

Transition plans of European automakers: disclosure gaps and underestimated transition risks

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In September 2025, we published a paper on the automotive sector's transition plans, focusing primarily on Renault, Volkswagen, and Toyota, with Toyota serving as the non-European counterpart. Nearly a year later, several recent publications make an update necessary. Stellantis has been added to this article because it shifted its trajectory following a leadership change in the summer of 2025. Indeed, it represents a unique case among the four manufacturers observed in this article, having adopted a less ambitious plan.

The previous article's conclusion stated: "Greater simplicity, transparency, and public visibility will be essential if transition plans are to regain relevance and contribute meaningfully to Europe's decarbonization agenda."

Nevertheless, as the title of this article suggests, these requirements are not fully met in the current automotive transition plans, despite the stated high ambitions. Across the automotive sector, transition plans differ markedly in their granularity, transparency and usefulness for investors seeking to assess transition-related uncertainties. The purpose of this article is to assess whether transition plans connect enough climate targets with the different variables through which transition risks may affect companies: capex, margins, technology choices, production flexibility, supply chains, workforce consequences and market absorption:

- **Volkswagen** provides the most detailed disclosures among the European manufacturers reviewed, but recent restructuring announcements (up to 100,000 job cuts) illustrate how difficult it remains to assess transition-related costs, industrial flexibility and workforce consequences from climate KPIs alone.
- **Renault** reports encouraging progress and strong electric-vehicle momentum, but its disclosures provide limited visibility on how demand growth translates into capacity, margins, supply-chain resilience and Scope 3 reductions.

- **Stellantis** has weakened its intermediate trajectory and now relies on conditional targets, explicitly reflecting regulatory and market uncertainty.
- **Toyota** has its own Environmental Action Plan, with specific targets and positive progress for most of them in 2025.

Therefore, this article distinguishes two possible uses of transition-plan disclosure:

- **First**, transition plans provide information on the expected scale and credibility of a company's contribution to climate transition: targets, emissions reductions, taxonomy alignment, value-chain actions and implementation progress.
- **Secondly**, they may serve as risk-assessment tools for banks and investors, but only if they connect these climate objectives with financial and economic variables and uncertainty ranges.

It should be noted that this analysis is even more relevant given that ongoing negotiations on the European automotive package are creating regulatory uncertainty that may slow the automotive transition.

1. Overview of each trajectory

1.1 Volkswagen (see Table 1)

Volkswagen aimed to reduce its Scope 1 and 2 emissions by 50.4% compared to the 2018 level. It reached its 2030 target for Scope 1 and 2 emissions as early as 2024, six years ahead of schedule. However, the group has not announced any update to this target, raising the question of whether its current level of ambition still reflects the pace of its actual progress.

TABLE 1.

	Volkswagen	Toyota	Renault	Stellantis
Overall trajectory	Ahead of target for Scope 1 and 2	Methodical continuity	Results ahead of plan, weak communication	Acknowledged setback
2030 target (Scopes 1&2)	-50.4% vs 2018 (already achieved in 2024)	-47% vs 2020	-62.5% vs 2019	-47% to -50% vs 2021
Net Zero	2050	2050	2050 (Europe: 2040)	2050
Scope 3 strategy	Fleet electrification (EU leader, 28% market share)	Targets differentiated by vehicle segment	Fleet electrification (16/22 models 100% electric in Europe by 2030)	Multi-energy (BEV, hybrid, alternative fuels), conditioned on external factors
EU Taxonomy-aligned revenue (2025)	7.4%	Not subject to CSRD	17.4%	7%

TABLE 2.**Breakdown by environmental objectives of taxonomy-aligned activities**

	Total	Proportion of taxonomy-eligible economic activities*	Taxonomy-aligned economic activities	Proportion of taxonomy-aligned economic activities*	Climate change mitigation	Climate change adaptation	Water	Circular economy	Pollution	Bio-diversity	Proportion of enabling activities	Proportion of transitional activities	Not assessed activities considered non-material*	Taxonomy-aligned economic activities in 2024	Proportion of taxonomy-aligned economic activities in 2024*
KPI	€ million	%	€ million	%	%	%	%	%	%	%	%	%	%	€ million	%
Sales revenue	321.913	90.4	34.527	10.7	10.7	-	-	-	-	-	10.7	-	1.5	24.104	7.4
Capital expenditure (CapEx)	69.879	99.3	23.514	33.6	33.6	-	-	-	-	-	33.6	-	0.3	18.481	27.3
Operating expenditure (OpEx)	12.915	96.9	4.972	38.5	38.5	-	-	-	-	-	38.5	-	2.7	5.448	40.4

* All percentages relate to the Group's total sales revenue/total capital expenditure/total operating expenditure

For Scope 3, most of which arises from the use of sold vehicles, Volkswagen is primarily relying on fleet electrification to reduce use-phase emissions by 30% by 2030 compared with 2018. The Group reported 296.9 million tons of Scope 3 category 11 emissions in 2024, down approximately 28% from its recalculated 2018 baseline of 413.0 million tons. However, this absolute reduction also reflects changes in production volumes and product mix, making it an imperfect standalone indicator of the underlying decarbonisation of Volkswagen's fleet.

Beyond fleet electrification, Volkswagen's strategy extends across the entire value chain, structured around four levers: battery production, supplier decarbonization, zero-impact logistics, and the dealership network.

For battery production, Volkswagen created PowerCO SE in 2022, a subsidiary dedicated to battery manufacturing that began operations in 2025. Its first plant is located in Salzgitter, with two further plants under construction in Valencia (Spain) and St. Thomas (Canada). These facilities rely on what the group describes as "climate-friendly electricity" – 240 GWh per year from wind power and

65 GWh per year from solar – which, based on an estimate using Germany's 2023 energy mix, avoids the emissions of 115,000 tons of CO₂ per year.

On supplier decarbonization, 500 suppliers have already signed a declaration committing them to using renewable energy.

On zero-impact logistics, Volkswagen is shifting transport towards rail wherever possible, increasing its use of electric trucks for journeys where road transport cannot be avoided and greening its intercontinental shipping fleet: 6 of its 12 vessels now run on low-emissions LNG. They are equipped with technology to eliminate fugitive methane emissions.

On the dealership network, emissions are accounted for under Scope 3, Category 14 ("franchises"). Volkswagen combines awareness-raising efforts within its dealer network with the "goTOzero Retail" plan, based on the ISO 14001 standard, which certifies dealerships for environmental best practice.

For residual emissions that cannot yet be avoided, Volkswagen relies on offsetting. All of the projects it finances are reduction projects rather than

TABLE 3.

Vision for alignment with well-below 2°C (WBC)

	Categories	Unit	Scenario	Base year	Target	Target	Status at end-2024
Intensity	Scopes 1 & 2	tCO ₂ e per vehicle produced	Well-below 2°C	2012	2030	-60%	-44%
	Scope 3 cat. 11 - use of sold products	gCO ₂ e per vehicle-kilometer, well-to-wheel	2°C	2010	2030	-41%	-30%
Absolute	Scopes 1 & 2	tCO ₂ e	1.5°C	2019	2030	-61.5%	-50%
	Scopes 3	tCO ₂ e well-to-wheel	Well-below 2°C	2030	2030	-27.5%	-38%

removal or carbon capture projects. It is a distinction worth noting, given that the ESRs require gross reduction targets, meaning carbon credits cannot be counted towards a company's stated emissions-reduction goals.

On the EU Taxonomy KPIs, Volkswagen's 2025 disclosures show a sizeable gap between eligibility and alignment. Of total sales revenue (€321,913 million), 90.4% is taxonomy-eligible, but only 10.7% is taxonomy-aligned. **Capital expenditure shows the highest alignment rate among the three KPIs, with 33.6% of CapEx (€69,879 million in total) aligned with taxonomy criteria,** consistent with the group's ongoing investment in battery production and electrification infrastructure. **Operating expenditure follows a similar pattern, with 38.5% aligned with the total OpEx of €12,915 million.**

Across all three KPIs, climate change mitigation accounts for the entire aligned share, with no contribution from the other five environmental objectives (climate adaptation, water, circular economy, pollution, biodiversity). (see Table 2).

Volkswagen's recent restructuring discussions are multiple, including cost competitiveness, pressure in China, software and BEV investment needs, relationship with subcontractors and the adaptation of European industrial capacity. The publication of transition plans and climate KPIs are insufficient for transition-risk analysis.

1.2 Renault

Renault's FutuREady plan, presented in March 2026, is centered on competitiveness, with the transition agenda relegated to a secondary role within the document.

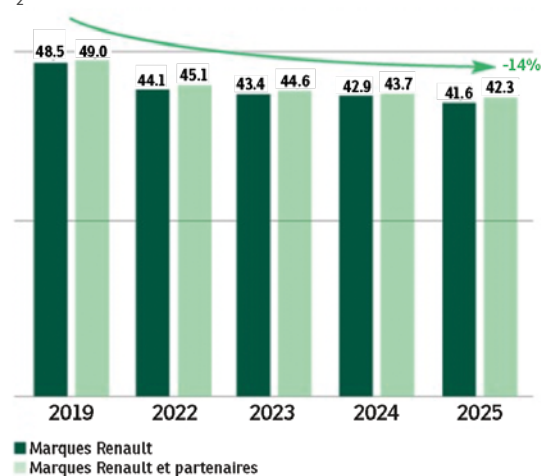
On climate commitments, Renault Group set a Net Zero target for 2050, with an intermediate milestone for Europe in 2040. The first interim step targets a 62.5% reduction in Scope 1 and 2 emissions and a 27.5% reduction in Scope 3 emissions by 2030, both compared to 2019.

In the 2025 results, the group reports a 64% reduction in Scope 1 and 2 emissions and a 38%

reduction in emissions across all scopes compared to 2019. (see Table 3).

Regarding the circular economy, Renault maintained an average of 30% circular-economy materials across its vehicles in 2025, while more than 30,000 used vehicles were reconditioned that same year.

On carbon intensity, the average carbon footprint per vehicle sold (Renault brand) fell from 48.5 to 41.6 tons of CO₂e between 2019 and 2025, a 14% reduction; when including partner brands, the figure declined from 49.0 to 42.3 tons of CO₂e over the same period.

CHART 1.Empreinte carbone par véhicule vendu (intensité tonnes CO₂/véhicule)

* Hors émissions liées aux achats de biens d'équipements et aux investissements (cat 2 et 15 du GHG Protocol)

On EU Taxonomy KPIs, Renault's 2025 disclosures show 99.9% of revenue is taxonomy-eligible. Still, only 17.4% is taxonomy-aligned, entirely attributable to climate change mitigation, with no contribution from the other five environmental objectives. **CapEx shows the highest alignment rate, at 33.1% of a total €5,672 million, while OpEx alignment stands at 26.5% of €1,567 million.** Compared to 2024, both aligned revenue (13.1% → 17.4%) and aligned CapEx (23.9% → 33.1%) increased, while aligned OpEx declined slightly (28.2% → 26.5%). (see Chart 2).

TABLE 4.
État de durabilité

KPI	Montant total	Part des activités éligibles à la Taxonomie	Montant des activités alignées sur la taxonomie	Part des activités alignées sur la taxonomie	Décomposition des activités alignées par objectif environnemental						Part des activités habilitantes	Part des activités transitoires	Activités non évaluées considérées comme non matérielles	Montant des activités alignées sur la taxonomie	Part des activités alignées sur la taxonomie
					Atténuation du changement climatique	Adaptation du changement climatique	Eau	Economie circulaire	Pollution	Biodiversité					
	€ million	%	€ million	%	%	%	%	%	%	%	%	%	%	€ million	%
Chiffre d'affaires	57 922	99,9	10 061	17,4	14,1	-	-	3,3	-	-	16,2	1,1	-	7 369	13,1
CapEx	5 972	100,0	1 879	33,1	33,126,5	-	-	0,0	-	-	23,3	9,8	-	1 122	23,9
OpEx	1 567	100,0	416	26,5	38,5	-	-	-	-	-	26,5	-	-	492	28,2

1.3 Stellantis

Stellantis abandoned its Dare Forward plan, which had targeted 100% battery electric vehicle sales in Europe by 2030.

The group's new 2030 targets are expressed as ranges rather than fixed figures: a reduction in absolute GHG emissions across Scopes 1, 2, and 3 of between 20% and 30% compared to 2021, a reduction in Scope 1 and 2 emissions from plants and sites of between 47% and 50%, and a 70% share of decarbonized electricity in own operations. This use of ranges is explicitly justified by regulatory and market uncertainty. (see Table 5).

The Net Zero target itself has not changed and remains set for 2050; what has shifted is the intermediate trajectory leading to it.

Stellantis is the only one of the four manufacturers reviewed in this article to explicitly acknowledge that its decarbonization targets do not align with a 1.5°C pathway: "Current decarbonization targets are based on internal modeling and do not align with a 1.5°C pathway as defined by the Science Based Target initiative (SBTi) in its current sectoral interim pathway for Original Equipment Manufacturers (OEMs)."

In place of Dare Forward's single-technology approach, Stellantis has adopted a "multi-energy" strategy spanning battery electric vehicles, hybrids, and alternative fuels.

On EU Taxonomy KPIs, Stellantis' 2025 disclosures show 96% of group revenue (€153,508 million) as taxonomy-eligible, with 7% taxonomy-aligned.

TABLE 5.
Progress made toward targets

	Targets		2021 base year/result (unaudited)	Results	
Required targets or entity-specific metrics	2030	2050		2024	2025
Carbon Net Zero Targets: ¹	(in tons of CO ₂ -eq)				
Percentage of reduction in absolute GHG emissions across Scopes 1, 2, and 3 vs. 2021 base year ²	20-30%	Carbon Net Zero ⁴	527.5 million	417.7 million	391.9 million
				% reduction vs. 2021	
				21%	26%
Percentage of reduction in absolute Scope 1 and 2 GHG emissions vs. 2021 base year ^{2,3}	47-50%		4.20 million	2.55 million	2.40 million
				% reduction vs. 2021	
				39%	43%
Percentage of decarbonized electricity used in own operations	70%			45%	59%

¹ The achievement is conditioned by key external enablers: decarbonized energy and grid infrastructure, and conducive public policies for BEV (charging infrastructure, purchasing incentives) impacting our Scope 3 emissions.

² The Scope 1 and Scope 2 emissions targets both account for less than 1 percent of total GHG emissions and therefore their contribution to the overall target individually less than 1 percent.

³ Does not include certain logistics-related emissions that were recategorized from Scope 3 to Scope 1 in 2025.

⁴ With single digit percent compensation of residual emissions.

TABLE 6.**Taxonomy summary KPIs**

			Environmental objective for Taxonomy Aligned activities												
2025 Taxonomy KPIs	Group total	Eligible KPI in	Taxonomy Aligned KPI	Taxonomy Aligned KPI	Climate Change Mitigation	Climate Change Adaptation	Water and Marine Resources	Circular Economy	Pollution Prevention and Control	Biodiversity and Ecosystems	Enabling Activity	Transitional Activity	Activities considered as Not Material	Aligned Activities in 2024	Aligned Activities in 2024
KPI	€ million	%	€ million	%	%	%	%	%	%	%	%	%	%	€ million	%
Revenues	153.508	96	10.090	7	7	-	-	-	-	-	100	0	4	11.379	7
CapEx	8.555	99	2.395	28	28	-	-	-	-	-	100	0	1	4.341	36
OpEx	2.955	96	857	29	29	-	-	-	-	-	100	0	0	1.400	44

CapEx alignment stands at 28% of €8,555 million, and OpEx alignment at 29% of €2,955 million. As with the other manufacturers reviewed, all aligned activity falls under climate change mitigation, with no contribution from the other five environmental objectives. **Compared to 2024, aligned CapEx fell, from 36% to 28%, while aligned revenue stayed broadly stable (7% in both years) and aligned OpEx declined from 44% to 29% (see Table 6).**

Stellantis is the clearest example of a transition plan becoming less predictable as a risk-assessment document. The shift from a 100% BEV Europe target to conditional ranges may be more realistic in light of regulatory and market uncertainty, but it reduces investors' ability to assess the future allocation of capital, the risk of stranded assets, technology choices and exposure to future regulatory tightening.

This uncertainty has already had financial consequences. Reuters reported that Stellantis booked €22.2 billion in charges as it scaled back its electric-vehicle ambitions, illustrating not that the charge should have been predicted with precision, but that miscalibrating the pace, geography and profitability of electrification can become financially material

1.4 Toyota

Toyota's review of its 7th Environmental Action Plan (2025) shows that 21 of its 23 targets have been achieved or are progressing smoothly. Several results notably exceeded their original targets: global average CO₂ emissions from new vehicles were reduced by 32% compared to 2010 levels, against a 30% target, achieved one year ahead of schedule, cumulative sales of electrified vehicles reached 31.75 million units, surpassing the 30 million target, also a year early; and CO₂ emissions from global plants fell by 34% compared to 2013 levels, against a 30% target.¹ The one objective marked as not achieved concerns the Toyota Today for Tomorrow Project, on biodiversity conservation

in partnership with the IUCN; the plan does not specify a revised timeline for this item.

Building on this track record, Toyota launched its 8th Environmental Action Plan, covering 2026–2030 and structured around three pillars (i.e., Carbon Neutrality, Circular Economy, and Nature Positive), translated into specific targets across 17 categories, with regional 2030 targets formulated for 10 regions. However, such regional targets are not yet accessible.

Under the Carbon Neutrality pillar, Toyota targets a 47% reduction in Scope 1 and 2 emissions compared to fiscal year 2020, an 80% adoption rate of renewable electricity, and a 30% reduction in life cycle GHG emissions per unit. For Scope 3 Category 11 (use of sold products), a 33.3% reduction in average emissions per new passenger and light commercial vehicle and an 11.6% reduction for medium and heavy freight trucks, both compared to 2019, are targeted.

TABLE 7.
Validation and Approval for Toyota's Emissions Reduction Targets by the Science Based Targets* initiative (SBTi)

Emissions		Target year	Base year	Reduction rate	Validation/Approval class
Scope 1 and 2		2035		68%	1.5°C
Scope 3 category 11 (emission intensity)	Passenger cars and light commercial vehicles	2030	2019	33.3%	Well below 2°C
	Medium and heavy-freight trucks			11.6%	

* Science Based Targets Initiative: It uses scientifically based criteria to certify that a company's scope 1 and 2 reduction targets are consistent with the goal of limiting the rise in the global average temperature to below 1.5°C compared to pre-industrial levels. With regard to automobile manufacturers, SBTi also approves the reduction targets for scope 3 category 11 emissions (g-CO₂e/km) as being in line with the criterion of "limiting the global average temperature rise to well below 2°C above pre-industrial levels".

Under the Circular Economy pillar, the “Car-to-Car” approach to batteries rests on three complementary levers: reducing the amount of critical minerals required in next-generation batteries, extending batteries' useful life through reuse and recycling, and enabling the recovery of critical minerals such as nickel, cobalt, and lithium through a battery-to-battery supply chain. Toyota also aims to use an average of 30% or more recycled materials by weight in new models introduced after 2030. (see Table 7).

1.5 Comparative EU Taxonomy investment KPIs (see Table 8)

CapEx and OpEx provide a more forward-looking indication of transition implementation than aligned revenue, as they show how manufacturers are allocating investment and operating resources. Volkswagen and Renault report almost identical CapEx alignment rates, at 33.6% and 33.1% respectively, but Volkswagen's substantially larger investment base means that the absolute scale of its taxonomy-aligned capital expenditure is considerably higher. Renault nevertheless recorded the strongest annual improvement, with aligned CapEx increasing by 9.2 percentage points. Stellantis moved in the opposite direction: its aligned CapEx fell by 8 percentage points and its aligned OpEx by 15 percentage points, consistent with the broader weakening and recalibration of its electrification trajectory. Volkswagen records the highest OpEx alignment rate, at 38.5%, ahead of Stellantis at 29% and Renault at 26.5%.

2. Decarbonizing the value chain: diverging approaches

2.1 Scope 3: a common challenge, variable responses

Across all four manufacturers, Scope 3 emissions account for the largest share of their carbon footprints, concentrated in two categories: Category

11 (use of sold products) and Category 1 (purchased goods and components).

Volkswagen and Renault are primarily betting on fleet electrification to reduce these emissions. Renault, for instance, has announced that 16 of the 22 new models it plans to launch in Europe by 2030 will be fully electric.

Toyota takes a more segmented approach, setting separate numerical targets by vehicle category: a 33.3% reduction for passenger cars and light commercial vehicles, and an 11.6% reduction for medium and heavy freight trucks, both by 2030 against a 2019 baseline.

Stellantis stands apart in explicitly conditioning its Scope 3 targets on external factors. Its 2030 commitments (ie. a 20% to 30% reduction in absolute GHG emissions across Scopes 1, 2 and 3, a 47% to 50% reduction for Scopes 1 and 2 from plants and sites, and a 70% share of decarbonized electricity in its own operations) are described as dependent on “key external enablers including decarbonized energy and grid infrastructure, and conducive public policies for BEV (charging infrastructure, purchasing incentives) impacting our Scope 3 emissions.” This is a notable departure from the other three manufacturers, which present their Scope 3 targets as commitments rather than conditional outcomes.

2.2 Upstream and downstream

Regarding the upstream, Volkswagen stands out for embedding binding CO₂ clauses in its newly signed supplier contracts. Stellantis, by contrast, relies on its Global Responsible Purchasing Guidelines, which set expectations for suppliers but without a comparable quantified constraint. Toyota's approach centers on materials rather than contractual obligations, with a target of 30% recycled materials and a “Car-to-Car” strategy for battery materials. Renault reports that 30% of materials used across vehicles leaving its plants in 2025 came from the circular economy, combined with an eco-design approach.

Each manufacturer adopts a different approach regarding the downstream side of their production.

TABLE 8.

	Volkswagen	Renault	Stellantis	Toyota
Total CapEx	€69.879m	€5.672m	€8.555m	-
Taxonomy-aligned CapEx	33.6%	33.1%	28.0%	Not subject to CSRD taxonomy reporting
Change vs. 2024	+6.3 pp	+9.2 pp	-8.0 pp	-
Total OpEx	€12.915m	€1.567m	€2.955m	-
Taxonomy-aligned OpEx	38.5%	26.5%	29.0%	Not subject to CSRD taxonomy reporting
Change vs. 2024	-1.9 pp	-1.7 pp	-15.0 pp	-

Volkswagen addresses its dealership network through the goTOzero Retail plan, based on the ISO 14001 standard, with emissions accounted for under Scope 3 Category 14 ("franchises"). Renault's downstream focus is on the circular economy in after-sales: 30,000 vehicles reconditioned in 2025 through its renew Factories, supporting a circular after-sales revenue of €145 million. Toyota's downstream effort centers on end-of-life vehicle treatment through its "100 dismantlers" project and associated recycling initiatives.

3. Transition-related uncertainties

Transition plans are supposed to serve not only as climate-disclosure documents, but also as transition-risk assessment tools. For banks and investors, the central question is therefore not simply whether a manufacturer has announced a Net Zero target or published taxonomy KPIs, but whether the plan is consistent with the strategy, the means, the global and European environment and what are the transition risks.

Recent developments in the European automotive sector suggest that the reporting on the transition plan answers these questions only partially. The main risks revealed by the plans reviewed here can be grouped into four channels: regulatory and policy risk, technology risk, market risk, and reputation or ESG-rating risk. These risks are closely connected: regulatory uncertainty affects demand; demand affects capacity and margins; technology choices affect stranded-asset risk; and all of these factors influence credit quality, ESG assessments and access to capital.

3.1 Recent development revealing transition risks

Recent developments show that transition-related costs and constraints are difficult to predict, especially when regulation, technology, consumer demand, Chinese competition, energy prices and industrial capacity are changing simultaneously. The usefulness of a transition plan is to help banks and investors understand the range of possible financial effects attached to different transition scenarios.

Volkswagen illustrates this difficulty particularly well. The group provides the most granular transition disclosure reviewed in this article and has already achieved its 2030 Scopes 1 and 2 target. Yet recent restructuring discussions point to cost competitiveness, employment and industrial-capacity pressures that are not captured by emissions KPIs or taxonomy-alignment ratios. Reuters reported that Volkswagen was considering up to 100,000 job cuts and four German plant closures, against a background of pressure from

Chinese competitors, declining margins and trade tensions. These developments do not prove that Volkswagen's transition plan was "wrong"; they show that a detailed climate plan may still fail to make visible the financial uncertainty associated with industrial execution, software, platform competitiveness, labor adjustment and market absorption.

Renault illustrates a different form of uncertainty. Its recent EV momentum suggests that transition risk is not only about insufficient demand. Stronger-than-expected demand may also create constraints: production capacity, additional shifts, battery sourcing, supplier readiness, working capital and margin preservation. A recent interview with Renault's CEO reinforces this point. François Provost confirms strong EV momentum, notably with more than 200,000 Renault 5 units produced since launch, but links the success of electrification to cost reduction, pricing and margins. Renault therefore illustrates a transition risk that is not driven by weak EV demand, but by the ability to scale production profitably.

Stellantis illustrates the risk of recalibrating the transition pathway itself. The abandonment of the previous 100% BEV Europe target, the use of conditional ranges and the EV-related writedown suggest that assumptions on demand, affordability, regulation, pricing and profitability were too fragile. The lesson is not that transition plans should forecast losses with precision, but that they should disclose the assumptions and sensitivities on which the pathway depends.

Taken together, these cases suggest that transition plans disclose targets and strategic orientations, but they do not connect them enough with the financial variables in order to assess the transition risk and its possible impact on capex, margins, production flexibility, technology choices, workforce consequences and market absorption.

3.2 Regulatory uncertainty and policy risk

The automotive sector is highly exposed to regulatory uncertainty. The central issue here is not litigation, but the uncertainty created by emissions standards, product phase-out rules, subsidies, charging infrastructure policy, carbon pricing, local-content rules and potential changes in the 2035 EU framework.

Volkswagen and Renault present a different profile. Both first appear more closely aligned with the European regulatory direction than Stellantis. However, their transition plans do not fully stress-test alternative regulatory scenarios, such as delays in charging infrastructure, lower purchase

subsidies, a weakening of the 2035 target, or, conversely, a renewed tightening of CO₂e standards.

Renault also confirms the centrality of regulatory uncertainty: its CEO calls for a ten-year freeze on new automotive regulations and supports flexibility around the 2035 100% electric target, while maintaining the electrification trajectory.

Transport & Environment's analysis of the European car CO₂e framework appears useful in this respect, as it argues that regulatory flexibility can delay BEV uptake and weaken incentives to scale up cheaper electric models. For banks and investors, this confirms that regulatory uncertainty is not merely an external background variable, as it directly affects the credibility of Scope 3 reduction pathways.

3.3 Technology risks

This risk concerns not only the possibility that existing products become obsolete, but also the uncertainty attached to technical choices on batteries, software, platforms, supply chains, production capacity, charging ecosystems and manufacturing flexibility.

Volkswagen illustrates the execution risk of a large-scale transformation: its plan is more detailed than its competitors', but Moody's credit commentary has highlighted the investment burden associated with emissions regulation, BEVs, and software development. Stellantis illustrates a different form of technology risk: an overly aggressive EV trajectory followed by a strategic reversal. Its large EV-related writedown shows that misjudging the pace, profitability, or geography of electrification can translate into immediate financial losses.

Renault further illustrates battery supply-chain risk: its CEO acknowledges delivery difficulties at Verkor and states that Renault cannot accept batteries priced 30% above market levels. This shows that European battery localization may reduce strategic dependence while creating ramp-up and cost risks.

In this sense, technology risk is not simply a question of choosing "the greenest" technology. A highly ambitious electrification strategy can itself create transition risk if battery costs, software capabilities, platform standardization, supplier readiness or consumer affordability do not follow the assumed trajectory.

3.4 Market risks

Demand for electric vehicles remains volatile and uneven across regions. Weak demand can expose overinvestment, but stronger-than-expected demand can expose capacity constraints.

As of Stellantis, its EV pullback suggests that the

previous trajectory was not sufficiently supported by market conditions: demand, affordability, pricing power, residual values or profitability assumptions appear to have been weaker than expected. For banks and investors, this is precisely the kind of information a transition plan should make visible. A Net Zero target is not enough if the plan does not explain how the group intends to sell low-emission vehicles profitably, at scale, and across regions with different levels of consumer readiness.

3.5 Reputation risks

Transition plans also affect how customers, employees, communities, NGOs, and financial counterparties perceive a manufacturer. A firm seen as delaying electrification may face reputational pressure from climate-focused investors and civil society. Conversely, a firm announcing large restructuring measures may face social and political resistance, even if its emissions trajectory appears credible (cf. Volkswagen).

The asymmetry in the quality and structure of these value-chain disclosures creates difficulties for banks and investors who must assess the transition risk of their portfolios as part of their own prudential transition plans (Scope 3, category 15).

ESRS E1 expects companies to disclose a formalized transition plan that is compatible with a 1.5°C pathway, built on gross reduction targets, and explicitly linked to financial decision-making. Against this benchmark, the four manufacturers reviewed here satisfy these expectations to very different degrees.

The issue is not only whether each manufacturer has set decarbonization targets. For banks and investors, the more important question is whether the plan makes transition risk measurable. Four risk channels are particularly relevant: policy and legal risk, technology risk, market risk, and reputation risk.

These four channels show why sector-level exposure statistics alone are insufficient. The automotive sector may appear limited in aggregate banking portfolios, but it is far from negligible. According to the EBA, the automotive sector accounted for up to 8% of EU banks' total manufacturing loans as of mid-2025. Exposure is also unevenly concentrated: some large banks, including Société Générale, BNP Paribas and Banco Santander, carry meaningful exposure through leasing and auto-finance activities, while some smaller institutions, such as Commerzbank and UniCredit, report automotive exposures above 3% of total loans.

These aggregate figures, however, say little about transition risk specifically. They do not distinguish

among manufacturers based on how credible, advanced, or financially relevant their transition plans are. A bank with concentrated exposure to a single manufacturer would therefore need, under the logic of the EBA Guidelines and CRD VI, to assess differences of the kind documented in this article: a manufacturer's distance from a 1.5°C-aligned pathway, the extent to which its Scope 3 targets are unconditional commitments rather than contingent on external enablers, the granularity of its supplier-level disclosures, and the visibility it provides on those four risks. None of this is captured in sector-level exposure statistics, which still treat the automotive sector as a relatively homogeneous risk category.

3.6 External assessments: rating agencies and NGOs

ESG ratings provide interesting assessments of the transition policy of car companies with different scopes and methodologies.

- **MSCI** evaluates a company's management of financially material ESG risks and opportunities relative to industry peers;
- **Sustainalytics** measures absolute unmanaged ESG risk, combining the company's exposure with its management of that exposure;
- **ISS** ESG's Prime status indicates that a company exceeds an industry-specific minimum sustainability threshold;
- **CDP** scores primarily reflect the quality and maturity of environmental disclosure and reported management practices.

Volkswagen is rated B by MSCI, C+ Prime by ISS ESG, Medium Risk by Sustainalytics and A– by CDP Climate. Taken together, these assessments indicate comparatively strong climate disclosure under CDP and performance above ISS ESG's sector-specific Prime threshold, alongside a material residual level of unmanaged ESG risk under Sustainalytics. They do not, however, establish whether Volkswagen's transition plan adequately captures specific execution risks such as cost competitiveness, technology choices or future regulatory change.

Renault reports Low Risk from Sustainalytics, BBB from MSCI, C+ Prime from ISS ESG, A– from CDP Climate and 83/100 from EcoVadis. These results indicate relatively limited unmanaged ESG risk under Sustainalytics, compliance with ISS ESG's sector-specific Prime threshold and comparatively mature climate disclosure under CDP. Nevertheless, the aggregate ratings cannot by themselves demonstrate that Renault's transition plan is sufficiently granular for investor analysis, as they also incorporate ESG issues and management practices beyond the plan itself.

For Stellantis, the most directly relevant external assessment concerns climate-policy engagement rather than its aggregate ESG rating. InfluenceMap assigns the company a D+ climate-policy engagement performance band, identifying both positive and negative engagement, including advocacy concerning EU CO₂ standards and US emissions and fuel-economy requirements. This evidence is specifically relevant to the consistency between the company's stated transition objectives and its policy engagement. It therefore reinforces concerns arising from conditional targets and the company's stated non-alignment with a 1.5°C pathway more directly than a broad ESG score would.

Toyota is also covered by the main ESG-rating providers, but its current MSCI, Sustainalytics and ISS ESG ratings could not be verified through recent publicly accessible primary sources, unlike those of Volkswagen and Renault. The most directly comparable external assessment is therefore CDP, which awarded Toyota an A score for Climate Change and an A– for Water Security in January 2026, indicating mature environmental disclosure and management practices. Toyota is also assessed by InfluenceMap, whose detailed scorecard displays a D+ climate-policy engagement performance band, reflecting engagement that remains misaligned with Paris-aligned climate policy. These assessments therefore point to a mixed profile: strong environmental disclosure, but materially weaker alignment between the company's stated transition objectives and its climate-policy engagement.

Overall, external assessments complement rather than replace transition-plan analysis. Aggregate ESG ratings indicate how different providers assess disclosure, ESG risk management or relative sectoral performance, but they do not necessarily evaluate the ambition, feasibility or financial integration of the transition plan itself. These dimensions remain the authors' assessment, based on the manufacturers' published plans, financial disclosures and available evidence on policy engagement.

4. The regulatory framework as a determining variable

4.1 Europe versus the rest of the world: a marker of regulatory pressure

The targets set by each manufacturer differ markedly between Europe and other regions; a

pattern that may point to the regulatory framework as a key driver of ambition.

Volkswagen requires 100% renewable electricity in Europe, whereas China uses a broader “100% carbon-neutral” standard that includes nuclear power. Renault targets a 50/50 split between battery electric and hybrid vehicle sales in Europe, against a looser target of “50% electrified vehicles” outside Europe. Toyota has formulated regional 2030 targets across ten zones, though differentiated figures for most regions outside Europe are not yet publicly detailed.

Stellantis is the most explicit of the four in laying out how regulation shapes its strategy market by market: “In Europe, with the announcement of the so-called Automotive Package in December 2025, it was proposed that the CO_{2e} reduction target for 2035 (vs. 2021) for both passenger cars and light commercial vehicles (LCV) would be reduced from -100% to -90%. The remaining 10% of emissions would be compensated through two mechanisms, with up to 7% from European green steel and up to 3% from e-fuels and biofuels. [...] In the UK, in line with the ZEV Mandate/VETS Order regulations, we are working towards the phase-out of the sale of new petrol and diesel cars from 2030 and of vans from 2035. In the U.S., there is no target date to phase out internal combustion engine vehicles.”

Toyota’s objectives will also differ according to different regions of the world: the 17 targets of its new Environmental Action Plan for 2030 will be translated into sub-targets for 10 regions still to be published.

This confirms that regulation is not merely a contextual factor but a central determinant of the transition plan usefulness for investors. A manufacturer whose targets vary significantly by region may be better adapted to short-term market realities. Still, it also becomes harder for investors to identify a single group-level transition pathway. The more a plan depends on external regulatory enablers, the more investors need scenario analysis showing how emissions, capex and profitability would evolve under different policy assumptions.

4.2 The Automotive Package: diverging positions

The European Commission’s Automotive Package, announced in December 2025, proposed easing the 2035 CO₂ target from -100% to -90% for passenger cars and light commercial vehicles, with flexibilities allowed for green steel and e-fuels.

Manufacturers’ reactions to this package differ in both substance and form. Volkswagen and Renault have pushed for flexibility on the 2035 target,

mainly through ACEA, the European automobile manufacturers’ association, alongside more limited individual statements. Stellantis has taken the most explicit individual public position, stating that “the proposals do not meaningfully address the issues that the industry is facing right now.” Toyota has not taken an identifiable public position on the issue, engaging primarily as an ACEA member.

The Automotive Package, therefore, raises a broader question for transition planning. If regulatory flexibility allows manufacturers to slow EV deployment without formally abandoning their long-term Net Zero targets, transition plans may become less informative. They may continue to display 2050 objectives while weakening the intermediate milestones that matter most for investors’ credit horizons, capital-allocation decisions and prudential transition plans.

Concluding remarks

Across the manufacturers reviewed, the comparison reveals less a single industry trajectory than different forms of transition plans which are never fully informative.

Volkswagen provides the most detailed disclosures and has already met its 2030 Scopes 1 and 2 targets. Still, it has not raised its ambition accordingly, and the recent announcement of a very strong restructuring of its production sites with a big impact on employment (up to 100,000 job cuts) illustrates that the decarbonisation process is more complicated than what is disclosed in a transition plan. Renault reports genuine progress and benefits from strong EV demand, yet its disclosures remain less granular than Volkswagen’s, particularly regarding capacity, margins, supplier transformation, and the financial implications of electrification. Stellantis is the clearest case of a weakened transition trajectory: the group has moved away from its previous 100% BEV target in Europe by 2030, adopted conditional ranges, and acknowledged that its current targets do not align with a 1.5°C pathway. Toyota has its own publications, not constrained by EU regulation; it has chosen to publish a first Environmental plan ending in 2025 with seemingly satisfactory results and a new one which is in continuity, except for objectives linked to nature which have been abandoned and with regional targets which are still to be published.

It is, of course, interesting to compare the transition plans, the level of ambition, and the current results. The ESG rating agencies also provide useful assessments of the transition

trajectories of the car makers. But each case illustrates a different difficulty in using transition plans as risk-assessment tools: Volkswagen shows the limits of detailed climate disclosure when industrial and cost pressures remain insufficiently connected to financial and other economic variables; Renault shows the need to link EV momentum with capacity, margins and supply-chain execution; Stellantis shows how conditional targets may better reflect uncertainty while reducing predictability for investors.

This matters directly to banks and investors. Sector-level exposure statistics cannot capture the differences among a manufacturer whose Scope 3 targets are unconditional, one whose EV demand is rising faster than its production capacity, and one whose intermediate decarbonization pathway has been weakened. Under the EBA Guidelines and CRD VI logic, financial institutions will increasingly need to assess transition risk at the counterparty level rather than treating the automotive sector as a homogeneous exposure category.

Transition plans should therefore be read as climate narratives, but also as risk documents. On this test, the plans reviewed here remain only partially satisfactory. Volkswagen is detailed but incomplete; Renault is directionally encouraging but insufficiently granular; Stellantis is transparent about uncertainty but less predictable and less aligned; Toyota seems to be on a satisfactory path of decarbonisation with less comparable data and possible risk analysis. **Ideally, the generation of transition plans will need to connect better decarbonisation targets with scenario analysis, Capex, profitability, employment, supply chains, and financing channels if they are to be genuinely useful to financial institutions.**

References

Company reports and disclosures

- Toyota Motor Corporation, Sustainability Data Book 2025.
https://global.toyota/pages/global_toyota/sustainability/report/sdb/sdb25_en.pdf
- Volkswagen Group, Annual Report 2025 – Sustainability Report: Climate Change.
<https://annualreport2025.volkswagen-group.com/sustainability-report/environmental-information/climate-change.html?tabc=2e2>
- Stellantis, 2025 Climate Policy Report.
<https://www.stellantis.com/content/dam/stellantis->

[corporate/sustainability/esg-disclosures/Stellantis-2025-Climate-Policy-Report.pdf](https://www.stellantis.com/content/dam/stellantis-corporate/sustainability/esg-disclosures/Stellantis-2025-Climate-Policy-Report.pdf)

- Renault Group, Integrated Report 2025–2026: Reconciling Sustainable Development and Performance.
<https://www.renaultgroup.com/magazine/nos-actualites-groupe/rapport-integre-2025-2026-concilier-developpement-durable-et-performance/>
- Moody's Ratings, Credit Opinion – Volkswagen Aktiengesellschaft, 19 May 2026.
https://uploads.vw-mms.de/system/production/documents/cws/003/281/file_en/1471ea3b0a54aca0e36e2336ce21c89c08a3bc36/Credit_Opinion-Volkswagen-Aktiengesellschaft-19May2026-PBC_1474693_1.pdf

European institutions and financial-sector analysis

- European Banking Authority, Risk Assessment Report – Spring 2025, June 2025.
<https://www.eba.europa.eu/sites/default/files/2025-06/93431cb8-4877-4325-82f9-0a41ba71e45a/Risk%20Assessment%20Report%20Spring%202025.pdf>

Automotive transition and climate analysis

- Transport & Environment, "EV Progress Report 2025."
<https://www.transportenvironment.org/articles/ev-progress-report-2025>
- Transport & Environment, "Mercedes the Only EU Carmaker Not on Track to Meet CO₂ Targets: Analysis."
<https://www.transportenvironment.org/articles/mercedes-the-only-eu-carmaker-not-on-track-to-meet-co2-targets-analysis>
- Reclaim Finance, "Leasing Companies: The New Giants of the Automotive Market Have No Credible Climate Strategy," 2 July 2025.
<https://reclaimfinance.org/site/en/2025/07/02/leasing-companies-the-new-giants-of-the-automotive-market-have-no-credible-climate-strategy/>
- AInvest, "Tariffs: Navigating Europe Auto Sector Risks in 2025."
<https://www.ainvest.com/news/tariffs-navigating-europe-auto-sector-risks-2025-2504/>

Recent industry and financial developments

- Reuters, "Renault Electric Vehicle Orders Have Surged Since Start of Iran War, Says CEO," 10 June 2026.
<https://www.reuters.com/business/renault-electric-vehicle-orders-have-surged-since-start-iran-war-says-ceo-2026-06-10/>

- Reuters, "Volkswagen CEO Aims to Cut Up to 100,000 Jobs in Coming Years, Manager Magazin Reports," 26 June 2026.
<https://www.reuters.com/business/autos-transportation/volkswagen-ceo-aims-cut-up-100000-jobs-next-years-manager-magazin-reports-2026-06-26/>
- Reuters, "S&P, Moody's Cut Stellantis to Lowest Investment Grade," 10 February 2026.
<https://www.reuters.com/business/sp-moodys-cut-stellantis-lowest-investment-grade-2026-02-10/>
- Reuters, "Automaker Stellantis Books €22.2 Billion in H2 2025 Writedowns on EV Pullback," 6 February 2026.
<https://www.reuters.com/business/automaker-stellantis-books-222-bln-euro-writedowns-h2-2025-ev-pullback-2026-02-06/>
- Les Echos, "L'industrie automobile européenne joue sa survie, mais Renault est prêt : François Provost dévoile son plan de bataille."
<https://www.lesechos.fr/industrie-services/automobile/lindustrie-automobile-europeenne-joue-sa-survie-mais-renault-est-pret-francois-provost-devoile-son-plan-de-bataille-aux-echos-2240848>

ESG ratings and external assessments

- Volkswagen Group, "ESG Ratings," Annual Report 2025.
<https://annualreport2025.volkswagen-group.com/group-management-report/shares-and-bonds/esg-ratings.html>
- Volkswagen Group, "ESG – Ratings."
<https://www.volkswagen-group.com/en/esg-ratings-19353>
- Renault Group, "Sustainable Development: More Responsible and Inclusive Mobility – Extra-financial Ratings."
<https://www.renaultgroup.com/en/responsability/>
- Toyota Motor Corporation, "External Recognition," Sustainability.
<https://global.toyota/en/sustainability/achievement/>
- InfluenceMap, "Stellantis – Automotive Climate Tool," company profile.
<https://automotive.influencemap.org/company/Stellantis-f74099fe7b65b22ca2748c9aba196add-1801>
- InfluenceMap, "Toyota Motor – Automotive Climate Tool," company profile.
<https://automotive.influencemap.org/company/Toyota-Motor-1765>