Management Quality and Carbon Performance of Aluminium Producers

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February 2019
Key messages

This slide set reports on TPI’s latest assessment; our first of the world’s largest publicly listed companies involved in aluminium production.

The 12 aluminium producers we assess are at various steps on the TPI Management Quality staircase, from acknowledging climate change as a business issue (Level 1) to strategic assessment (Level 4). As a whole, the sector’s Management Quality is close to the average of all companies in the TPI database. However, the 12 aluminium producers perform better on average than other carbon-intensive manufacturing sectors such as cement, paper and steel.

All the leading companies in this sector are listed in OECD countries and several are diversified with major operations in e.g. mining other commodities. By contrast, more than half of global primary aluminium production is located in China.

Carbon Performance data for the aluminium sector are limited. This reflects a lack of emissions disclosure of, and limited target-setting for, aluminium production specifically.

Aluminium producers’ emissions intensity varies widely, due mainly to the source of electricity used for smelting.

Only 3 aluminium producers have an emissions intensity that is currently aligned with the Paris Agreement benchmarks: Alcoa, Norsk Hydro and Rio Tinto. Norsk Hydro’s current emissions intensity is almost as low as the Below 2C benchmark in 2030.

Only 2 companies have a target to reduce their emissions intensity of aluminium production that extends to at least 2020: Alcoa and UC Rusal. Neither is aligned with the benchmarks.
About the Transition Pathway Initiative
About TPI and this slide set

TPI is a global initiative led by Asset Owners and supported by Asset Managers.

Aimed at investors, it assesses companies’ progress on the transition to a low-carbon economy, supporting efforts to address climate change.

Established in January 2017, TPI is now supported by more than 40 investors with over £10.3/$13.3 trillion AUM.

Using companies’ publicly disclosed data, TPI:

• Assesses the quality of companies’ management of their carbon emissions and of risks and opportunities related to the low-carbon transition, in line with the recommendations of TCFD;

• Assesses how companies’ planned or expected future Carbon Performance compares to international targets and national pledges made as part of the 2015 UN Paris Agreement;

• Publishes the results via an open-access online tool: www.transitionpathwayinitiative.org.

This slide set presents our latest assessment; TPI’s first assessment of the aluminium sector.
TPI Partners

The Grantham Research Institute on Climate Change and the Environment, a research centre at the London School of Economics and Political Science (LSE), is TPI’s academic partner. It has developed the assessment framework, provides company assessments, and hosts the online tool.

FTSE Russell is TPI’s data partner. FTSE Russell is a leading global provider of benchmarking, analytics solutions and indices.

The Principles for Responsible Investment (PRI) provides a secretariat to TPI. PRI is an international network of investors implementing the six Principles for Responsible Investment.
We would like to thank our Research Funding Partners for their ongoing support to the TPI and their enabling the research behind this report and its publication.
Company assessments are based only on publicly available information: disclosure-based

Outputs should be useful to Asset Owners and Asset Managers, especially with limited resources: accessible and easy to use

Aligned with existing initiatives and disclosure frameworks, such as CDP and TCFD: not seeking to add unnecessarily to reporting burden

Pitched at a high level of aggregation: corporation-level
Overview of the TPI Tool

TPI’s company assessments are divided into 2 parts:

1. **Management Quality** covers companies’ management/governance of greenhouse gas emissions and the risks and opportunities arising from the low-carbon transition;

2. **Carbon Performance** assessment involves quantitative benchmarking of companies’ emissions pathways against the international targets and national pledges made as part of the 2015 UN Paris Agreement, for example limiting global warming to below 2°C.

Both of these assessments are based on company disclosures.
Management Quality

<table>
<thead>
<tr>
<th>Level 0</th>
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<th>Level 3</th>
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<tbody>
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<td>Building capacity</td>
<td>Integrating into operational decision making</td>
<td>Strategic assessment</td>
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TPI’s Management Quality framework is based on 16-17 indicators, each of which tests whether a company has implemented a particular carbon management practice. These 16-17 indicators are used to map companies on to 5 levels/steps. The data are provided by FTSE Russell.

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- **Level 0: Unaware**
  - Company does not recognise climate change as a significant issue for the business

- **Level 1: Awareness**
  - Company explicitly recognises climate change as a relevant risk/opportunity for the business
  - Company has a policy (or equivalent) commitment to action on climate change

- **Level 2: Building capacity**
  - Company has set GHG emission reduction targets
  - Company has published info. on its operational GHG emissions

- **Level 3: Integrating into operational decision making**
  - Company has nominated a board member/committee with explicit responsibility for oversight of the climate change policy
  - Company has set quantitative targets for reducing its GHG emissions
  - Company reports on its Scope 3 GHG emissions
  - Company has had its operational GHG emissions data verified
  - Company supports domestic & international efforts to mitigate climate change
  - Company has a process to manage climate-related risks
  - Company discloses Scope 3 GHG emissions from use of sold products (selected sectors only)

- **Level 4: Strategic assessment**
  - Company has set long-term quantitative targets (>5 years) for reducing its GHG emissions
  - Company has incorporated ESG issues into executive remuneration
  - Company has incorporated climate change risks and opportunities in its strategy
  - Company undertakes climate scenario planning
  - Company discloses an internal carbon price
Carbon Performance

TPI’s Carbon Performance Assessment tests the alignment of company targets with the Paris Agreement goals, using the same approach as Science-Based Targets.

TPI uses 3 benchmark scenarios:

1. Paris Pledges, consistent with emissions reductions pledged by countries as part of the Paris Agreement (i.e. NDCs);
2. 2 Degrees, consistent with the overall aim of the Paris Agreement, albeit at the low end of the range of ambition;
3. Below 2 Degrees, consistent with a more ambitious interpretation of the Paris Agreement’s overall aim.

Benchmarking is sector-specific and based on emissions intensity.

Company A is not aligned with any Paris benchmark

Company B is eventually aligned with the Paris Pledges, but neither 2°C nor Below 2°C

Company C is aligned with all Paris benchmarks, including Below 2°C
Latest results:
Management Quality of aluminium producers
Management Quality level

Level 0
Unaware

Level 1
Awareness

Level 2
Building capacity

Level 3
Integrating into operational decision making

Level 4
Strategic assessment

3 companies
Alcoa
Rio Tinto
South32

4 companies
Alumina
Arconic
Nippon Light Metal
Norsk Hydro

2 company
UACJ
UC Rusal

3 companies
Chalco
China Zhongwang
Press Metal

0 companies
Chalco
China Zhongwang
Press Metal
Management Quality level

Aluminium producers’ average Management Quality score is 2.6, meaning that the average company in this sector is just over halfway between building capacity (Level 2) and integrating climate change into operational decision making (Level 3).

Aluminium producers’ average Management Quality score of 2.6 is about the same as the average score of all companies in the TPI database.* However, the aluminium sector scores better on average than other carbon-intensive manufacturing sectors such as cement, paper and steel.

Five out of 12 aluminium producers are on Levels 1 and 2, while the remaining 7 companies are on Levels 3 and 4. All the leaders in this sector are listed in OECD countries and several of them are diversified, with major operations in e.g. mining other commodities. By contrast, more than half of global primary aluminium production is located in China.

No company satisfies all Management Quality criteria: there are not yet any 4* aluminium producers.

* As of February 2019
Management Quality: indicator by indicator

Most aluminium producers implement the basic carbon management practices; fewer take the more advanced steps. We see this general pattern in all TPI sectors.

The 12 companies in the aluminium sector are more likely than the average TPI company to have set quantified, long-term emissions targets (Q13) and to have undertaken climate scenario planning (Q16), although the absolute number of companies undertaking climate scenario planning remains low (4 out of 12).

Conversely aluminium producers are less likely than the average TPI company to disclose Scope 3 emissions (Q8) and to have incorporated ESG issues into executive remuneration (Q14).

None of the 12 aluminium producers discloses an internal carbon price (Q17).
Latest results: Carbon Performance of aluminium producers
Scope of Carbon Performance assessment

Our emissions intensity measure in this sector is Scope 1 + 2 greenhouse gas emissions from aluminium production, per tonne of aluminium produced.* The majority of emissions are in Scope 2.

We focus on the two most emissions-intensive stages of aluminium production; refining and smelting. We also take emissions from aluminium recycling into account.

Aluminium producers that are involved in neither refining nor smelting fall outside the scope of our assessment: Arconic, China Zhongwang and Nippon Light Metal

*Primary and secondary aluminium
Aluminium producers’ Carbon Performance versus the benchmarks

Carbon Performance data for the aluminium sector are limited. This reflects a lack of emissions disclosure of, and limited target-setting for, aluminium production specifically.

Aluminium producers’ emissions intensity varies widely, due mainly to the source of electricity used for smelting. For example, Norsk Hydro sources its electricity mainly from hydro-electric plants, while Alumina does so mainly from fossil power plants.

Only 3 aluminium producers have an emissions intensity that is currently aligned with the benchmarks: Alcoa, Norsk Hydro and Rio Tinto. Norsk Hydro’s current emissions intensity is almost as low as the Below 2C benchmark in 2030.

Only 2 companies have a target to reduce their emissions intensity of aluminium production that extends to at least 2020: Alcoa and UC Rusal. Neither is aligned with the Paris Agreement targets.

### Emissions intensity of aluminium production (t CO₂ / t aluminium)

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<tbody>
<tr>
<td>Alcoa</td>
<td>6.31</td>
<td>5.47</td>
<td>5.20</td>
<td>5.25</td>
<td>5.09</td>
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<tr>
<td>Alumina</td>
<td>21.27</td>
<td>20.70</td>
<td>19.90</td>
<td>19.41</td>
<td>17.06</td>
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<tr>
<td>Chalco</td>
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<td>Norsk Hydro</td>
<td>3.31</td>
<td>3.46</td>
<td>3.45</td>
<td>3.35</td>
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<td>Press Metal</td>
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<td>UACJ</td>
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<tr>
<td>UC Rusal</td>
<td>7.56</td>
<td>7.81</td>
<td>7.70</td>
<td>6.94</td>
<td>6.93</td>
<td>6.90</td>
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<tr>
<td>Rio Tinto</td>
<td>5.71</td>
<td>5.18</td>
<td>4.80</td>
<td>4.59</td>
<td></td>
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<tr>
<td>Below 2 Degrees</td>
<td>6.34</td>
<td>6.13</td>
<td>5.92</td>
<td>5.70</td>
<td>5.07</td>
<td>4.00</td>
<td>3.07</td>
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<tr>
<td>2 Degrees</td>
<td>6.34</td>
<td>6.16</td>
<td>5.98</td>
<td>5.80</td>
<td>5.26</td>
<td>4.35</td>
<td>3.14</td>
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<tr>
<td>Paris Pledges</td>
<td>6.34</td>
<td>6.22</td>
<td>6.10</td>
<td>5.98</td>
<td>5.61</td>
<td>5.01</td>
<td>4.35</td>
<td></td>
</tr>
</tbody>
</table>

**Key**
- Aligned with below 2C
- Aligned with 2C
- Aligned with Paris Pledges
- Not aligned
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