Transition Pathway Initiative

Management Quality and Carbon Performance of automobile manufacturers: November 2018 update

Simon Dietz, Valentin Jahn, Michal Nachmany and Jolien Noels

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 30 investors with over £8.2/$10.7 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

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.

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*

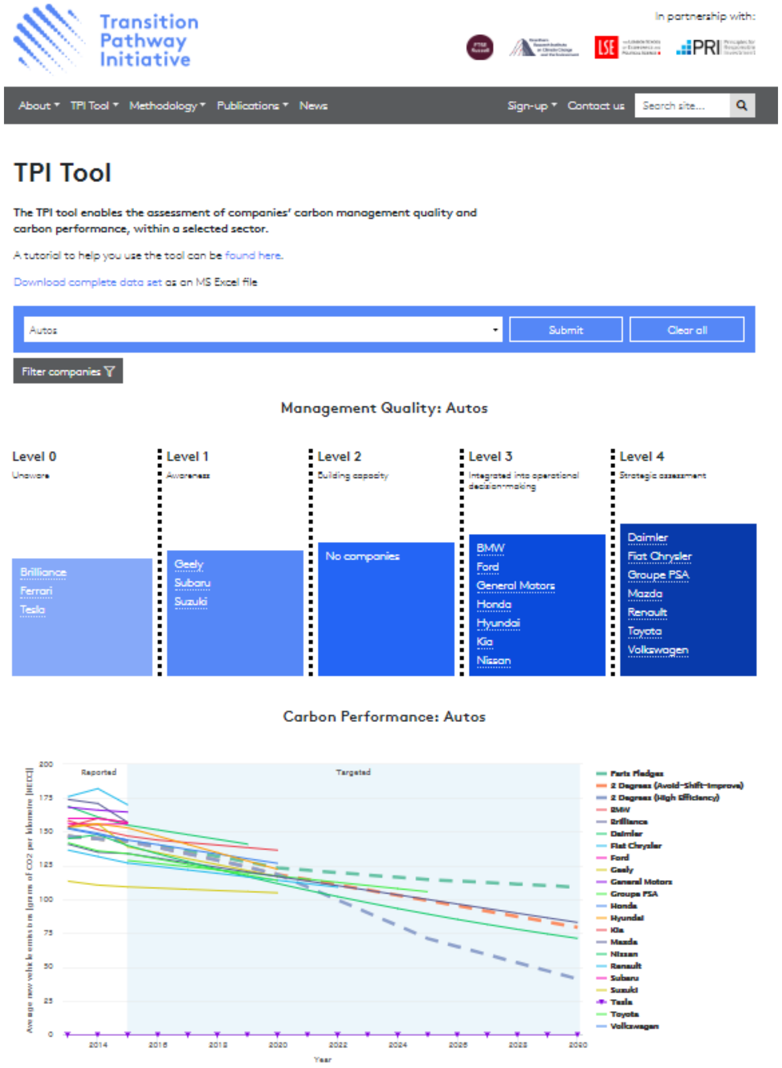
Pitched at a high level of aggregation: *corporation-level*

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



Management Quality

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.

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 materially important Scope 3 GHG emissions

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

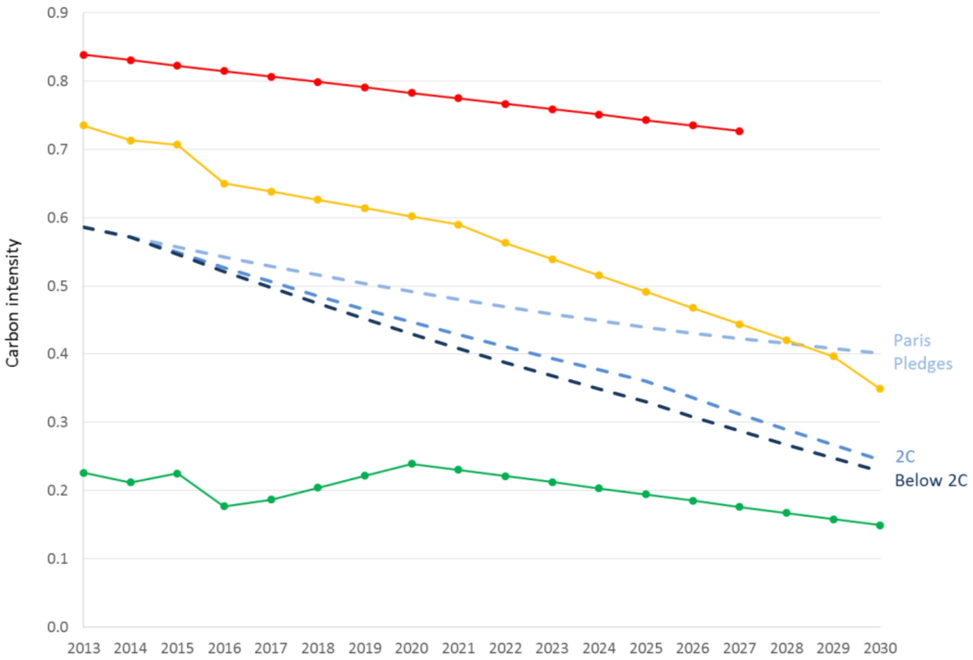
Carbon Performance

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 2C nor Below 2C

Company C is aligned with all Paris benchmarks, including Below 2C

Latest results:
Management Quality of Automobile Manufacturers

Transition
Pathway
Initiative

Management Quality level

Level 0	Level 1	Level 2	Level 3	Level 4
Unaware	Awareness	Building capacity	Integrating into operational decision making	Strategic assessment
2 companies	**4** companies	**1** company	**9** companies	**5** companies
Brilliance	Ferrari	Mitsubishi	BMW	Daimler
Tesla	Geely		General Motors	Fiat Chrysler
	Kia		Groupe PSA	Ford
	Suzuki		Honda	Mazda
			Hyundai	Toyota
			Nissan	
			Renault	
			Subaru	
			Volkswagen	

Transition Pathway Initiative

Management Quality level

Automobile manufacturers' average Management Quality score is 2.5, putting the average company in this sector midway between "Building capacity" (Level 2) and "Integrating into operational decision making" (Level 3)

Autos is the second-best performing sector in the TPI database on Management Quality, behind electricity

6 out of 21 companies are on Levels 0 and 1, while 14 out of 21 companies are on Levels 3 and 4: behind the average, companies in the autos sector divide into two classes on Management Quality, leaders and laggards

Tesla's poor rating on Management Quality is a direct consequence of an absence of appropriate climate change disclosures, and contrasts with its best-in-class Carbon Performance (see below)

No company satisfies all Management Quality criteria: there are not yet any 4* automobile manufacturers

Management Quality: indicator by indicator

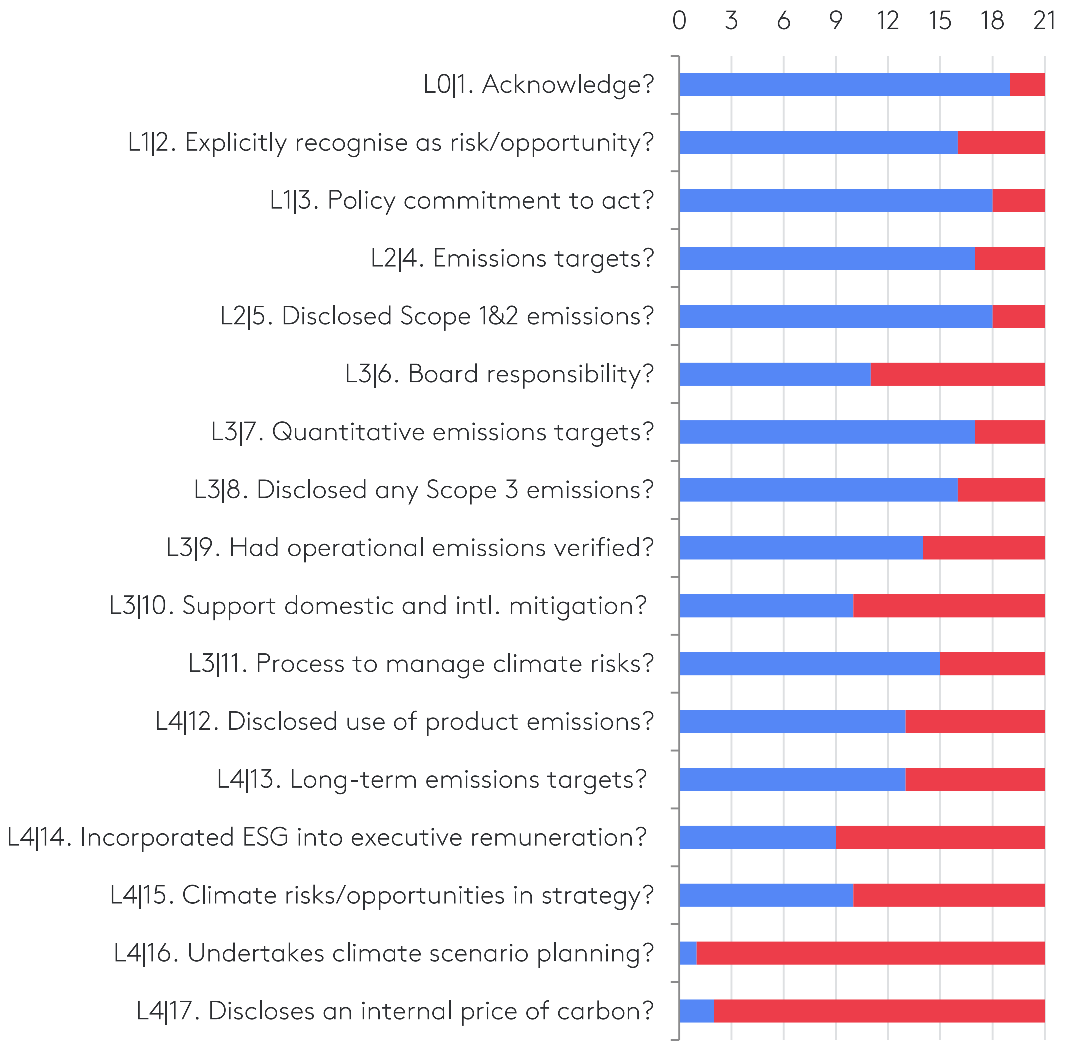
Most companies do the basics; fewer take the more advanced steps. We see this general pattern in all TPI sectors.

More than 80% of automobile manufacturers have a policy commitment to act, explicitly recognise climate change as a business risk/opportunity, have some form of emissions reduction target and disclose their operational emissions

It is particularly notable that more than 80% have set a quantitative emissions reduction target

Only Nissan undertakes climate scenario planning

Only BMW and GM disclose an internal carbon price



Latest results: Carbon Performance of automobile manufacturers

Transition Pathway Initiative

Automobile manufacturers' Carbon Performance versus the benchmarks

Most automobile manufacturers' *current* fleet emissions are not aligned with the benchmarks

But in 2020, 8 out of 10 companies with targets would have a fleet emissions intensity below the Paris Pledges benchmark and 6 of these would be aligned with the most ambitious 2C High Efficiency benchmark

Only 2 companies have a target to reduce their fleet emissions intensity in 2030

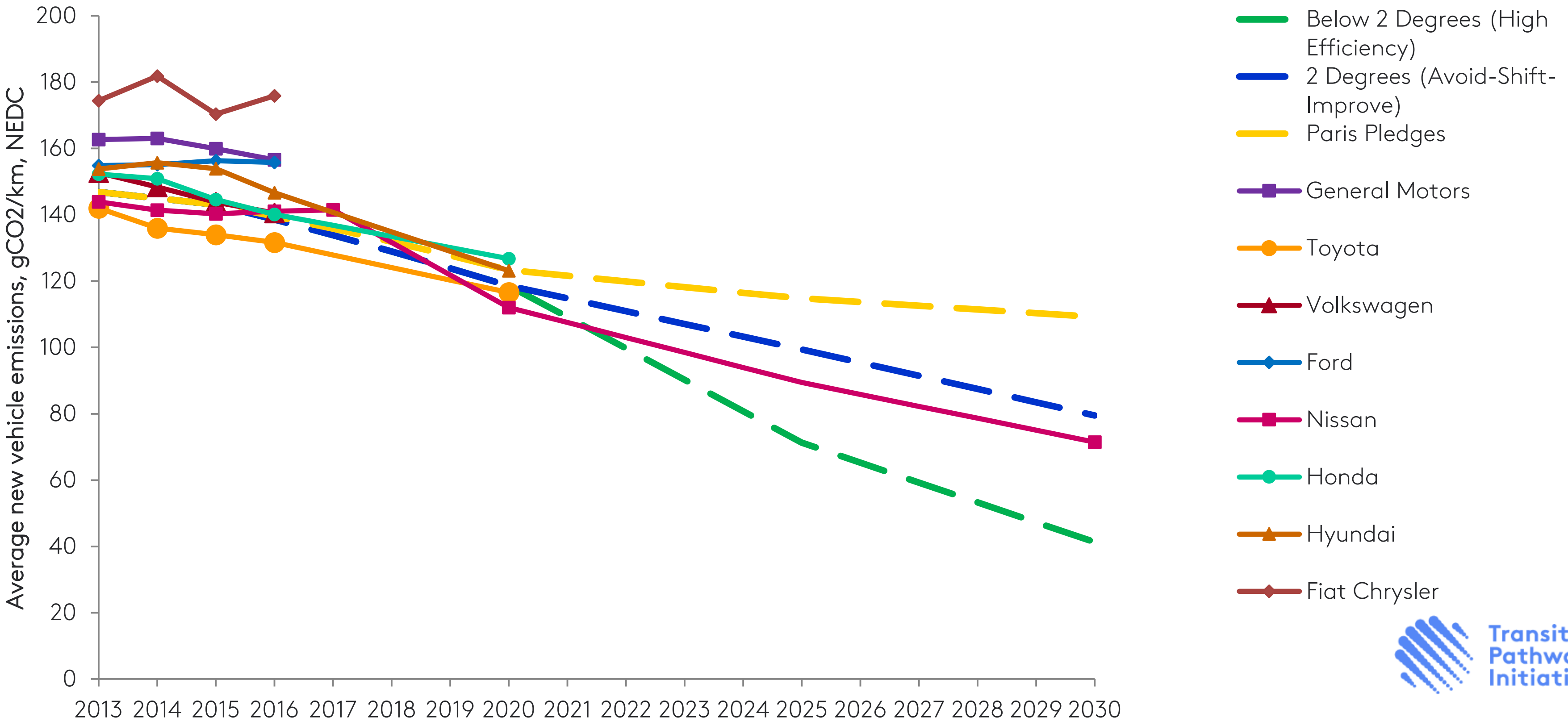
- Mazda is aligned with the Paris Pledges
- Nissan is aligned with 2C Avoid-Shift-Improve

Tesla's fleet is zero emissions (on a Tank-to-Wheel basis) throughout

Company	New vehicle average carbon emissions (gCO2/km, NEDC)								
	2013	2014	2015	2016	2019	2020	2022	2025	2030
BMW	159	152	147	144	138	137			
Brilliance	174	171	168	161					
Daimler	166	159	153	149	135				
Ferrari					No data				
Fiat Chrysler	174	182	170	176					
Ford	155	155	156	156					
Geely	151	149	146	125					
General Motors	163	163	160	157					
Groupe PSA	135	130	123	119	111	109	96		
Honda	152	151	145	140	130	127			
Hyundai	154	156	154	147	129	123			
Kia	152	159	158	149					
Mazda	143	138	137	137	125	121	114	102	82
Mitsubishi Motors	153	144	138	150					
Nissan	144	141	140	141	122	112	103	89	71
Renault	135	131	126	123	119	116	109		
Subaru	159	160	157	158					
Suzuki	115	113	111	109	106	105			
Tesla	0	0	0	0	0	0	0	0	0
Toyota	142	136	134	132	120	117			
Volkswagen	153	148	144	141					
2 Degrees (High Efficiency)	147	145	143	139	124	119	100	71	41
2 Degrees (Avoid-Shift-Improve)	147	145	143	139	124	119	111	99	80
Paris Pledges	147	145	143	140	128	123	120	115	109

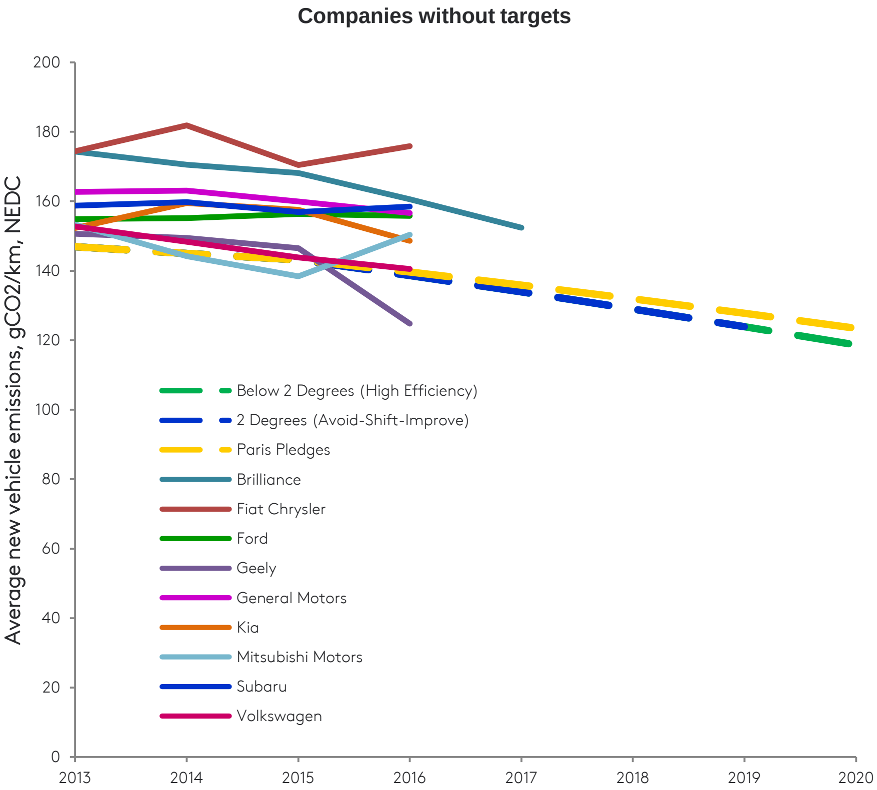
Key	Aligned with 2C (High Efficiency)	Aligned with 2C (Avoid-Shift-Improve)	Aligned with Paris Pledges	Not aligned

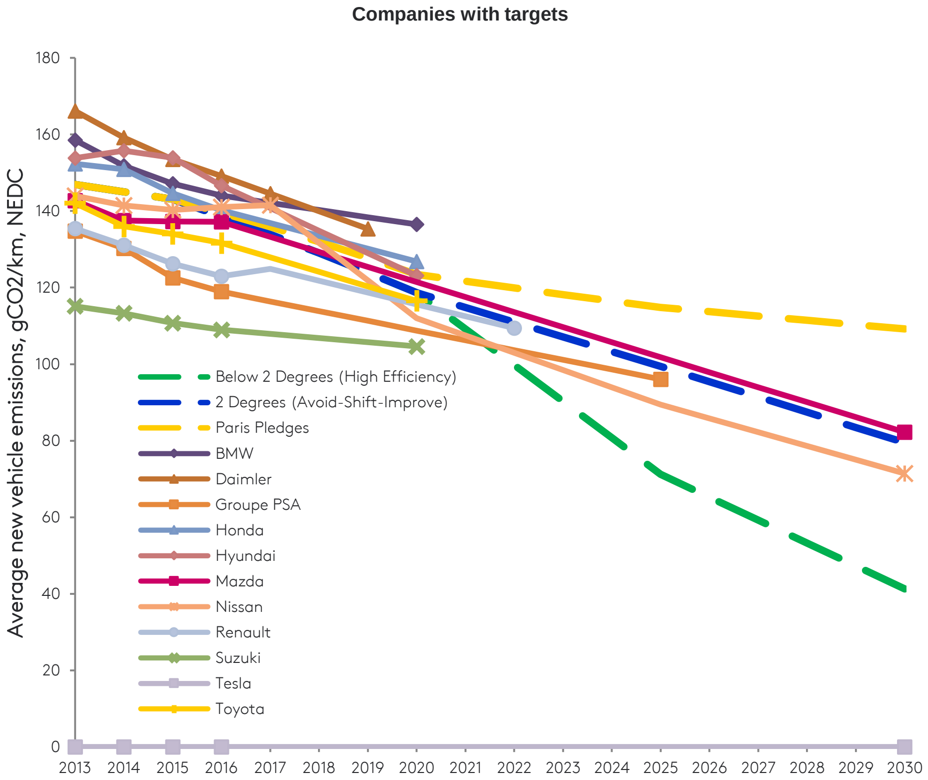
The largest manufacturers (in terms of sales) tend not to be aligned with the Paris benchmarks



Transition Pathway Initiative

Companies with targets have lower emissions than companies without targets





Disclaimer

1. All information contained in this report and on the TPI website is derived from publicly available sources and is for general information use only. Information can change without notice and The Transition Pathway Initiative does not guarantee the accuracy of information in this report or on the TPI website, including information provided by third parties, at any particular time.

2. Neither this report nor the TPI website provides investment advice and nothing in the report or on the site should be construed as being personalised investment advice for your particular circumstances. Neither this report nor the TPI website takes account of individual investment objectives or the financial position or specific needs of individual users. You must not rely on this report or the TPI website to make a financial or investment decision. Before making any financial or investment decisions, we recommend you consult a financial planner to take into account your personal investment objectives, financial situation and individual needs.

3. This report and the TPI website contain information derived from publicly available third party websites. It is the responsibility of these respective third parties to ensure this information is reliable and accurate. The Transition Pathway Initiative does not warrant or represent that the data or other information provided in this report or on the TPI website is accurate, complete or up-to-date, and make no warranties and representations as to the quality or availability of this data or other information.

4. The Transition Pathway Initiative is not obliged to update or keep up-to-date the information that is made available in this report or on its website.

5. If you are a company referenced in this report or on the TPI website and would like further information about the methodology used in our publications, or have any concerns about published information, then please contact us. An overview of the methodology used is available on our website.

6. Please read the Terms and Conditions which apply to use of the website.

Transition Pathway Initiative