

In Europe's Auto Market It's All About Curbing CO2 Emissions

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Key Takeaways

- European automakers' efforts to comply with EU regulation on carbon dioxide (CO2) emissions will squeeze their margins in 2019 and 2020.
- The introduction of new electric vehicle models might not be sufficient to achieve compliance because their acceptance in the market is uncertain.
- It is easier for premium auto manufacturers to gain such acceptance, but overall it would take time to restore margins to companies' medium-term guidance.
- We believe the quest for volumes to reduce unit costs will increase the market's appetite for consolidation over the next few years.

In 2020, the European Commission will start phasing in tougher CO2 emission targets for new passenger cars and light commercial vehicles in the EU. Regulatory compliance with these mandatory targets is reshaping original equipment manufacturers' (OEMs') strategies to adapt to lower earnings, associated with the transition to producing and selling lower-emission vehicles. The transition comes with sizeable investments in technology and infrastructure. A high share of plug-in hybrid electric vehicles (PHEV) and battery-electric vehicles (BEV) will come to the market through 2023. The European automotive industry invests more than €50 million annually--more than 5% of its turnover according to ACEA--and ranks second only to the pharma and technology industry in Europe.

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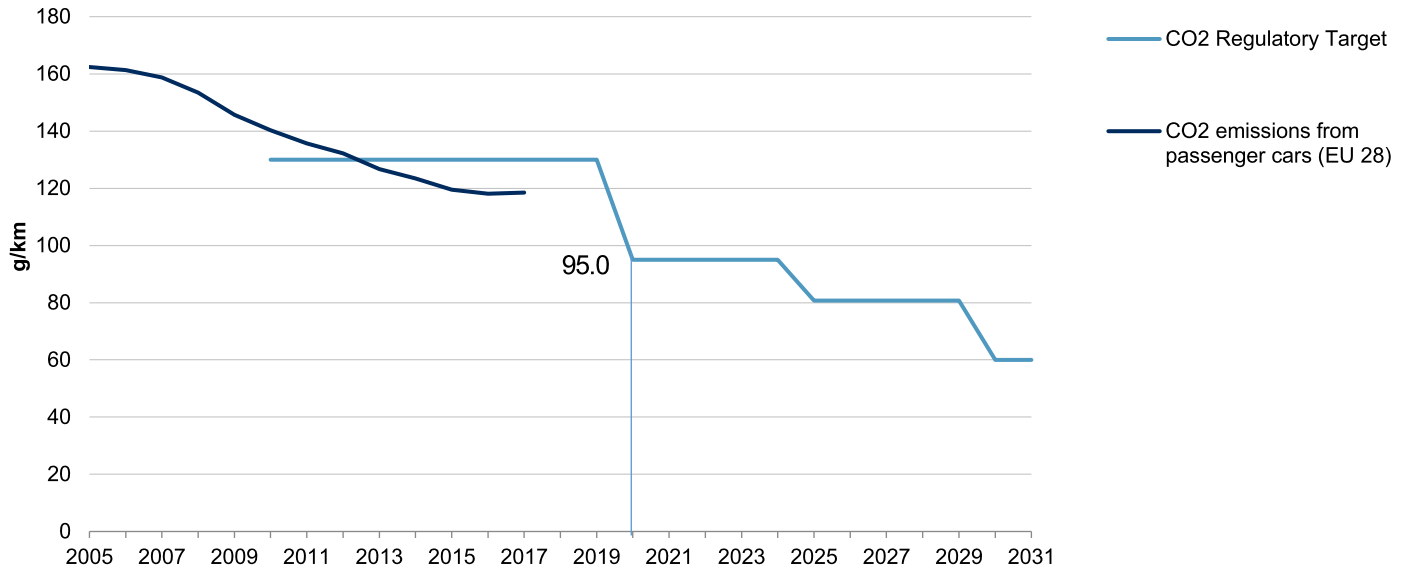
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Chart 1

Europe's Stricter CO2 Emission Standards Kick In Next Year



Source: EEA; S&P Global Ratings.

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Over the next two years, we think the introduction of new low-emission models is a necessary, but not sufficient, condition to bridge the current CO2 gap for many automakers. Because of market acceptance risks, increased competition from a wider choice of models, and price differences between technologies, the availability of low-emission models alone is probably not sufficient to ensure full compliance with the new CO2 emission requirements for all manufacturers.

OEMs' strategic choice of technology to meet the targets may vary, but we believe they all face declining margins. This is because the cost of producing electric vehicles is typically higher than for conventional vehicles (mainly due to still-high battery costs), and buyers could be reluctant to pay the cost difference for such cars, so margins are lower. Although purchasers of premium vehicles are less price sensitive than mass-market car buyers, we believe low electric-vehicle sales volumes in the premium segment could considerably lengthen the time needed for OEMs to recoup their investments. This would make it challenging for OEMs' operating margins to catch up to historical guidance.

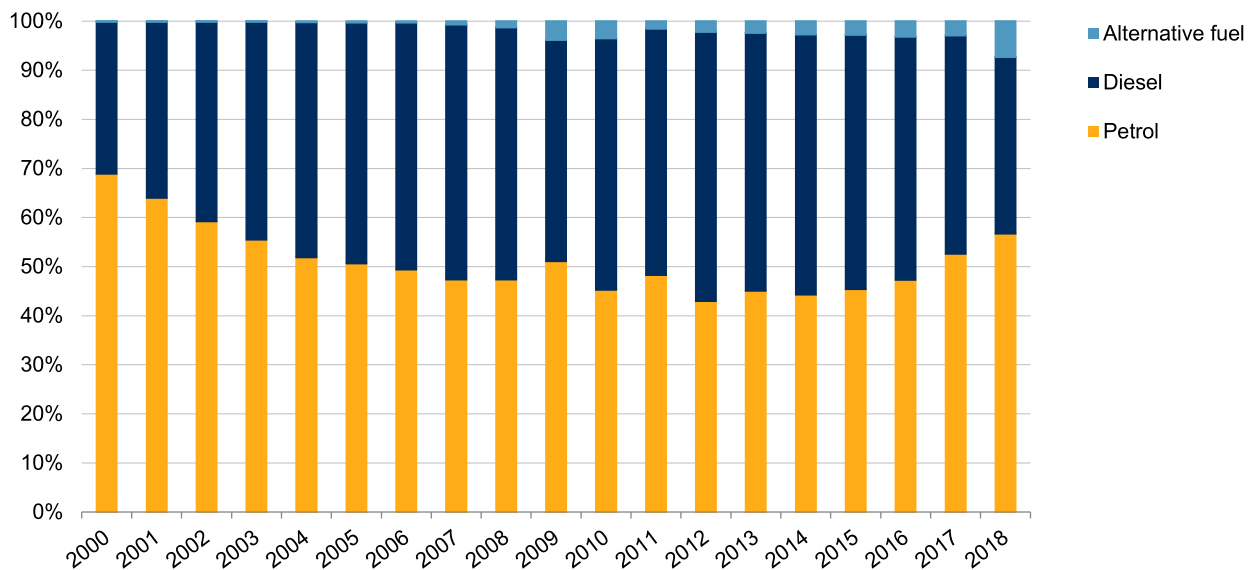
We thus expect all OEMs, including premium manufacturers, to deploy stringent cost management to contain the expected margin erosion. What's more, we now believe that cost management will trigger consolidation, particularly in markets driven by regulation, such as Europe. We expect pressure on profitability and partnerships/consolidation to drive our ratings on European automakers over the next two years.

Emissions Reduction Has Stalled

European passenger car manufacturers still have some way to go to achieve the next regulatory CO2 emission target of 95 grams per kilometer (g/km) in 2021. As of 2020, 95% of the auto fleet in Europe needs to be compliant. Since 2005, the OEMs have consistently achieved a reduction of CO2 emissions in new vehicles. However, progress came to a standstill in 2017 as the share of diesel-powered vehicle sales dropped and demand for less fuel-efficient SUV body styles increased.

Chart 2

Share Of Fuel Type: New Passenger Cars (EU 28)



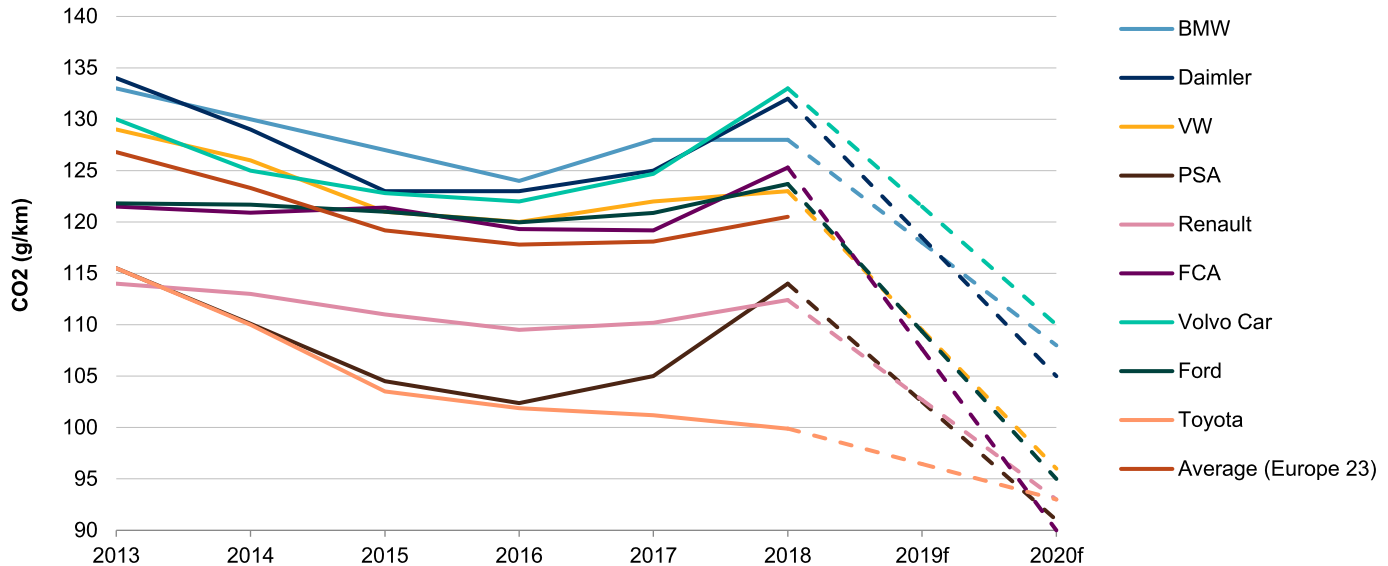
Source: European Automobile Manufacturers Association (ACEA).

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Although official EEA (Europe Environment Agency) statistics are not yet available for 2018, we believe average CO2 emissions increased, since the market share of petrol vehicles rose by almost 6.5 percentage points last year, accounting for 56.7% of all cars sold in the EU. In the first quarter of 2019, nearly 60% of all new passenger cars registered across the EU ran on petrol, while less than one-third ran on diesel. This trend does not bode well for CO2 emissions in 2019. With the exception of Toyota, the auto manufacturing industry will need to reduce emissions by more than 20 g/km on average in less than two years (see chart 3).

Chart 3

Average CO2 Emissions Of European Fleet



Source: S&P Global Ratings, based on companies' annual reports and companies' corporate social responsibility reports.
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We See Five Ways To Restore Momentum

Over 2019 and 2020, OEMs in Europe should be able to at least partly bridge the emissions reduction gap through:

- Introducing new lower-emission models, mainly PHEVs and full BEVs.
- Technological innovations to improve aerodynamism and reduce the weight of components. The maximum emission credits for these eco-innovations per manufacturer are 7 g/km per year.
- CO2 supercredits: Zero and low-emission cars lower-emission vehicles (lower than 50 g/km) carry a higher weight (2x in 2020, 1.67x in 2021, and 1.33x in 2022) in the calculation of manufacturers' average emissions.
- Dropping high-emission vehicles from the product range (for example, Renault will withdraw the Lada brand from Europe).
- Pooling agreements (such as FCA with Tesla). Automakers may form a pool for the purpose of meeting their CO2 obligations. Such agreements enable the pool to be counted as one entity that needs to comply with a joint target. This type of flexibility allows manufacturers to decide on the most efficient way of complying with the regulation.

We believe new vehicle models, PHEV and BEV, in particular, will be critical for OEMs to achieve emission targets by the end of 2020. PHEV emissions, depending on the model, would typically

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range between 65 g/km (Land Rover RR Sport 2.0 SI4 PHEV SE) and 20 g/km (Toyota Prius 1.8 Hybrid Plug-in E-cvt), levels that are far below the average for the best-selling models in Europe early this year.

Table 1

Popular Vehicles Sold In Europe (Q1 2019)

Rank	Make and model	CO2 emissions (g/km)
1	Volkswagen Golf 1.9 TDI105	119-162
	Volkswagen Polo	95-180
2	Renault Clio	104-114
3	PSA Citroen c3	90-107
4	Mercedes Classe C	103-132
5	BMWseries 3	136-146
6	Audi A4	95-144
7	Tesla Model 3	0

Source: S&P Global Ratings and company reports.

We do not expect mild hybrid versions (for Toyota Prius approximately 80 g/km) to contribute substantially to emission reduction over the next decade because their average emissions would be just at the average CO2 emission level in 2025 (80 g/km) in 2025 and exceed the limit in 2030 of less than 60 g/km. Below 70 g/km, the market's uptake of BEV becomes necessary for compliance.

No First-Mover Advantage In Electrification

The frontrunners in electrification, like BMW and Renault, did not materially outperform peers in 2018 in terms of average CO2 emission, even though both brought electric vehicles to the market early (the i3 and i8 for BMW, and the Zoe for Renault). This begs the question: Does electrification provide a sustainable first-mover advantage?

We see little evidence of it. In order to limit margin dilution, OEMs appear to have had so far little interest in aggressively supporting the sale of electric vehicles. Even in a market where there's an increasing variety of models at different prices, we believe market acceptance remains a risk. This is because the advantage of a lower or at least equal ownership cost (including residual value) for the customer is not yet apparent. This risk supports FCA's strategic decision to enter a pooling agreement with Tesla, which dilutes its margins but reduces its exposure to market risk. In addition, there is uncertainty on the residual value of new electric vehicles as battery technology evolves.

Because fines correlate closely with passenger car registrations in the EU, the cost per gram of CO2 exceeded can vary substantially among automakers, and is high for OEMs with large European market shares, like VW, PSA, and Renault (see table 2: estimates rely on 2018 EU registrations).

Table 2

Potentially High Fines For OEMs With Large European Market Shares

	Cost per 1g of CO2 exceeded on specific company target (mil. €)	1g as a % of S&P adjusted EBITDA in 2020
BMW	90-95	<1%
Daimler	85-90	<1%
FCA	90-100	Approximately 1%
Ford Motor Co.	90-100	Approximately 1%
PSA	250-280	3%-4%
Renault	140-160	2.5%-3.5%
Toyota	60-80	<0.5%
Volkswagen	330-350	Approximately 1%
Volvo Car	25-30	1%-1.5%

Source: S&P Global Ratings and companies' corporate social responsibility reports.

Margins Are Unlikely To Recover In 2019-2020

The stronger the bias of the fuel mix toward PHEV and BEV, the higher the dilution of OEMs' profitability in 2019-2020. This is because those models have higher production costs and typically lower margins than traditional internal combustion engines, since consumers are unlikely to pay high price premiums for electric vehicles.

The burden on margins will come at a time when higher investments in research and development (R&D) and capital expenditure (capex) for vehicle electrification are already straining profitability and cash flows. We estimate that both areas will have absorbed 10-11% of revenues in 2018-2019. If the mix in OEMs' vehicle portfolios does not comply with the CO2 requirements, potential fines or the cost of credits purchased via pooling agreements would reduce OEMs' margins. At the same time, prospects for volume growth in 2019-2020 are bleak, in our view, since we expect a decline of global sales in 2019 (see "Worldwide Auto Sales Will Slump More Than Expected In 2019," published May 6, 2019, on RatingsDirect), putting additional pressure on margins.

What Factors Will Make A Difference?

So far, we reflect the negative impact of the expected uptake of electric vehicles only partly in our base cases for auto OEMs we rate. This is mainly because of a lack of visibility on the profitability of new electric models that will hit the market this year or next. The profitability of these vehicles will depend on, among other factors, volumes sold, ability to recoup higher production costs through pricing, and behavior of peers with regards to incentives. However, we remain convinced that the transition to electric mobility comes with margin dilution, for both mass market and premium manufacturers.

We thus expect lower EBITDA margins in 2019-2020 versus 2018, particularly for OEMs with significant sales in Europe. The transition to electric mobility could mean lower margins for premium manufacturers beyond our two-year horizon, whereas mass-market auto producers will enjoy potentially larger scale and presumably stronger negotiating power with future key

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suppliers, global battery producers.

The key factors influencing the auto manufacturing sector's profitability will be the development of battery prices and OEMs' ability to reduce R&D investments through partnerships.

Related Research

- Worldwide Auto Sales Will Slump More Than Expected In 2019, May 6, 2019
- ESG Industry Report Card: Autos And Auto Parts, May 13, 2019

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