

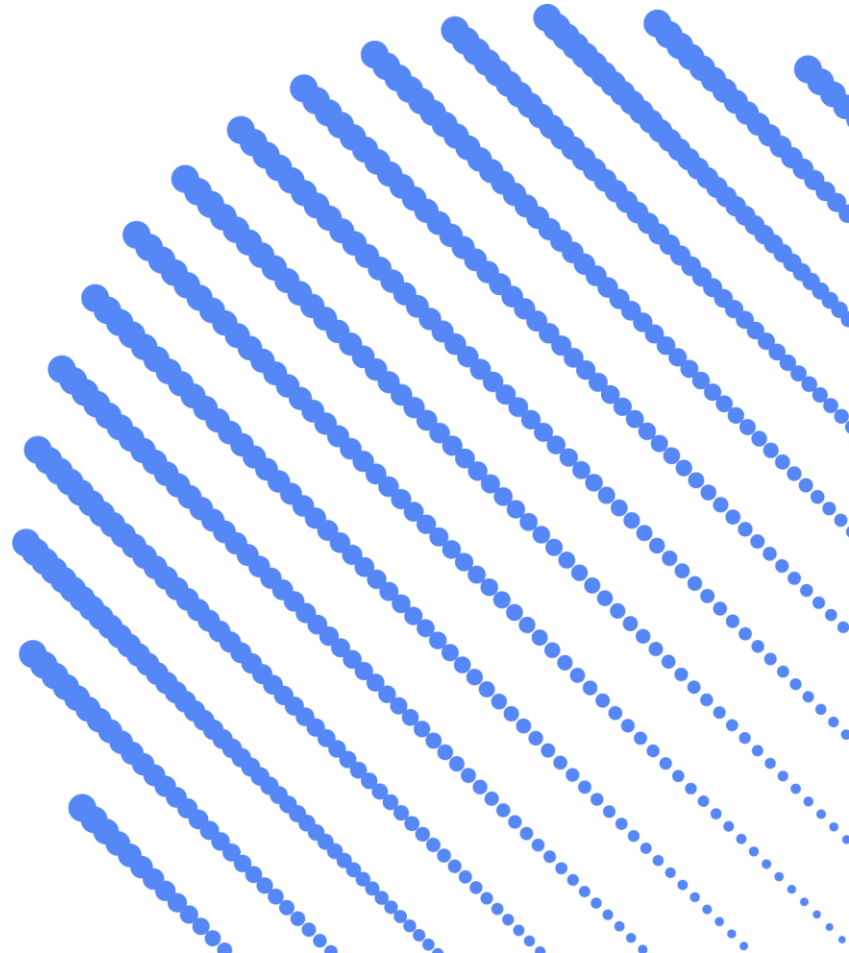


Transition  
Pathway  
Initiative

# Management Quality and Carbon Performance of Aluminium Producers

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# 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](http://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.



THE LONDON SCHOOL  
OF ECONOMICS AND  
POLITICAL SCIENCE ■



Grantham  
Research Institute  
on Climate Change  
and the Environment



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# Research Funding Partners



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.

# TPI Design Principles

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.

## TPI Tool

The TPI tool enables the assessment of companies' carbon management quality and carbon performance, within a selected sector.

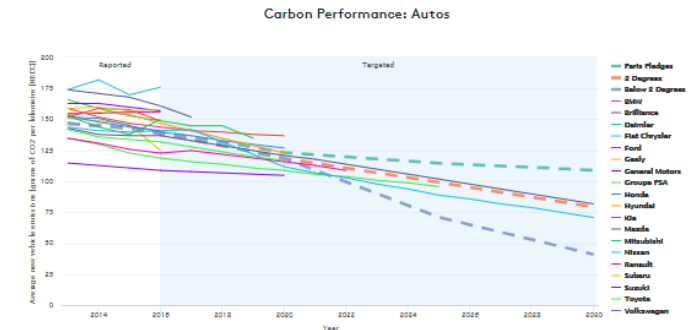
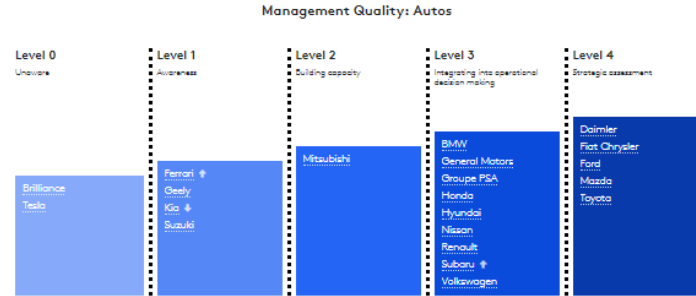
A tutorial to help you use the tool can be found [here](#).

[Download complete data set as an MS Excel file](#) (updated January 2019)

Filter by sector  
Autos

Go straight to a company

Filter companies





# Management Quality

## Level 0

Unaware

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.

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

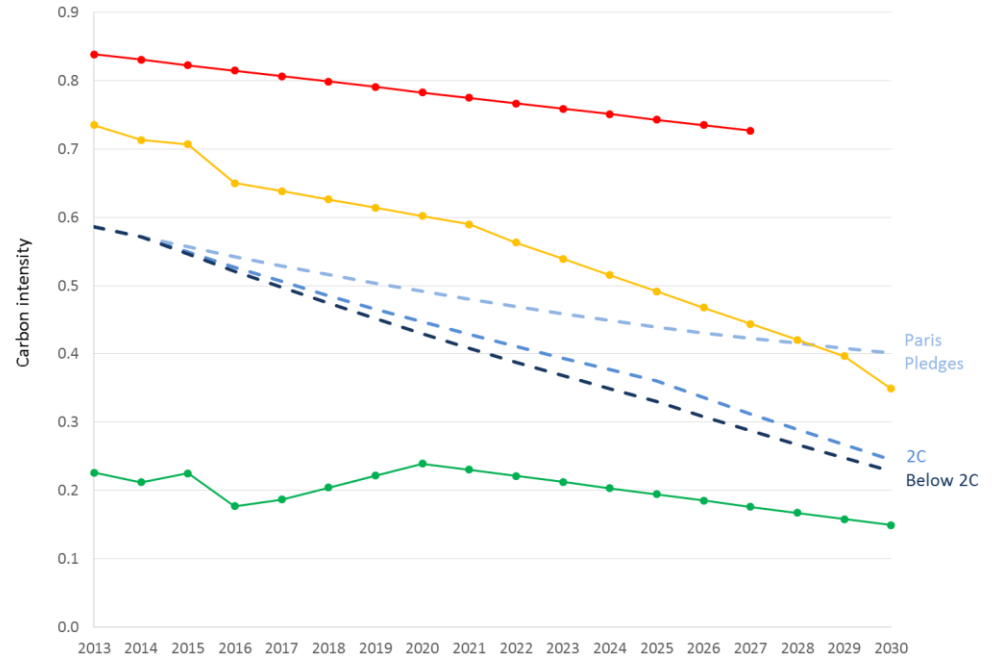
# Carbon Performance

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.



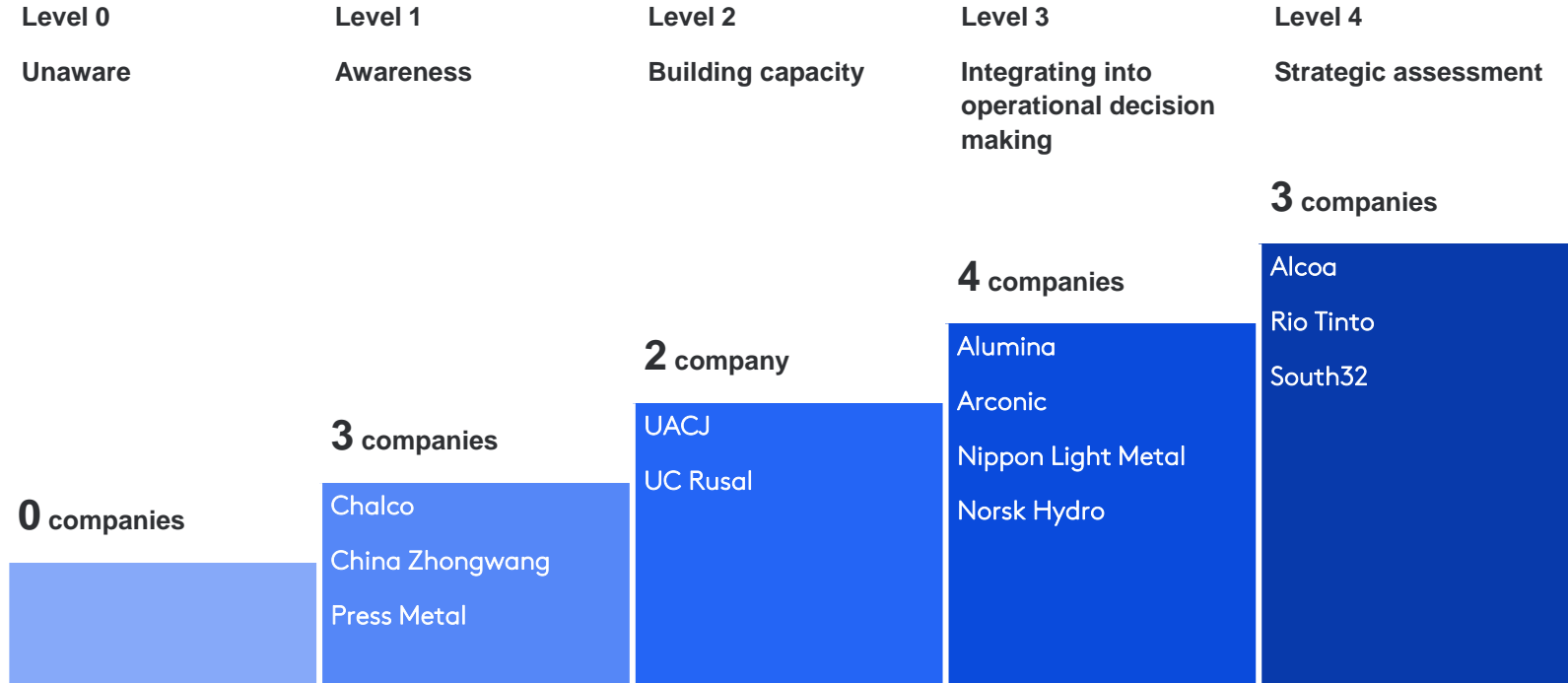
Company A is not aligned with any Paris benchmark

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



# 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



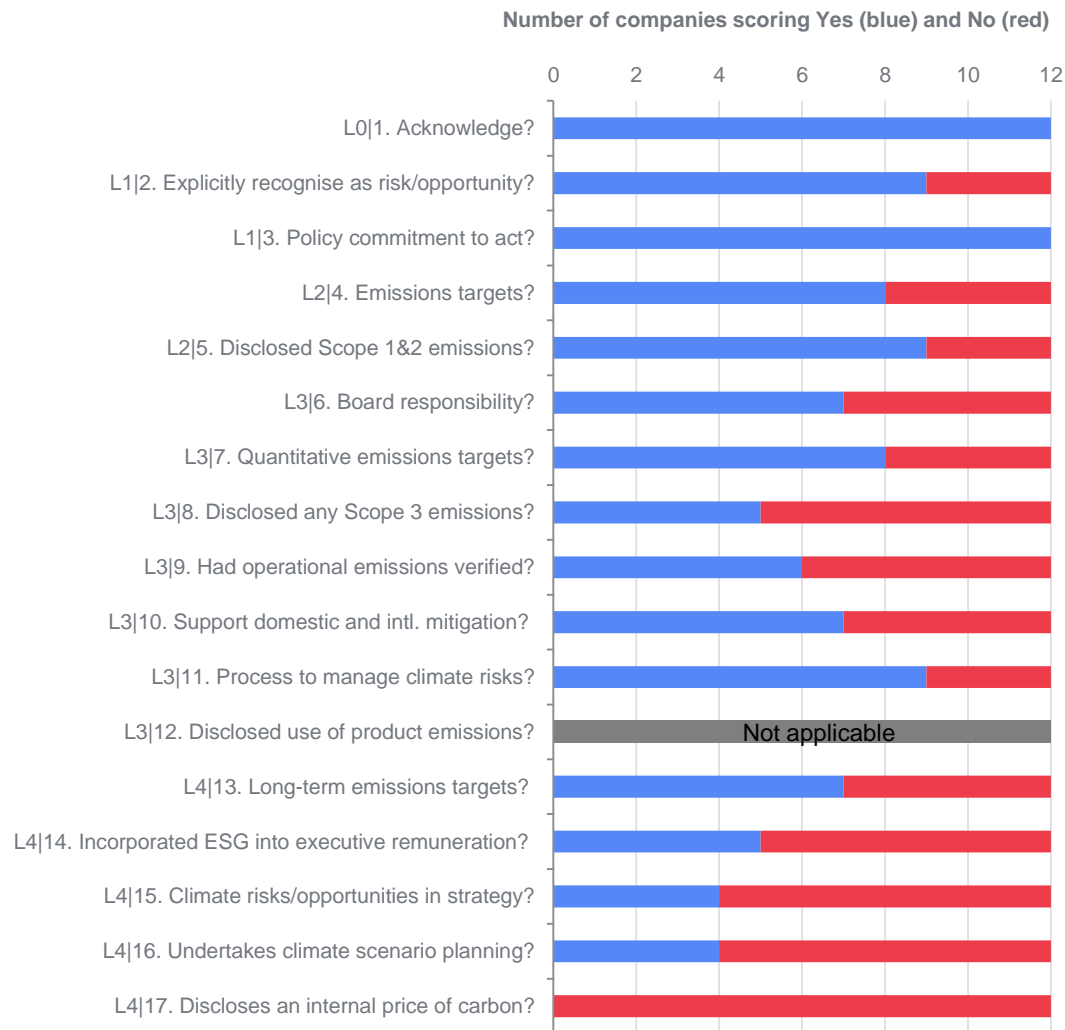
# Management Quality: indicator by indicator

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.

Company	Emissions intensity of aluminium production (t CO <sub>2</sub> e / t aluminium)								
	2013	2014	2015	2016	2017	2020	2025	2030	
Alcoa			6.31	5.47	5.20	5.25	5.35	5.09	
Alumina	21.27	20.70	19.90	19.41	17.06				
Chalco	No data								
Norsk Hydro	3.31	3.46	3.45	3.35	3.34				
Press Metal	No data								
UACJ	No data								
UC Rusal		7.56	7.81	7.70	6.94	6.93	6.90		
South32	No data								
Rio Tinto		5.71	5.18	4.80	4.59				
<b>Below 2 Degrees</b>		6.34	6.13	5.92	5.70	5.07	4.00	3.07	
<b>2 Degrees</b>		6.34	6.16	5.98	5.80	5.26	4.35	3.14	
<b>Paris Pledges</b>		6.34	6.22	6.10	5.98	5.61	5.01	4.35	
<b>Key</b>	Aligned with below 2C		Aligned with 2C		Aligned with Paris Pledges		Not aligned		

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