



# The European automotive industry

## Unlikely to return to normal

Global Strategy Group



# Has the traditional auto sector peaked?

## A perfect storm is brewing

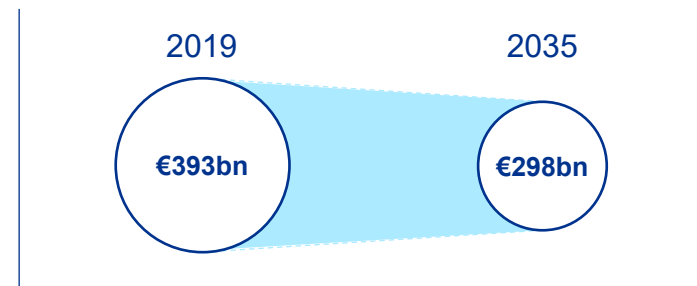
Recessions come and go, yet the automotive original equipment manufacturer (OEM) sector has continued to grow. And that has placed the focus on building up capacity and harnessing process efficiency.

Now, growth no longer looks so certain. In fact, we believe that the automotive OEM sector has entered a period of decline and disruption. Emerging out of the pandemic is a perfect storm that threatens to change the fortunes of the automotive industry.

In our view, five key factors are driving this perfect storm:

- 1 Drop in demand:** Increasing economic uncertainty could mean post-pandemic demand never materializes.
- 2 Socio-demographic change:** Aging populations and declining purchasing power could slow new car sales.
- 3 Shift to electric vehicles (EVs):** The move to EVs is expected to reduce labor intensity and erode market value for traditional OEM suppliers.
- 4 Suppliers near peak debt:** The majority of traditional OEM suppliers could face financial distress.
- 5 Price parity comes early:** Inflation and rising costs could affect the internal combustion engine (ICE) and EV market differently.

## Market size forecast for passenger cars in Europe (excl. batteries) 2019–2035, in constant (2010) EUR billions



Source: KPMG analysis based on Euromonitor data. Data pulled November 2022.

## Strategic implications

The **automotive industry is expected to shrink**, kicking off a period of decline.

**In our view, survival cannot be achieved through financial restructuring** alone given the foreseeable scenario.

We believe there will be a need for an **operational restructuring** within the automotive industry.

**Industry coordination will likely be required** to decide which suppliers stay and which ones go.

# Five key factors driving the perfect storm for auto OEMs

## 01

### Drop in demand

Sales forecasts for the next decade mostly point in one direction: up. Yet, what if demand doesn't materialize? Analysts expected to see a rebound between 2023 and 2025 as OEMs work through order backlogs and demand accumulated during the pandemic. But now, with economic uncertainty rising and recession scenarios seeming more likely, there's a high risk this demand may not materialize.

## 02

### Socio-demographic change

The number of new car buyers is declining. So is their purchasing power. Indeed, statistics suggest that by 2030, the 45 to 64 age demographic will shrink by 10 percent. At the same time, real purchasing power has been in decline since 2019. And the current inflationary trends indicate that the purchasing power gap will likely continue to grow in the near to mid-term.

## 03

### Shift to EVs

The trend towards EVs has the potential to fundamentally change the proportionate value of production inputs. Recent studies suggest electric drivetrains require around 25 percent fewer parts and around 65 percent less assembly time. Battery aside, the total value of parts in an EV is around 15 percent lower than in an ICE car, thus reducing the value of the traditional supplier market.

## 04

### Suppliers near peak debt

Continuous pressure on margins and upcoming debt repayments pose an existential threat to many suppliers. Most supplier debt is payable within 2 years. As cash reserves dwindle, an over-reliance on short-term debt and the need to service debt repayments will likely put immediate pressure on near-term profit generation and reduce suppliers' ability to transform.

## 05

### Price parity comes early

While it's expected inflation will continue to push up the cost and price of traditional ICEs, EVs can mitigate some price increases and maintain margins through increased efficiencies and lower battery prices. This, in turn, could accelerate the confluence of prices and drive more rapid EV adoption in the market.



# Contents

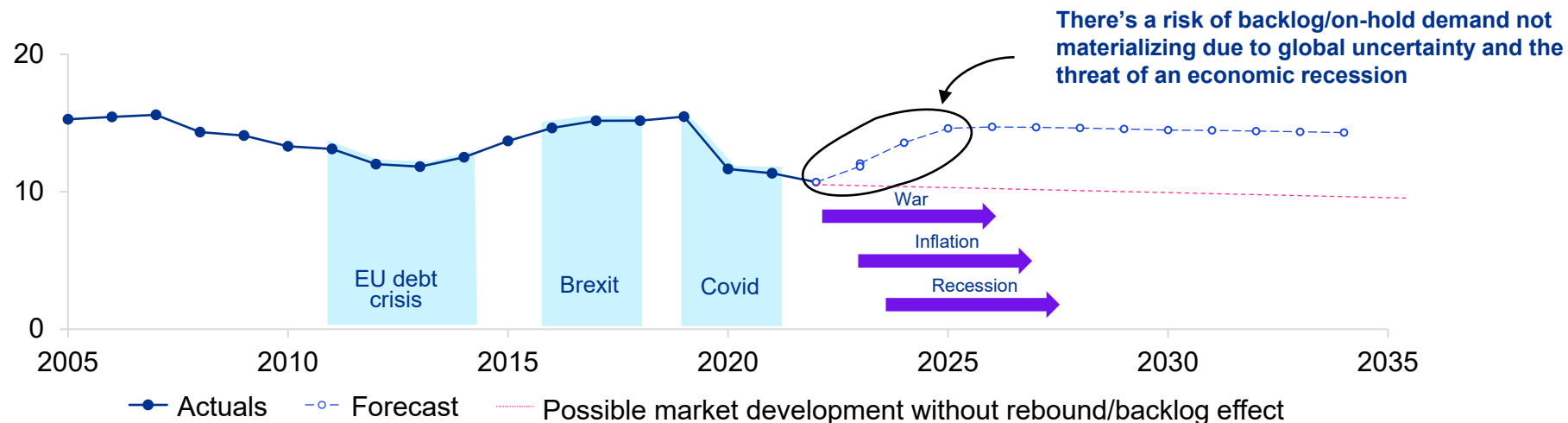


<b>01</b>	<a href="#">Drop in demand</a>	05
<b>02</b>	<a href="#">Socio-demographic change</a>	06
<b>03</b>	<a href="#">Shift to EVs</a>	08
<b>04</b>	<a href="#">Suppliers near peak debt</a>	10
<b>05</b>	<a href="#">Price parity comes early</a>	12
<b>06</b>	<a href="#">Next steps for the European auto industry</a>	14

# 01 What if demand fails to materialize?



**Figure 1: Development of car sales in Europe with forecast and adjustment for crises**  
2005–2034, in #million for the EU27+1



Source: Actual car sales — Euromonitor (Passport) historical and forecast data. Data pulled on 18 October 2022.

## The decline may be underway

Even before the current economic disruption, sales forecasts for the next decade were less than enthusiastic. Most suggested a slight increase in sales over the decade. Some anticipated volume stagnation. But they all agreed that the automotive industry would enjoy a rebound between 2023 and 2025 based on existing order backlogs and accumulated demand from the pandemic period.

In our view, the situation has clearly changed. Macroeconomic trends, rising inflation and economic uncertainty — coupled with global geopolitical disruption — suggest the anticipated rebound in demand may not materialize.

If that is the case, the industry may already be in a state of decline in Europe. OEMs and suppliers may have little time to react.

Drop in demand

Socio-demographic change

Shift to EVs

Suppliers near peak debt

Price parity comes early

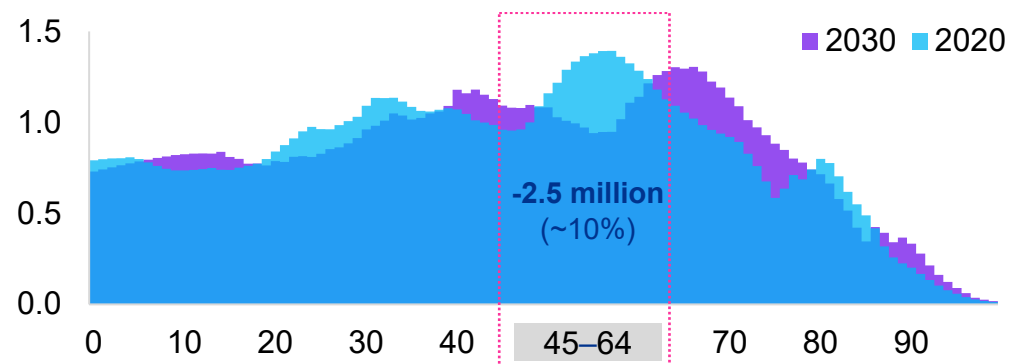
Afterthoughts

# Socio-demographic trends foreshadow a shift in demand

## The key customer demographic for new passengers will likely shrink significantly

In Europe's largest market, Germany, the majority of new cars have traditionally been purchased by customers 45–64 years old. While Germany's total population is expected to grow, this cohort will shrink. In fact, over the next decade, this key demographic will drop by approximately 2.5 million people, or 10 percent of the current market size (Figure 2).

**Figure 2: Germany: Comparison of demographic structure in 2020 and 2030 in # months**



Source: Demographic data from the German National Statistical Office. Data pulled on 15 September 2022.

% new car purchases →

29%

<45

47%

45–64

24%

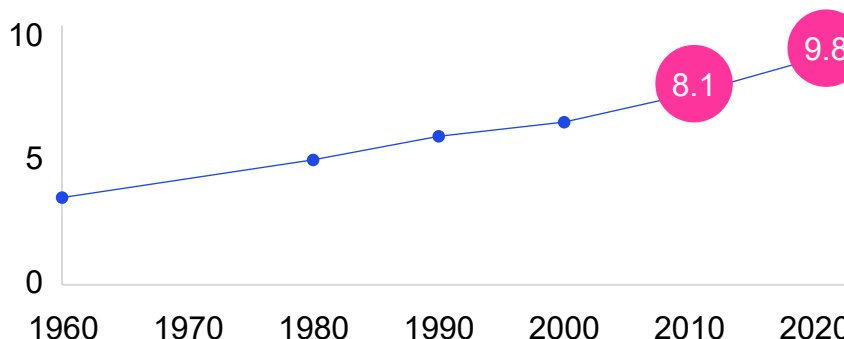
>64

Source: New car purchases (registrations) from the German National Office for Transportation. Published in January 2021. Data pulled on 8 September 2022.



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**Figure 3: Germany: Average passenger car age development in # years**



Source: European Automotive Manufacturers' Association — Vehicles in use Europe 2022. Data pulled on 7 September 2022.

The same trend, albeit to a lesser extent, can be seen on a European level (EU27) — even in the most optimistic simulation, the 45–64 age cohort is projected to shrink by at least 2 percent.

What's more, younger cohorts tend to prefer alternative ownership and mobility options — such as renting, car-sharing, or micro-mobility — over an outright purchase.

### Secondary market will be the norm, rather than the alternative

Ten years ago, the average car in Germany was around 8.5 years old. Today, the fleet is closer to 10 years old — an increase of 20 percent (Figure 3). The average age of a car in the broader EU is even higher.

This suggests the used car market is growing and gaining prominence (particularly among younger demographics) which could unlock opportunities in the aftermarket sector for both OEMs and suppliers.



Drop in demand

Socio-demographic change

Shift to EVs

Suppliers near peak debt

Price parity comes early

Afterthoughts

# New car buyers face growing economic challenges

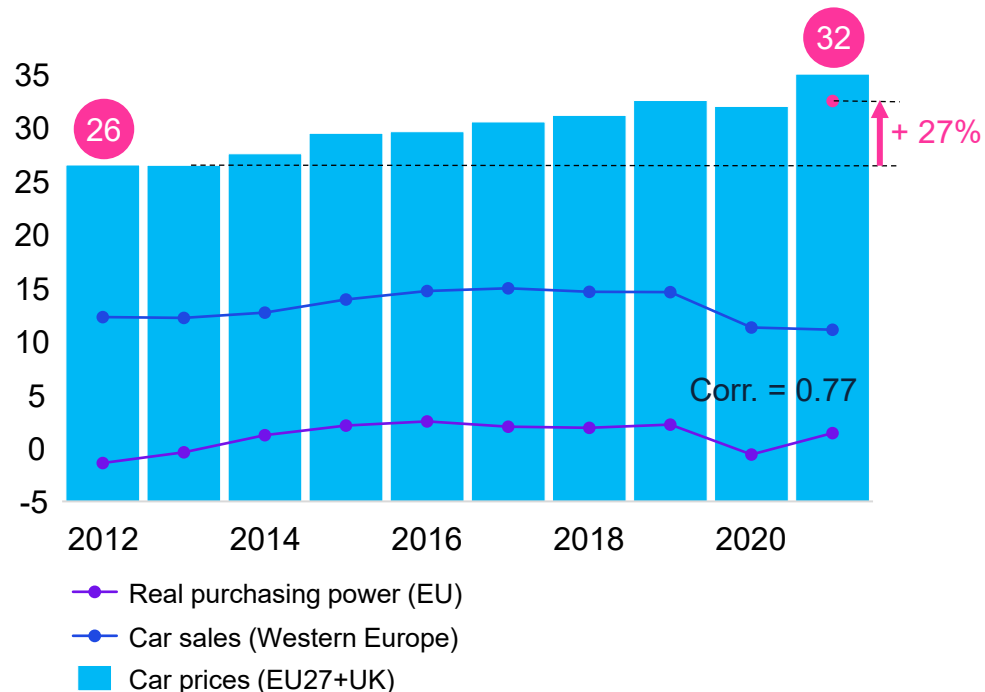
## Rising car prices coupled with decreases in real purchasing power may limit car sales

For more than a decade, there has been a strong correlation between European new passenger car sales and real purchasing power. Even after accounting for the pandemic, supply chain disruptions and the chip crisis, the relationship between car sales and purchasing power remains strong.

With most of Europe now facing rising energy prices and increasing rates of inflation, there are growing signs that purchasing power may well decrease further as a larger proportion of real disposable income is allocated to necessities and wages fail to keep up with inflation.

Yet new ICE car prices are rising: the price of an average new car increased by around 27 percent between 2012 and 2021. And the trend is likely to continue — as the Consumer Price Index continues to rise, so too can new car prices, potentially pricing out future potential buyers.

**Figure 4: Germany: Purchasing power development**  
Year-over-year real disposable income vs. car sales



Source: OECD/EIU — Purchasing Power Parity. Data pulled on 7 September 2022.



Drop in demand

Socio-demographic change

Shift to EVs

Suppliers near peak debt

Price parity comes early

Afterthoughts

# The shift to EVs will likely shrink the traditional supplier market

**Electric vehicle production typically requires significantly fewer resources**

EVs are generally less part-intensive than ICE cars (Figure 5) — an EV engine often requires fewer moving parts to deliver similar or better performance. Consider, for example, that an average EV only needs a simple single-speed gearbox, yet delivers a higher rev range and wider powerband than an ICE car.

Moreover, a large proportion of the components for an EV come pre-assembled, thereby reducing assembly time. As the industry gains more experience and finds more efficiencies, additional time can be saved in the assembly of the drivetrain itself.

While EVs are still more expensive than comparable ICE vehicles, much of that additional cost (30–50 percent) can be traced back to the battery. Minus the battery, the remaining value of the parts is actually EUR4,585 less than a traditional ICE car (see chart below).

There are two things to take from this trend. One is that the total value of the OEM supplier market is likely to fall as the market shifts to EVs. The second is that the decline of battery prices could give EVs the cost edge.



**-27%**

Lower component requirement (esp. drivetrain)

**-67%**

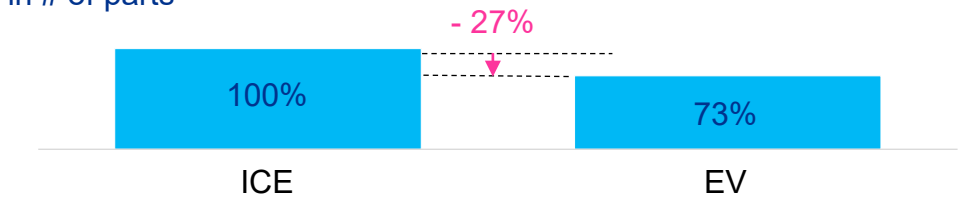
Lower labor intensity of production

**-EUR4,585**

Reduction in part value compared to ICE car

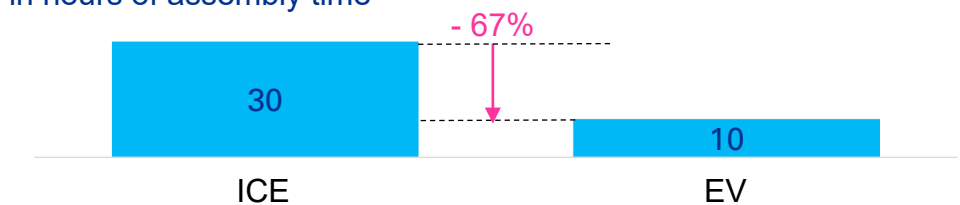
**Figure 5: Component-intensity in # of parts**

INDICATIVE

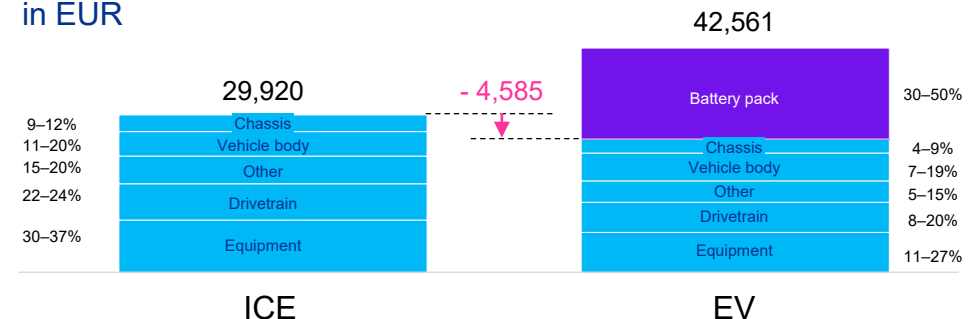


**Figure 6: Labor intensity in hours of assembly time**

INDICATIVE



**Figure 7: Average cost split of an ICE vs. EV in EUR**



Source: KPMG analysis based on the: Marklines database. Data pulled on 14 September 2022. TUM Automotive Centre — An Overview of Costs for Vehicle Components, Fuels, Greenhouse Gas Emissions and Total Cost of Ownership (published in 2017), KPMG proprietary data.



Drop in demand

Socio-demographic change

Shift to EVs

Suppliers near peak debt

Price parity comes early

Afterthoughts



# OEMs should reorganize their supply chains and restructure their operations

## OEMs should restructure, not just retool

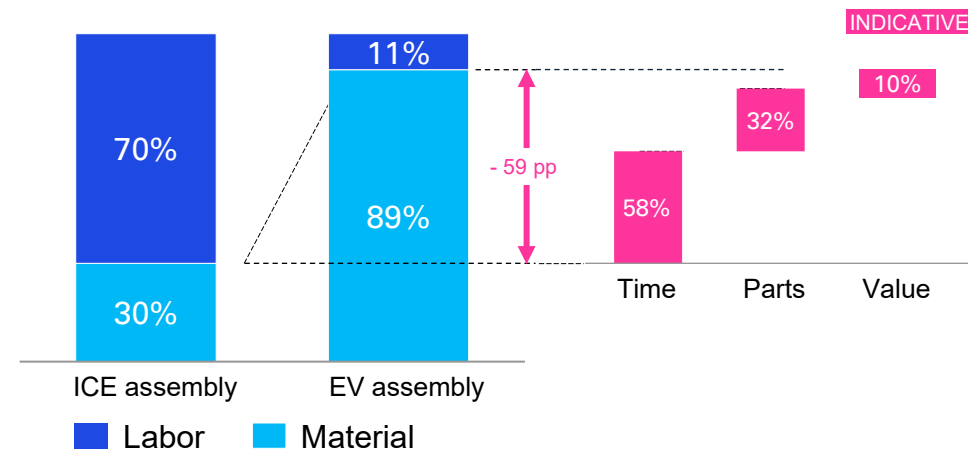
We believe the shift from ICE vehicles to EVs will have a significant impact on OEM supply chains and operations.

For one, fewer and different components are needed for EVs, requiring existing suppliers to innovate and new suppliers to be sourced. OEMs should start prioritizing EV-component suppliers, particularly as more traditional suppliers struggle to innovate and remain relevant.

On the operations side, the drop in labor intensity associated with EV production is expected to be profound. The availability of quality pre-assembled components and the wider adoption of advanced automation means less complexity and less manpower on the assembly line.

As a result, it's anticipated that the relative proportions of labor and material will reverse dramatically (Figure 8), forcing OEMs to start moving away from decades of focus on efficiency gains. Instead, the leaders should be focusing on restructuring their existing capabilities and reorganizing their supply networks to remain competitive in the long-run.

**Figure 8: Assembly split in material and labor in %**



Source: KPMG proprietary data/analysis. Data pulled September 2022.

“Assembling EVs requires substantially different supply chains and processes. Demand shift should force OEMs to rethink their operations in their shift to electric mobility.”

**Javier Rodríguez González**  
Partner, Deal Advisory, Global Head of Elevate, Deal Strategy  
KPMG in Germany



Drop in demand

Socio-demographic change

Shift to EVs

Suppliers near peak debt

Price parity comes early

Afterthoughts

# More than a quarter of suppliers are at risk of distress

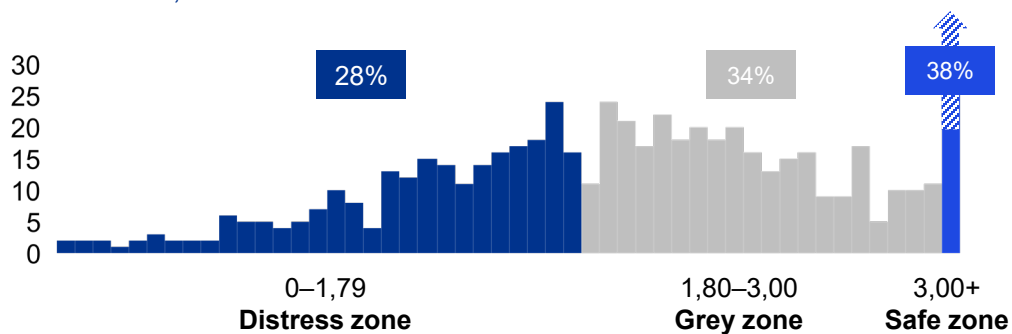
## The financial health of suppliers is deteriorating rapidly with little reason for optimism

Lower production volumes coupled with a forced shift into a lower-value market can put significant pressure on suppliers as they struggle with an uphill battle against revenue decline. At the same time, there is diminishing value to be squeezed from cost-cutting measures as capital expenditure is vital for innovation and working capital needs are unlikely to change.

Research suggests the resulting negative free cash flows will lead to a spike in indebtedness. Since 2017, the proportion of suppliers in a 'bad' liquidity position rose by 9 percent (Figure 10). If you assume a commonly accepted maximum debt-equity ratio of 3, our data indicates that about a third of suppliers are at risk of immediate distress — a finding confirmed by the Altman Z scores (Figure 9).

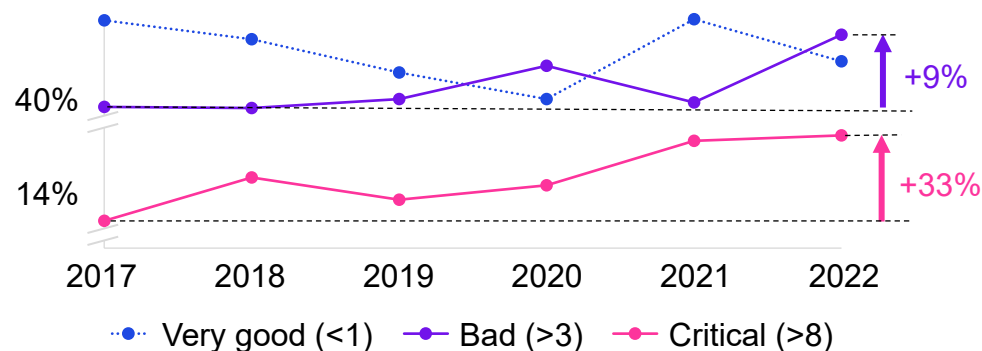
### Figure 9: Automotive components suppliers

Altman Z score, based on LTM financial data



Source: CapitalIQ. Data pulled on 16 September 2022.

Figure 10: Development of debt-equity ratio of suppliers 2017–2022, in %



Source: CapitalIQ. Data pulled on 16 September 2022.

The Altman Z metric considers the strength of the balance sheet and the company's ability to generate income to calculate the probability of default. The most recent data shows that about a third of suppliers are in the 'distress zone', with a further 34 percent in the 'grey zone' of improvement potential.

### Suppliers will likely require additional funding

Under strain themselves, banks have become much more selective about their distressed lending. Refinancing rates are high. And investors are looking for growth opportunities. So where will the additional funding come from?

Those with a bulletproof business case for transformation are attracting alternative sources of financing — including credit from OEMs.



Drop in demand

Socio-demographic change

Shift to EVs

Suppliers near peak debt

Price parity comes early

Afterthoughts

# Peak debt due is expected to hit suppliers by the end of 2023

## There will be a push to refinance short-term debt maturities

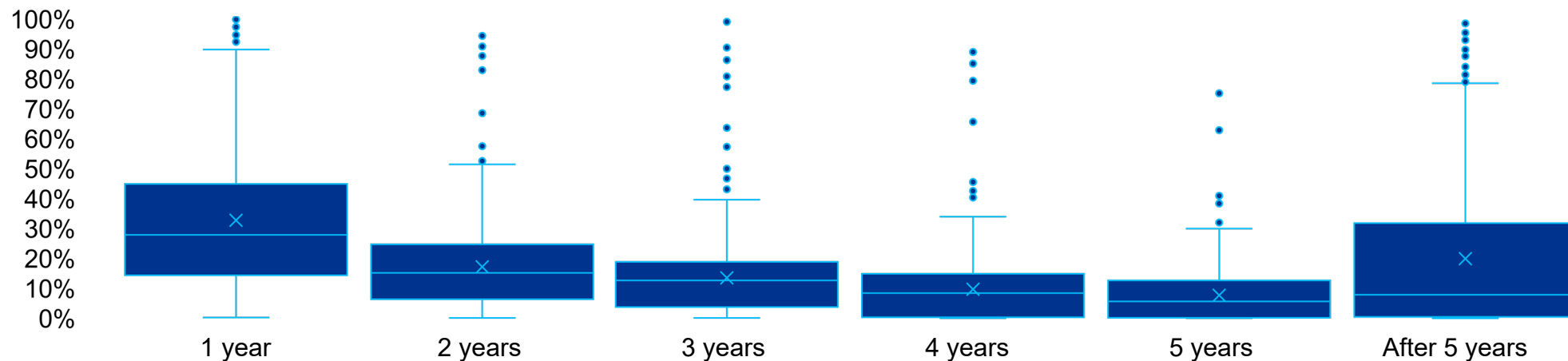
The just-in-time nature of many component categories has cultivated a financing dynamic that relies heavily on short-term debt. The average automotive supplier debt portfolio includes around 49 percent short-term debt (with less than 2 years maturity), 31 percent medium-term debt (maturing in 2–5 years), and around 20 percent long-term debt (Figure 11).

This is forcing many OEMs to consider how they can provide short-term credit facilities and other financing alternatives to priority suppliers, potentially backed by a degree of bank involvement.

“ Many suppliers are now facing an incoming peak debt which could hit in the latter quarters of 2023. Now is a good time to act. ”

**Andrés Caballero Ponce**  
Senior Manager, Deal Advisory,  
KPMG in Germany

**Figure 11: Debt maturity structure of automotive suppliers**  
in %



Source: CapitalIQ. Data pulled on 16 September 2022.

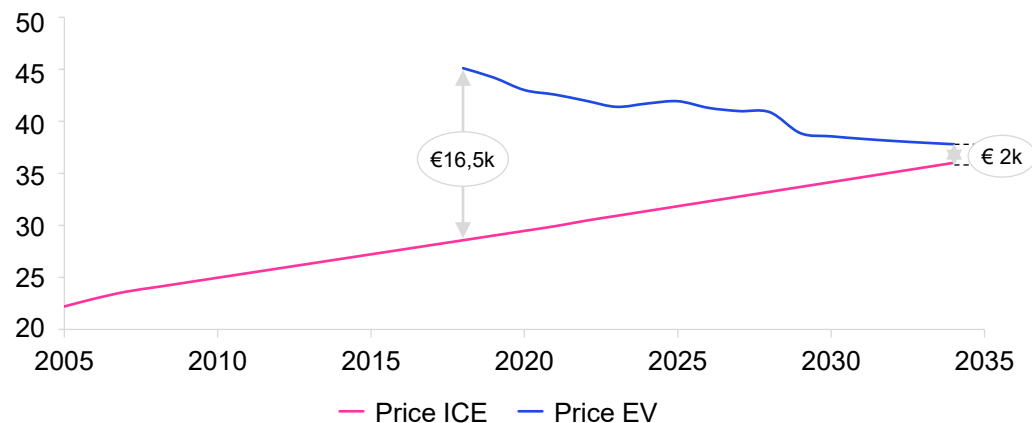
# Falling battery prices and scale efficiencies can allow EVs to offset inflation

## The cost of batteries for EVs should continue to decrease

The average price of an ICE passenger car is expected to keep growing through the next decade, mainly driven by price inflation.

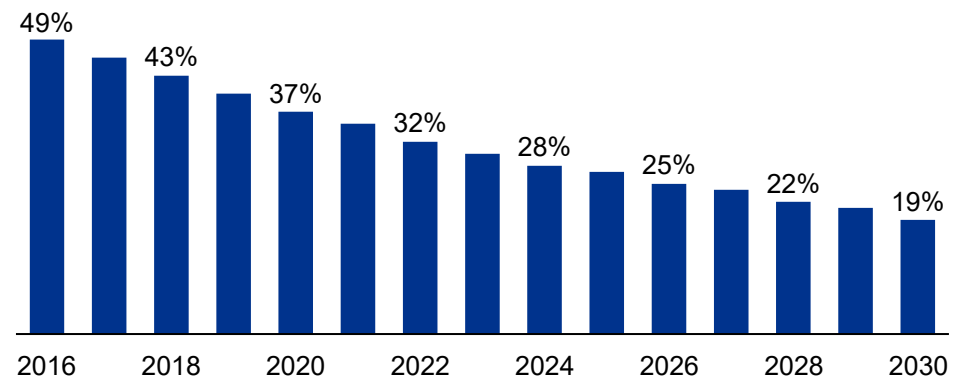
Yet EVs still have room to maneuver. The cost of batteries is expected to continue to fall — notwithstanding further supply chain and resource constraints — as a result of not only new technological improvements (such as solid-state batteries), but also from economies of scale.

**Figure 12: Average price evolution for ICEs and EVs 2005 to 2035, in EUR**



Source: KPMG analysis based on the Marklines database. Data pulled on 14 September 2022.

**Figure 13: Development of battery cost as a % of EV cost 2016–2030, in %**



Source: Bloomberg New Energy Finance — When will Electric Vehicles be Cheaper than Conventional Vehicles, published April 2017.

Other factors should also help EVs gain price advantages. The ramp up of EV production should lead to an increase in capacity and new production efficiencies which should further drive down costs. And the introduction of additional entry-segment EV models — from both traditional OEMs and startups — could further drive down average prices.

Even taking into account recent geopolitical developments, our conservative estimate suggests EV and ICE vehicles will reach price parity by 2035. Other estimates and observers suggest an even earlier date — some as soon as 2025.



Drop in demand

Socio-demographic change

Shift to EVs

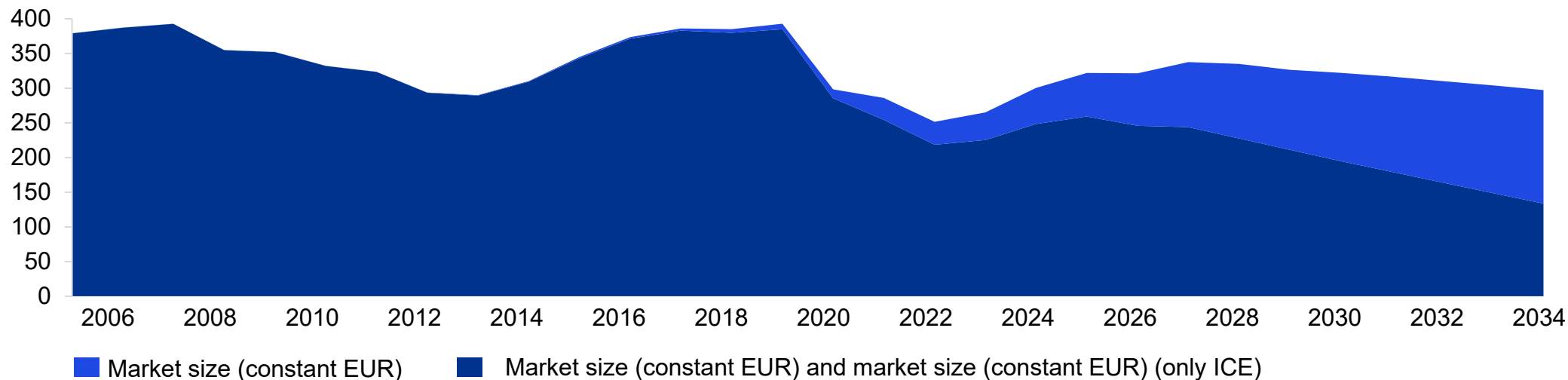
Suppliers near peak debt

Price parity comes early

Afterthoughts

# Price parity should accelerate the decline of the ICE market

**Figure 14: Market size evolution for passenger cars in Europe (excl. batteries)**  
2005–2034, in #million for the EU27+1



Source: ICE market size. Data pulled on 18 October 2022.

## Can't see the forest for the trees

All the data and analysis seems to suggest that the European automotive market size is in decline. This is not a recessionary dip like past downturns — the trends influencing the market are likely here to stay.

The events of past few years have been dramatic and captivating, making it difficult to see the development of the bigger trends behind the headlines.

As we've noted in this document, there is little hope for a robust rebound and subsequent steady increase in sales — to believe otherwise would be wishful thinking.

We believe the greatest impact will be in the ICE market. Traditional suppliers unable to innovate could face challenges. And OEMs should work efficiently to help protect their supply chains.



Drop in demand

Socio-demographic change

Shift to EVs

Suppliers near peak debt

Price parity comes early

Afterthoughts



# Next steps for the European auto industry

## Taking action

The European automotive industry is likely to enter a period of contraction in value due to a combination of factors, including consumption/ demographic trends as well as a shift to simpler, less labor-intensive EV architecture. Acting exclusively on financial levers may no longer guarantee the sustainability of the supply base. In our view, a call for action is needed, as is a call to rethink the sector.

**Understand and assess the trends.** Diminishing demand, shifting socio-demographics, rising price pressures and supplier distress are just some of the interrelated and complex issues facing automotive OEMs and their supply chains today. Start by understanding how these trends will influence your particular organization, markets and operations — and your wider supply ecosystem.

**Identify the risks and opportunities.** This environment is creating a myriad of new risks and opportunities for automotive OEMs and their suppliers. Yet each organization is different and the options available to one company could differ considerably from another in the same sector. Work with experienced professionals to identify what risks and opportunities your organization might be facing in the future.

**Quantify the comparative value of different options.** You can't decide your organization's future based on historical experiences and solutions. It takes smart data, clear insights into the relative value of each risk and opportunity, and deep multi-industry experience to help determine what move to make next. Build confidence in your decisions by quantifying the actual financial value of your different options.

**Move quickly to capture and retain value.** As this report indicates, the decline in demand and margins is likely to become more apparent and steadily erode the sector's profitability. The current macroeconomic situation is showing signs of reducing the room to maneuver. Look for quick wins that can deliver in-year cost savings that can fund out-of-year transformation objectives and work with experienced professionals to help efficiently capture that value.

**Work as an ecosystem.** In the next few years, the automotive industry is expected to face a significant disruption. Large portions of the supply chain are likely to come under financial stress. Some can be saved — others may not. Automotive OEMs and their suppliers should work as an ecosystem and collaboratively across the industry to ensure the transition is smooth and that key suppliers are not lost.



Drop in demand

Socio-demographic change

Shift to EVs

Suppliers near peak debt

Price parity comes early

Afterthoughts

# Contact us for further information



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