

- 2018 interim dividend: 2.2
- On-market plc SBB by Feb-2019: 1.0
- 2018 final dividend: 3.1
- Total returns from Operations: 6.3
- Off-market Ltd SBB
- On-market Plc SBB: 2.1
- 2019 special dividend: 1.1
- Grasberg and Dunkerque proceeds: 4.0
- Total returns declared: 13.5

Note: Franking credit balance at Dec-2018 was $4.7 billion | Numbers have been rounded to the nearest $0.1bn
Our strategy has delivered value through the cycle

Superior cash generation

World-class assets
Portfolio

Operating and Commercial excellence
Performance

Capabilities
People & Partners

Disciplined capital allocation

Balance sheet strength

Superior shareholder returns

Compelling growth
Higher aluminium and RTIT prices partly offset by lower iron ore prices

Underlying EBITDA 2017 vs 2018

$ million

- Aluminium*
- Minerals
- Uranium
- Diamonds
- Copper
- Iron ore
- Other, net

* Aluminium includes alumina and bauxite and includes movements in market and other premia
Strong sales in iron ore, copper, gold and aluminium

Underlying EBITDA 2017 vs 2018

$ million

2017 underlying EBITDA

<table>
<thead>
<tr>
<th>Product</th>
<th>2017 EBITDA</th>
<th>2018 EBITDA</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron ore</td>
<td>18,580</td>
<td>18,406</td>
<td>(436)</td>
</tr>
<tr>
<td>Gold</td>
<td>277</td>
<td>286</td>
<td>9</td>
</tr>
<tr>
<td>Aluminium</td>
<td>286</td>
<td>366</td>
<td>80</td>
</tr>
<tr>
<td>Copper</td>
<td>185</td>
<td>177</td>
<td>(8)</td>
</tr>
<tr>
<td>Iron &amp; Titanium</td>
<td>366</td>
<td>203</td>
<td>(163)</td>
</tr>
<tr>
<td>Diamonds</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Aluminium includes alumina and bauxite
Iron Ore
maintaining our competitive advantage

Pilbara cash unit cost
$ per tonne

2018 cash unit cost of $13.3/t ($0.1/t lower than 2017)

Focus on maintaining strong EBITDA margins (68% in 2018, in line with 2017)

Productivity initiatives and weakening Australian dollar in 2018 offset:
- Steeper hauls
- Higher diesel, labour and maintenance costs

Average realised FOB price of $57.8 per wet metric tonne ($62.8 per dry metric tonne)

2019 guidance for shipments from the Pilbara remains unchanged at 338-350Mt, subject to market conditions and any weather constraints
Iron Ore
lower prices partly offset by higher volumes

Underlying EBITDA 2017 vs 2018

$ million

- Our Pilbara mines produced 338 million tonnes in 2018 (282 million tonnes as Rio Tinto’s share) – 2% higher than 2017. This increase came from expanded mines and minimal weather interruptions compared to 2017
- Pilbara FOB EBITDA margins of 68% achieved in 2018 (68% in 2017)
- Pilbara cash unit costs were $13.3 per tonne in 2018, compared to $13.4 per tonne in 2017
- Pilbara iron ore revenues includes $1.7 billion of freight in 2018 compared to $1.5 billion in 2017
- Approximately 68% of sales in 2018 were priced with reference to the current month average, 17% with reference to the prior quarter’s average index lagged by one month, 5% with reference to the current quarter average and 10% were sold on the spot market
- Approximately 32% of our sales were made on an FOB basis with the remainder sold including freight
Aluminium
higher prices and volumes offset by raw material cost headwinds

Underlying EBITDA 2017 vs 2018
$ million

<table>
<thead>
<tr>
<th>2017 underlying EBITDA</th>
<th>Price</th>
<th>Exchange rates</th>
<th>Energy</th>
<th>Inflation</th>
<th>Flexed 2017 underlying EBITDA</th>
<th>Volumes &amp; Mix</th>
<th>Cash cost reductions</th>
<th>Tax &amp; other</th>
<th>2018 underlying EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,423</td>
<td>283</td>
<td>136</td>
<td>(132)</td>
<td>(94)</td>
<td>3,616</td>
<td>185</td>
<td>(491)</td>
<td>(215)</td>
<td>3,095</td>
</tr>
</tbody>
</table>

– Aluminium underlying EBITDA of $3.1 billion declined by 10% compared with 2017. Stronger prices in H1 2018 were more than outweighed by the impact of legacy alumina sales contracts, raw material cost inflation and lower aluminium volumes

– The average realised price per tonne averaged $2,470 in 2018 (2017: $2,231)

– The 2018 cash LME aluminium price averaged $2,110 per tonne, an increase of 7% on 2017

– The mid-West premium rose 111% to $419/tonne (2017: $199/tonne), driven by the 10% US tariff implemented on 1 June which is included in our operating costs

– VAP represented 57% of the primary metal we sold (2017: 57%) and generated attractive product premiums averaging $224/tonne of VAP sold (2017: $221/tonne)

– EBITDA margins were 32% in 2018, compared to 35% in 2017

– Bauxite revenues includes $371 million of freight in 2018 ($266 million in 2017)

– In 2018, we sold the Dunkerque aluminium smelter in France to Liberty House for $0.4 billion, net of completion adjustments, and a wharf and land in Kitimat, British Columbia to LNG Canada for $0.6 billion
Copper & Diamonds
strong operational performance

Underlying EBITDA 2017 vs 2018

$ million

- Underlying EBITDA of $2.8 billion was 46% higher than 2017. Our strong performance was primarily driven by increased volumes of copper and gold, lower costs linked to productivity improvements at our managed operations, and Escondida running at full capacity after the 2017 strike

- Copper & Diamonds generated $2.1 billion in cash from operating activities, a 25% increase on 2017. This included $786 million of dividends from Escondida. Working capital, productivity and cost management initiatives also contributed to favourable cash flows

- Average copper prices increased 6% to 297 US cents per pound, and the average gold price rose 1% to $1,269 per ounce compared with 2017. Price changes, including the effects of provisional pricing movements, resulted in a $25 million decrease in underlying EBITDA compared with 2017

- At 31 December 2018, the Group had an estimated 240 million pounds of copper sales that were provisionally priced at 277 cents per pound. The final price of these sales will be determined during the first half of 2019. This compares with 250 million pounds of open shipments at 31 December 2017, provisionally priced at 304 cents per pound
higher prices offset by coal disposal and one-off disruptions

Underlying EBITDA 2017 vs 2018

$ million

<table>
<thead>
<tr>
<th></th>
<th>2017 underlying EBITDA</th>
<th>2018 underlying EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>2,803</td>
<td>2,193</td>
</tr>
<tr>
<td>Exchange rates</td>
<td>384</td>
<td>445</td>
</tr>
<tr>
<td>Energy</td>
<td>(2)</td>
<td>(201)</td>
</tr>
<tr>
<td>Inflation</td>
<td>(31)</td>
<td>(718)</td>
</tr>
<tr>
<td>Volumes</td>
<td>3,062</td>
<td>(339)</td>
</tr>
<tr>
<td>Flexed 2017 underlying EBITDA</td>
<td>(92)</td>
<td>(51)</td>
</tr>
<tr>
<td>Cash cost reductions</td>
<td>(5)</td>
<td></td>
</tr>
<tr>
<td>Coal gains on disposal and royalty</td>
<td>(201)</td>
<td></td>
</tr>
<tr>
<td>Coal disposal</td>
<td></td>
<td>(718)</td>
</tr>
<tr>
<td>One-offs</td>
<td></td>
<td>(339)</td>
</tr>
<tr>
<td>Tax &amp; Other</td>
<td></td>
<td>(51)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2,193</td>
</tr>
</tbody>
</table>

- Underlying EBITDA of $2.2 billion was 22% lower than 2017. Excluding the entire contribution from coal in both years, 2018 EBITDA of $1.3 billion was 18% lower than the 2017 comparative of $1.6 billion.
- Coal EBITDA included a $278 million gain from the sales of the Winchester South and Valeria coal development projects and a $167 million pre-tax gain from the revaluation of a royalty receivable arising from the disposal of the Mount Pleasant coal project in 2016.
- Net operating cash flows of $1.3 billion were 35% lower than 2017.
- We completed the sale of the Kestrel and Hail Creek coking coal mines and the Valeria coal and Winchester South development projects by 1 August 2018 for headline proceeds of $4.15 billion, and expect to pay ~$0.9 billion in tax on these disposals to the Australian Taxation Office in H1 2019.
- Excluding the entire contribution from coal in both years, 2018 net operating cash flows of $0.9 billion was 19% lower than the 2017 comparative of $1.1 billion.
## Other movements in underlying EBITDA

### Underlying EBITDA impact

<table>
<thead>
<tr>
<th>$ million</th>
<th>2017</th>
<th>FX/ price</th>
<th>Energy &amp; Inflation</th>
<th>Volumes</th>
<th>Cash costs</th>
<th>E&amp;E</th>
<th>Non-cash</th>
<th>Interest, tax, other</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other operations</td>
<td>(116)</td>
<td>121</td>
<td>(117)</td>
<td>6</td>
<td>(31)</td>
<td>-</td>
<td>2</td>
<td>64</td>
<td>(70)</td>
</tr>
<tr>
<td>Exploration &amp; Evaluation (net)</td>
<td>(218)</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>(17)</td>
<td>-</td>
<td>-</td>
<td>(231)</td>
</tr>
<tr>
<td>Other</td>
<td>(736)</td>
<td>-</td>
<td>3</td>
<td>(22)</td>
<td>-</td>
<td>(43)</td>
<td>(153)</td>
<td>(952)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,070</td>
<td>123</td>
<td>(113)</td>
<td>6</td>
<td>(53)</td>
<td>(17)</td>
<td>(41)</td>
<td>(89)</td>
<td>1,253</td>
</tr>
</tbody>
</table>

- Other operations includes the Gove alumina refinery (curtailed in May 2014), Rio Tinto Marine and Legacy projects
- Central exploration & evaluation costs higher due to increased activity levels, primarily at Resolution
- The increased loss in Other primarily relates to a $95 million rise in restructuring, project and other one-off costs and a $60 million increase in central pension costs and insurance. It also reflects an increase in our information system and technology spend and continued investment in capability to support our mine-to-market productivity programme
Modelling EBITDA

<table>
<thead>
<tr>
<th>Underlying EBITDA sensitivity</th>
<th>2018 average price/ rate</th>
<th>($m) impact on FY 2018 underlying EBITDA of 10% price/rate change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>297c/lb</td>
<td>388</td>
</tr>
<tr>
<td>Aluminium</td>
<td>$2,110/t</td>
<td>612</td>
</tr>
<tr>
<td>Gold</td>
<td>$1,269/oz</td>
<td>46</td>
</tr>
<tr>
<td>Iron ore (62% Fe FOB)</td>
<td>$61.2/dmt</td>
<td>1,566</td>
</tr>
<tr>
<td>A$</td>
<td>75USc</td>
<td>721</td>
</tr>
<tr>
<td>C$</td>
<td>77USc</td>
<td>354</td>
</tr>
<tr>
<td>Oil</td>
<td>$71/bbl</td>
<td>78</td>
</tr>
</tbody>
</table>

Note: The sensitivities give the estimated effect on underlying EBITDA assuming that each individual price or exchange rate moved in isolation. The relationship between currencies and commodity prices is a complex one and movements in exchange rates can affect movements in commodity prices and vice versa. The exchange rate sensitivities include the effect on operating costs but exclude the effect of revaluation of foreign currency working capital.
# Modelling aluminium costs

<table>
<thead>
<tr>
<th>Canadian* smelting unit cash** cost sensitivity</th>
<th>($/t) Impact a $100/t change in each of the input costs below will have on our 2018 Canadian smelting unit cash cost of $1,533/t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alumina (FOB)</td>
<td>191</td>
</tr>
<tr>
<td>Green petroleum coke (FOB)</td>
<td>34</td>
</tr>
<tr>
<td>Calcined petroleum coke (FOB)</td>
<td>30</td>
</tr>
<tr>
<td>Coal tar pitch (FOB)</td>
<td>7</td>
</tr>
</tbody>
</table>

* 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.  
** The smelting unit cash costs refer 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.
## Case Study: Active management at Kennecott

### South impoundment – closed in 2002
- No longer met seismic hazard design criteria
- Upstream construction method
- Deposition at new North impoundment commenced in 1998
- South impoundment de-weighting work undertaken
- 46 dewatering wells, 200+ horizontal and 1300+ wick drains installed
- Deflection berms installed
- Ongoing work planned

### North impoundment – opened 2002-present
- Design review board comprised of international experts
- Designed to +7.25 magnitude earthquake (MCE*)
- Limited water storage and away from crest
- Wide beaches
- Centreline construction method
- Sophisticated monitoring systems:
  - 450+ piezometers for pore pressure monitoring
  - Accelerometers (earthquake detection) – linked to emergency alarms
  - GPS survey for construction monitoring and InSAR+ monitoring for early detection of instability
  - Inclinometers to detect settlement and displacement in slope

---

*Maximum Considered Earthquake
+ Interferometric Synthetic Aperture Radar

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Closure, taking the long term view

Committed to closing our assets well
At end 2018, closure and restoration provisions of $10 billion

Dedicated closure team, in-house R&D
Dedicated team, defined strategy and technical experts to improve closure outcomes and manage legacy sites

Proven closure capability
Leading technical, environmental and community practices in closure:
Holden, a recent example