

Deloitte Brexit Briefing | 5

Brake Block Brexit - How a hard Brexit would impact the
German automotive industry

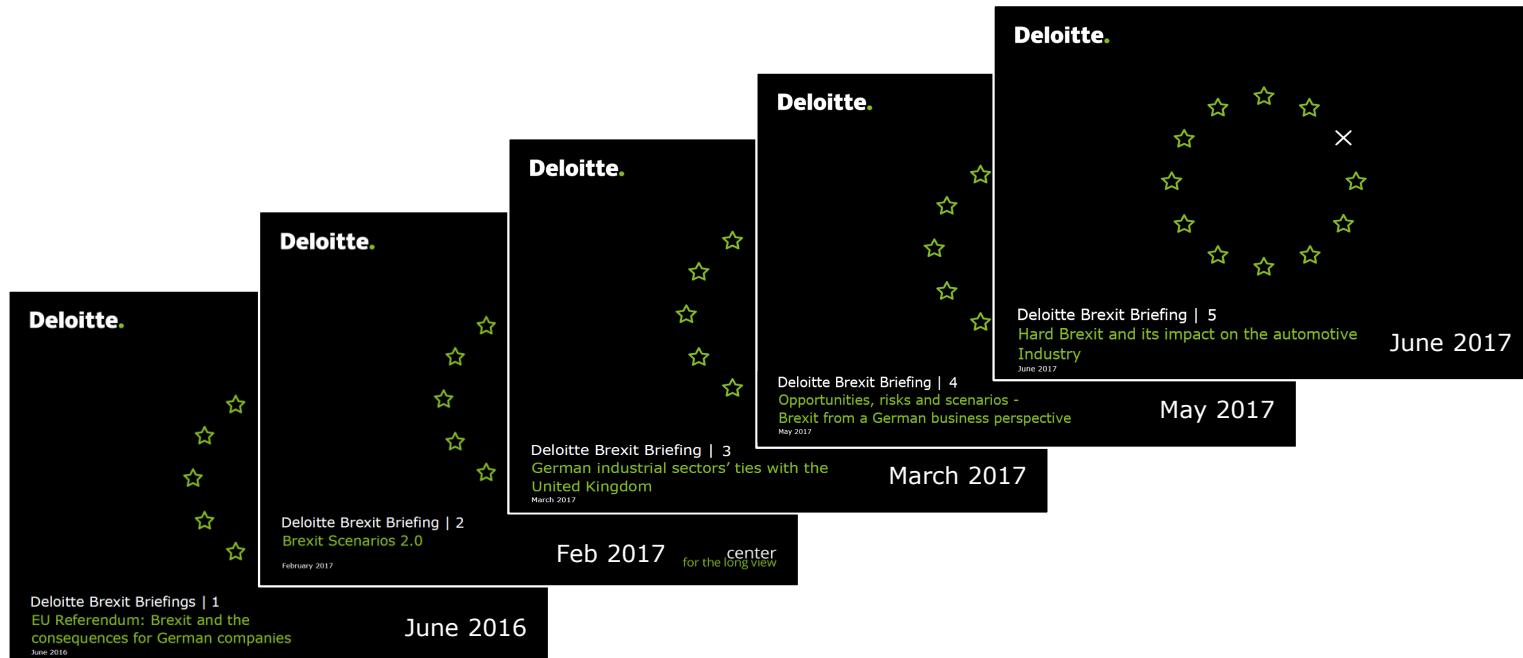
Deloitte Brexit Briefings

Perspectives on Brexit

Deloitte Brexit Briefings Series

The United Kingdom's decision in June 2016 to leave the EU will have a far-reaching economic and political impact. For German companies, Brexit means a fundamental change in the business environment.

Deloitte Brexit Briefings examine the core Brexit themes and risks from economic, strategic, taxation and legal perspectives, and are intended to provide orientation about the complex effects of the Brexit and the Brexit process.



The current edition

In this current edition, "Hard Brexit and its impact on the German automotive industry", we will analyse the impact that a hard Brexit would have on the British vehicle market. The focus will be on how future WTO duties and an ongoing weakness in the British pound affect German and European automobile exports.

Automotive industry UK | Overview & relevance to Germany

The United Kingdom is the most important export market globally for Germany's manufacturers (2016)

German exports to UK¹

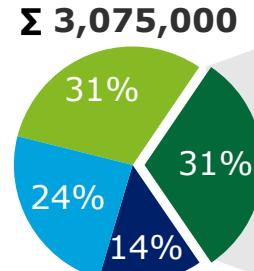


One in three newly registered vehicles in the UK is a **German export**. In total, 950,000 of the 3 million newly registered cars in the UK are German exports (2016).

One in five new cars exported from Germany **goes to the UK** (20% of German exports).



Manufacturing for UK sales market (units)²



Σ 950,000

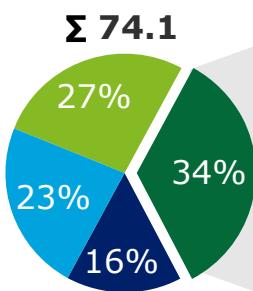
428,000

522,000

Units

Premium
Volume

UK turnover by vehicle origin (€ billion)⁴



Σ 25.5

15.3
10.2

Premium
Volume

Jobs in DE for UK export market



60,000 employees in Germany

manufacture 950,000 vehicles for the UK sales market



Summary

A hard Brexit not only leads to sales and turnover slumps for German manufacturers, it also endangers German jobs



A hard Brexit (WTO duties and 10 percent devaluation of the pound) means a cumulative **cost increase** of **€1.9 billion (+15%)** for automotive manufacturers in the United Kingdom compared to a no-Brexit scenario.



If vehicle manufacturers pass this cost increase on 1:1 to their customers, the price of a car in the United Kingdom would increase by **€3,700**, and by as much as **€5,600** for cars manufactured in Germany.



Taking into account British consumer behaviour, in the year of exiting the EU this price increase would lead to an **overall sales decrease** of approx. **550,000** vehicles (-19%) in the **United Kingdom**. **German vehicle exports** would decline by **255,000** units (-32%).



Total turnover from vehicles in the UK would decline by approx. **€12.4 billion** (-18%), and profits by €900 million. While manufacturers from the UK and outside of the EU benefit, EU-27¹ turnover would decline by **€8.3 billion**, and for **German manufacturers** by **€6.7 billion**.

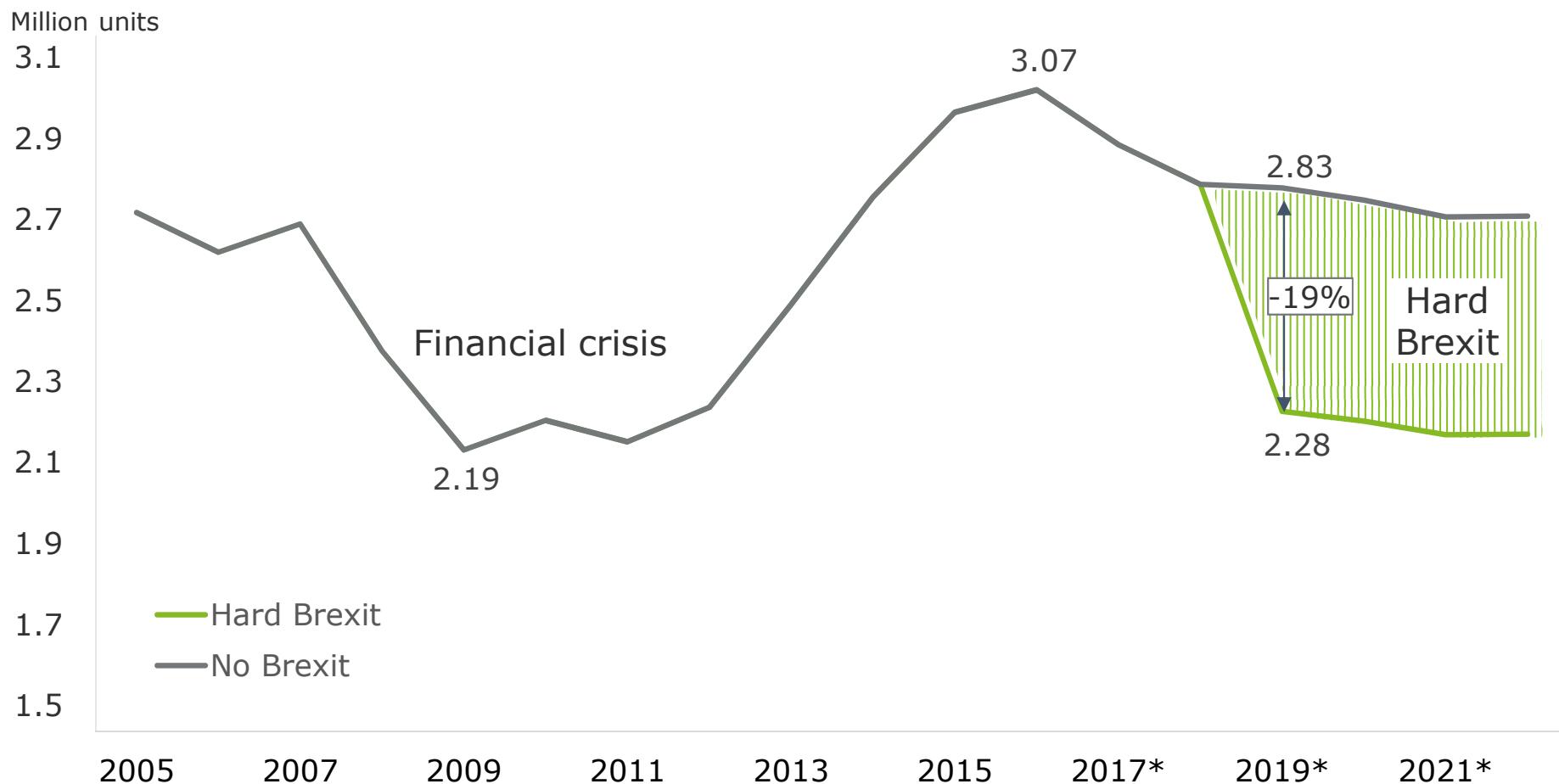


Based on these declines in sales and turnover, approx. **18,000 jobs** in the German automotive industry would be directly endangered.

Summary

A hard Brexit would have a negative effect similar to the financial crisis of 2008/2009

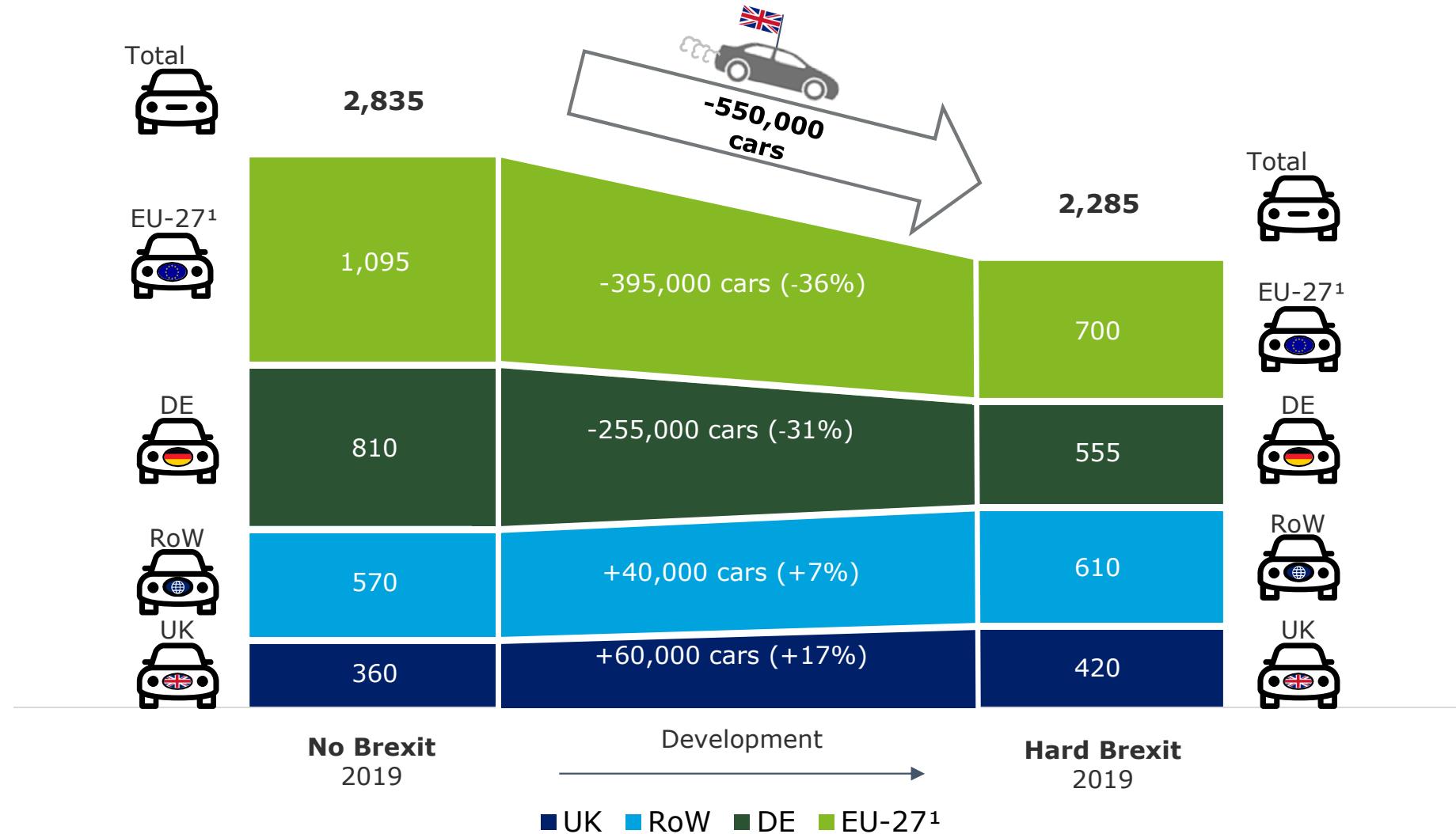
Forecast sales development cars & LCV after a hard Brexit (million units)



Summary | Sales development

After a hard Brexit, German and other European manufacturers would sell 650,000 fewer cars

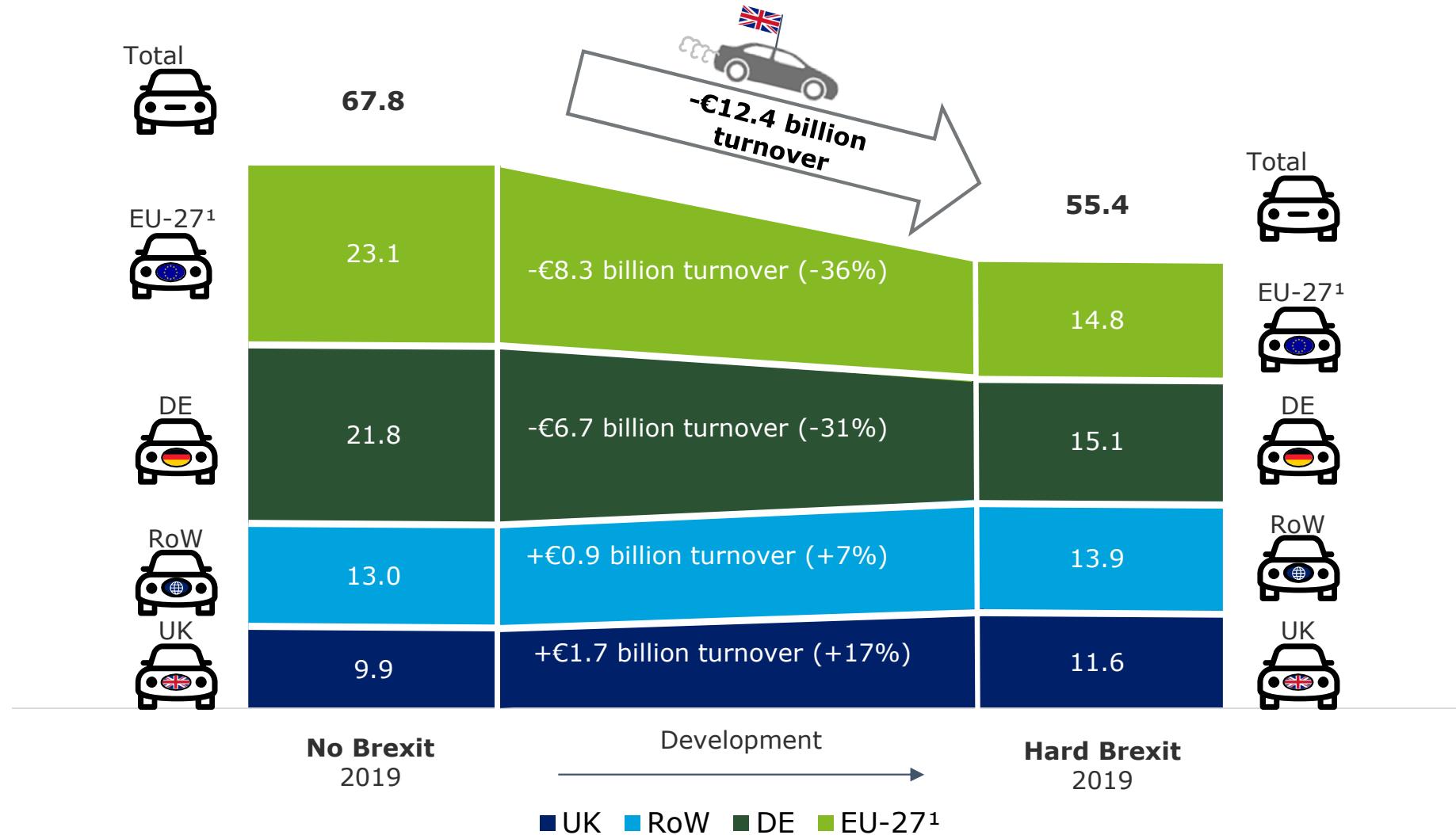
Sales by manufacturing region after a hard Brexit (in thousands)



Summary | Turnover development

The turnover volume of the British automobile market would decline from €67.8 billion to €55.4 billion, i.e. 18%

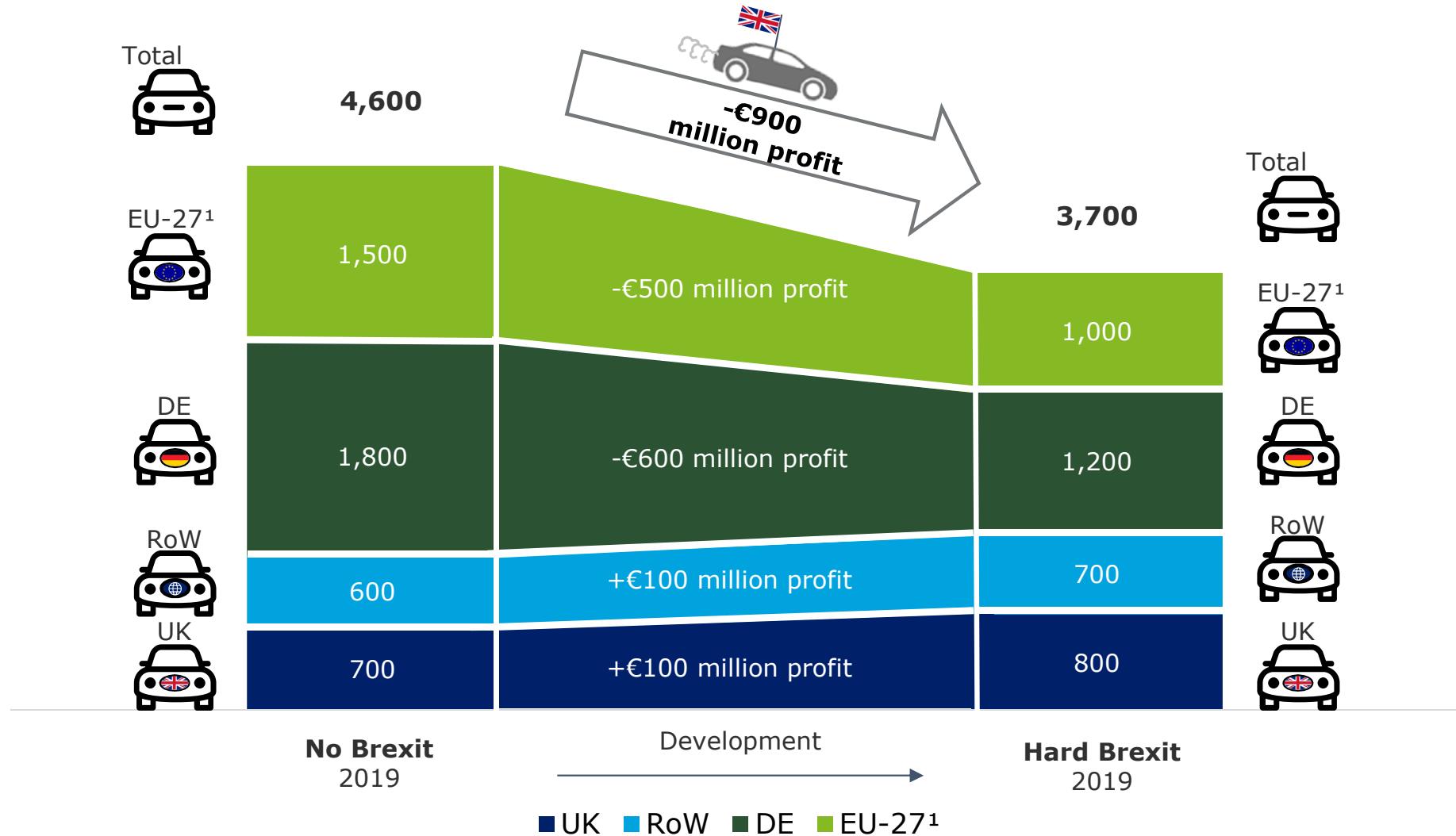
Turnover by manufacturing region after a hard Brexit (in € billion)



Summary | Profit development

The German automotive industry would see a sharp decline in its profits due to the pronounced sales slump in its premium brands

Profit by manufacturing region after a hard Brexit (in € million)





Model and methodology

Overview

Scenarios

Two factors influence the occurrence of a *hard Brexit*: future WTO duties and the exchange rate of the pound

WTO duties

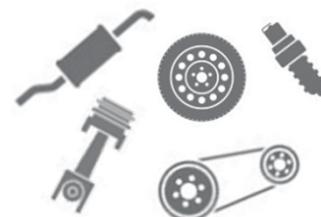
After a hard Brexit, trade between the EU and UK would initially fall under the customs conventions of the World Trade Organization (WTO):

Vehicles



~10%

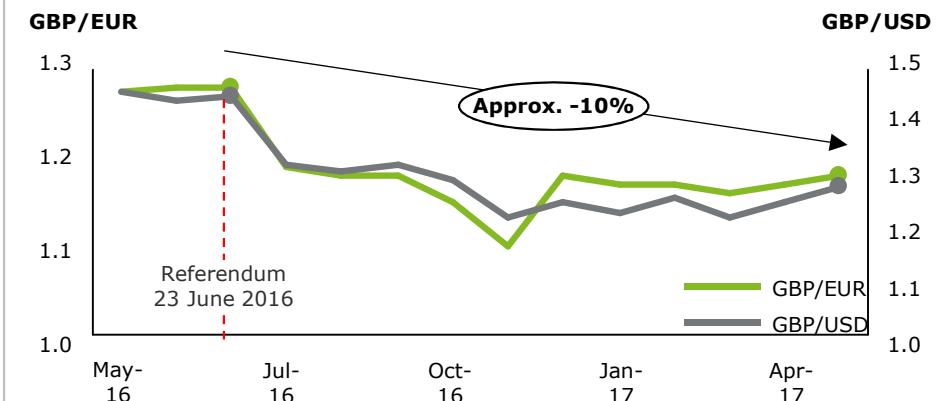
Vehicle parts



~4,5%

Development of the pound

Since the Referendum, the British pound (GBP) has been devalued by approx. 10% on average against the euro and other currencies (e.g. USD).



No Brexit Scenario

Central assumptions:

Market development as per the IHS Automotive forecast **before the Brexit Referendum**, i.e.:

- UK has full access to EU Single Market
- Pound stable at level before Referendum



Hard Brexit Scenario

Central assumptions:

- WTO duties apply between EU and UK:
vehicles: ~10% / vehicle parts: ~4,5%
- The exchange rate of the pound remains consistently **10% under level** before the Brexit Referendum

UK market analysis

The British automotive market was analysed and mapped out comprehensively in order to model the impact of a hard Brexit



Sales figures

- Categorisation of sales figures¹ by:
- Manufacturer
 - Model
 - Manufacturer type
 - Segment²



List prices

Research of British list prices of 330 car models in total³



Manufacturing sites

- Manufacturing sites and volumes of vehicles sold in the United Kingdom¹
- Germany⁴
 - EU-27 (excluding Germany)
 - United Kingdom (UK)
 - Rest of world (RoW)

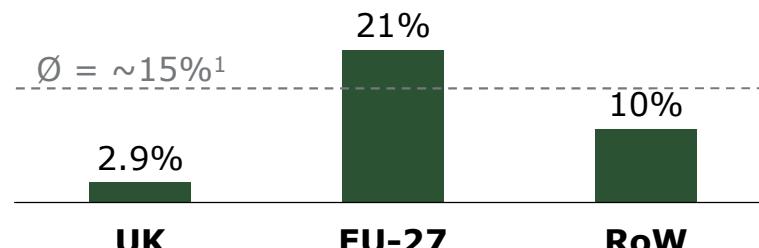
Make	Model	Manufacturer type	Segment ² (A-F)	Sales UK 2016	List price UK (in EUR)	Manufacturing site
	VW Golf	Volume	C	72,762	€20,972	DE
	Citroen C1	Volume	A	19,155	€9,917	EU-27
	BMW X3	Premium	D	9,638	€40,629	RoW
	Jaguar XE	Premium	D	13,498	€33,365	UK

Model

Based on the scenarios, the model calculates post-Brexit vehicle sales, sector turnover and endangered jobs in DE

Cost increases after hard Brexit

Change in cost base due to WTO duties and currency effects



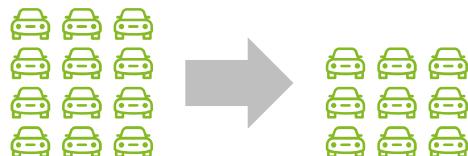
Implication for price development

Assumption: manufacturers pass on cost increases 1:1 to end consumers



1. Sales development

Modelling of sales development taking into account price and cross-elasticities²



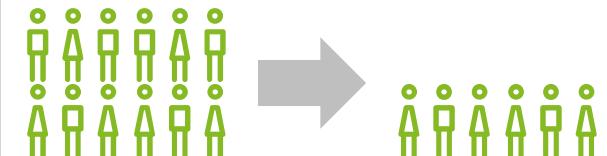
2. Turnover development

Modelling of manufacturer turnover based on sales development



3. Endangered jobs

Modelling of endangered jobs based on automotive industry job multiplier



Modelling of "No Brexit" base scenario:

Originally forecast development of initial parameters before the Brexit decision was known



Implications

Potential impact of a hard Brexit



Price development



Sales development



Turnover and profit development



Jobs affected

Price development

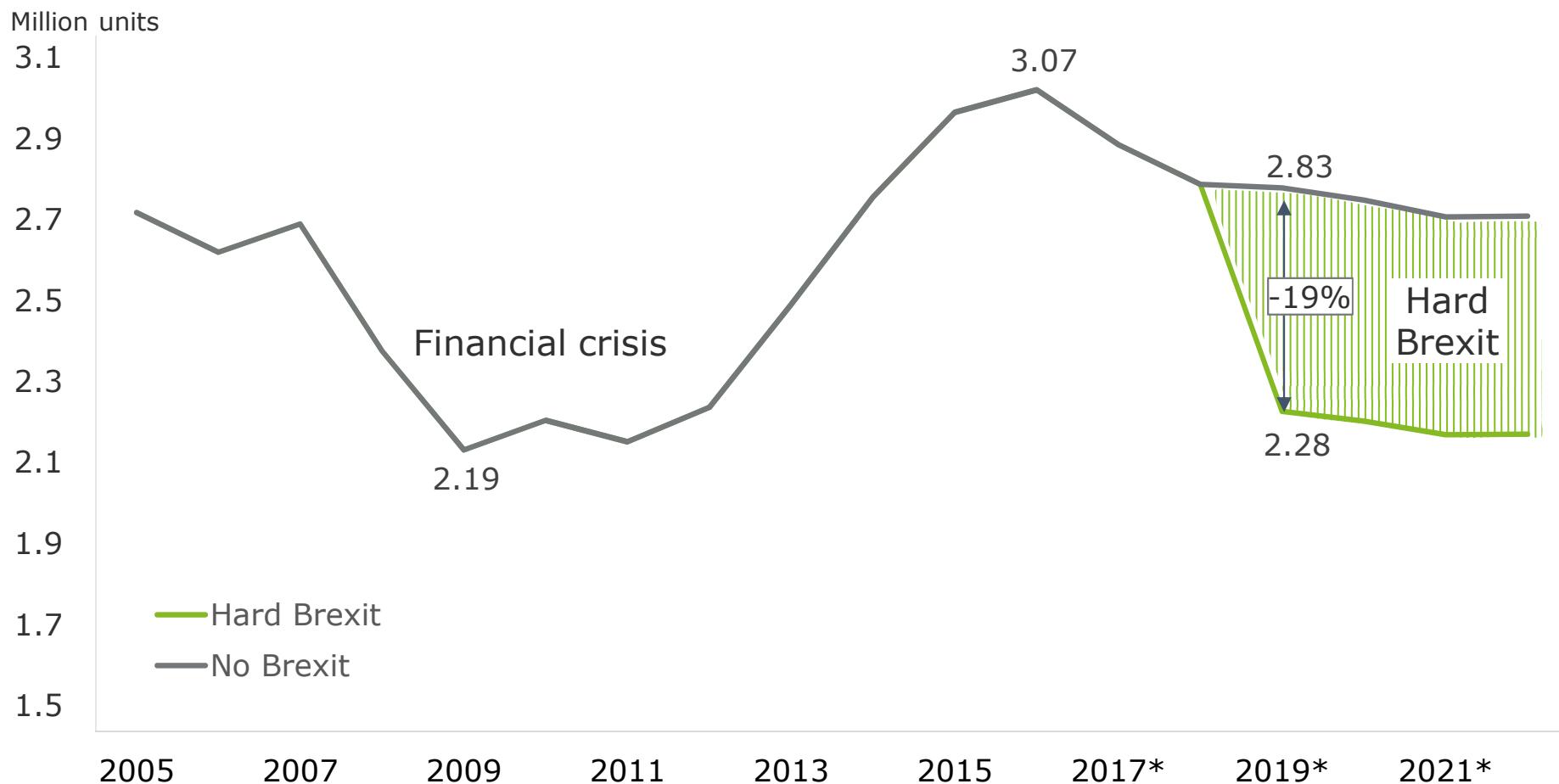
If cost increases were passed on entirely, vehicles prices in the UK would increase by approx. 15% on average

Average ¹ price development by production region (€ and %)				Price increase
Standard car in UK				
	Current list price ² : €23,900	a) Price ³ after hard Brexit:	€27,600	 +15%
		b) Price increase	+€3,700	
UK manufacture				
	Current list price ² : €26,900	a) Price ³ after hard Brexit:	€27,700	 +3%
		b) Price increase	+€800	
DE manufacture				
	Current list price ² : €26,500	a) Price ³ after hard Brexit:	€32,100	 +21%
		b) Price increase	+€5,600	
EU-27 manufacture (excluding DE)				
	Current list price ² : €20,600	a) Price ³ after hard Brexit:	€24,900	 +21%
		b) Price increase	+€4,300	
RoW manufacture				
	Current list price ² : €23,200	a) Price ³ after hard Brexit:	€25,500	 +10%
		b) Price increase	+€2,300	

Sales development | Summary overview

Price increases after a hard Brexit would lead to sales decreases of around 550,000 cars (-19%)

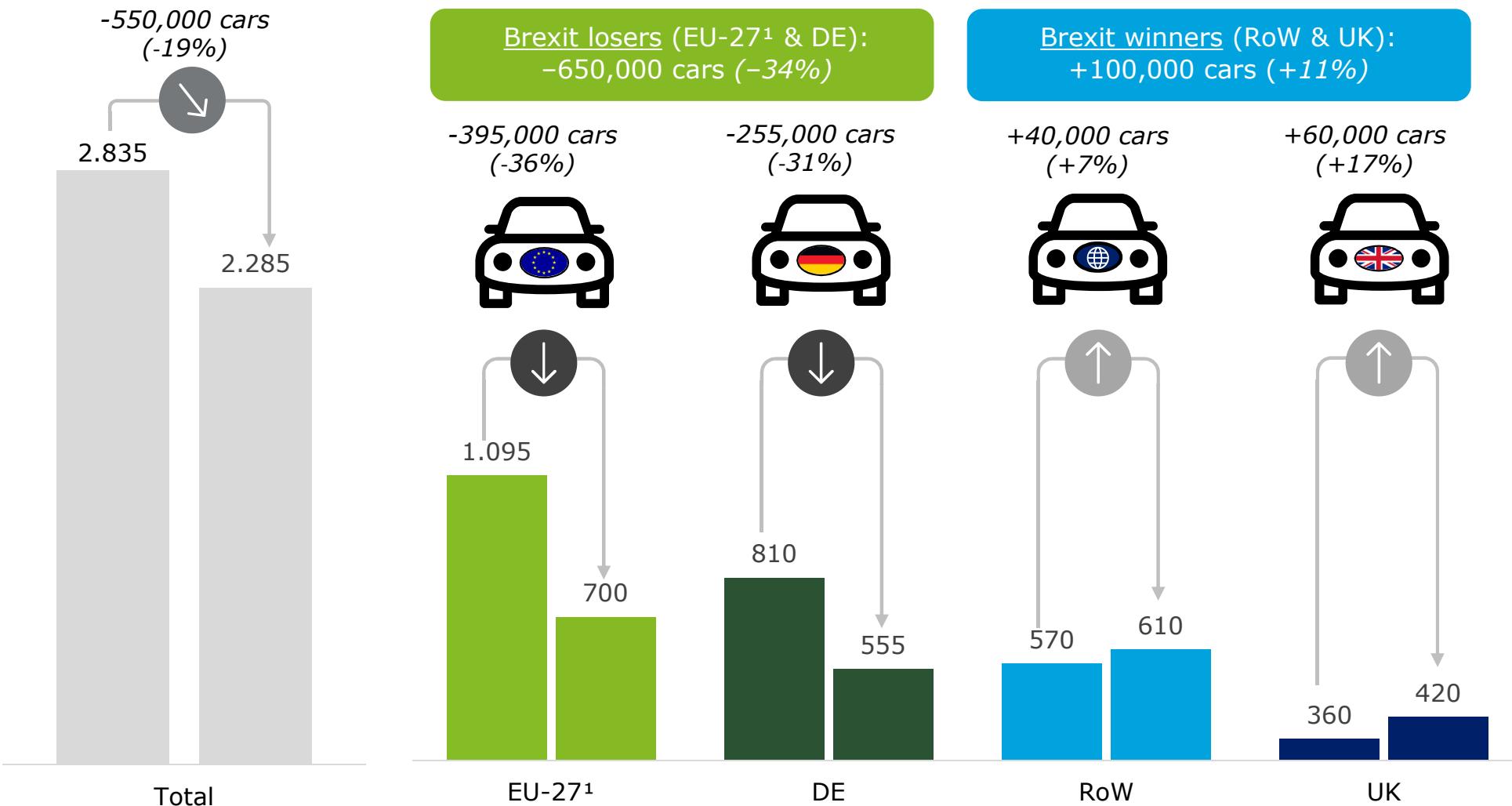
Forecast sales development cars & LCV after a hard Brexit (million units)



Sales development | Manufacturing regions

While European manufacturers would sell 650,000 fewer cars, the UK and other regions would benefit (+100,000 cars)

Sales development by manufacturing region after hard Brexit (thousand units)

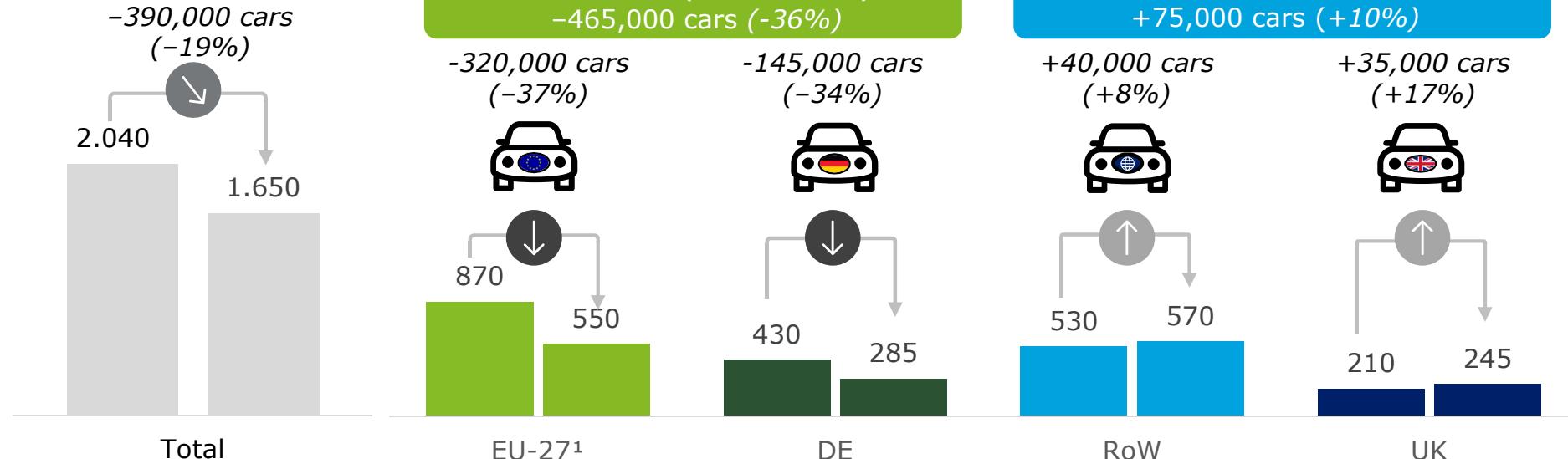


Sales development | Volume and premium segment

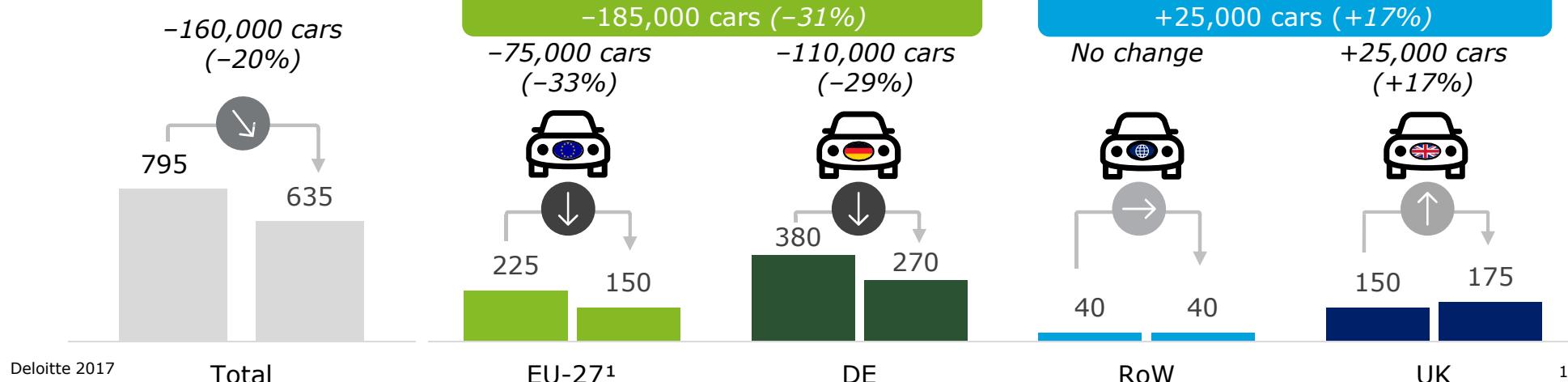
The decline in sales figures will affect volume and premium manufacturers equally

Development of sales volumes after hard Brexit (thousand units)

Volume segment



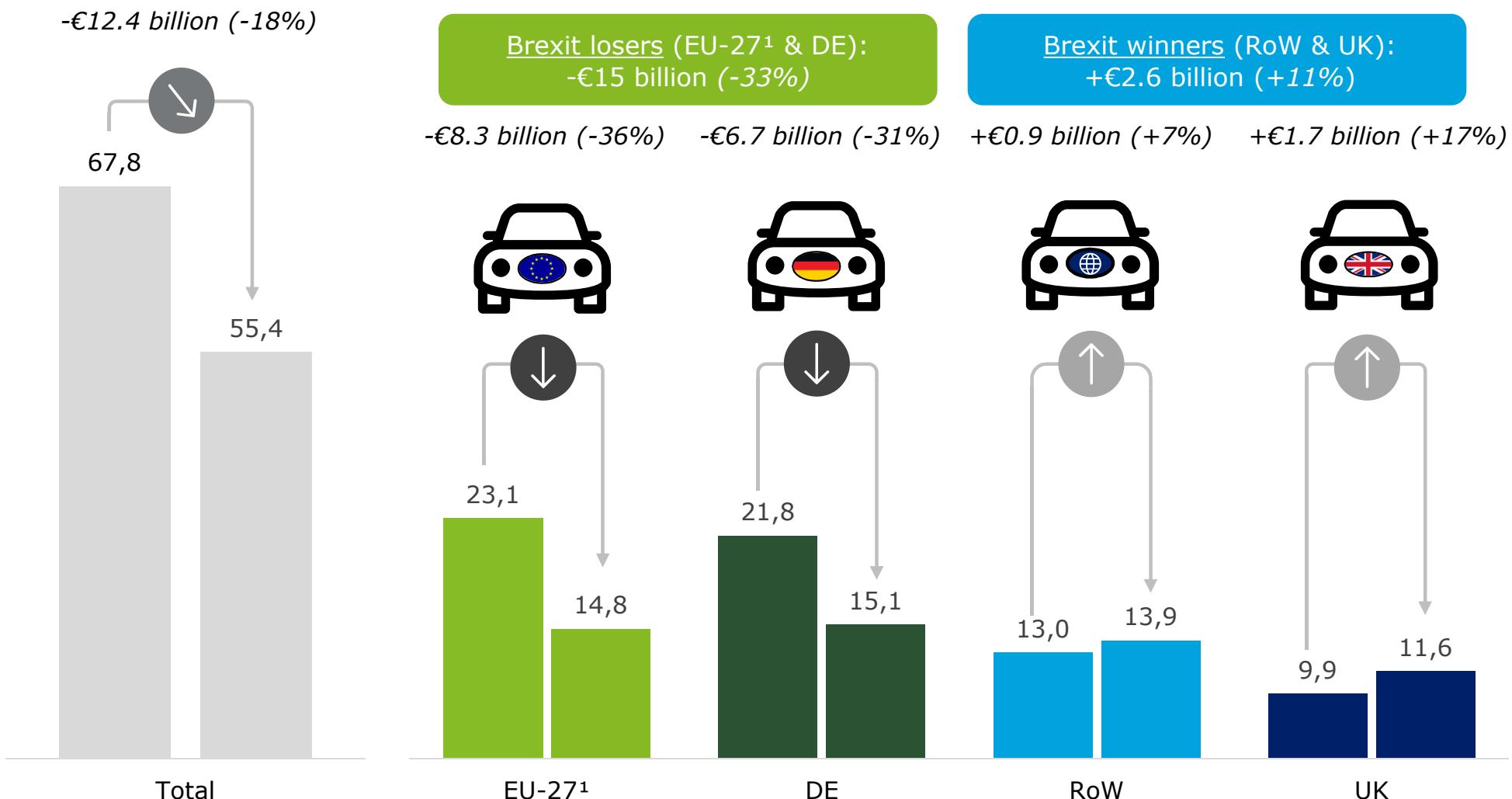
Premium segment



Turnover development | Manufacturing regions

German and European manufacturers' declining sales are also reflected in falling turnover in these regions

Turnover development by manufacturing region after hard Brexit (€ billion)



Turnover development | Volume and premium segment

RoW manufacturers benefit especially in the volume segment, while UK manufacturers make gains in the premium segment

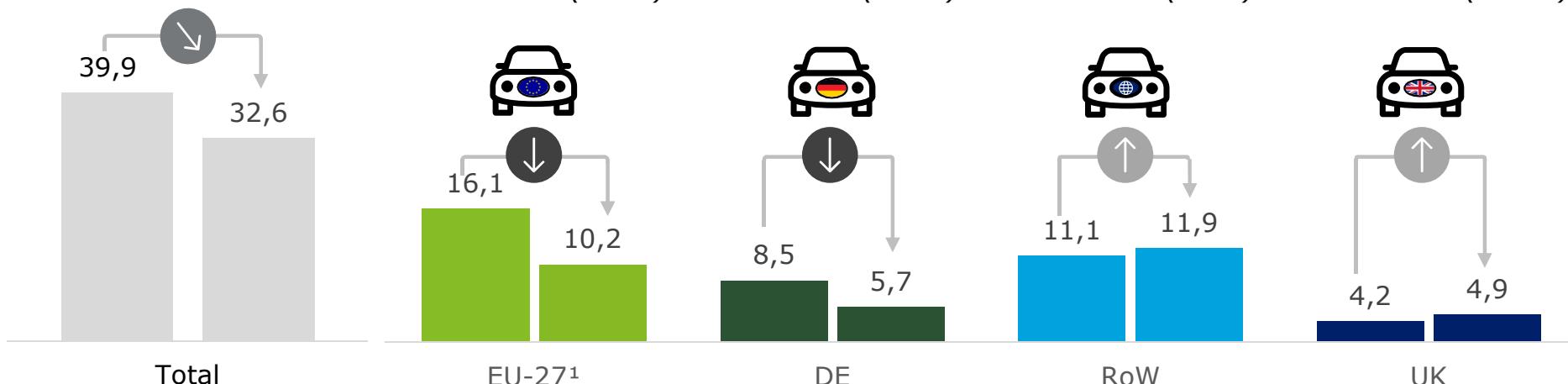
Development of sales volumes after hard Brexit (thousand units)

Volume segment

-€7.3 billion (-18%)

Brexit losers (EU-27¹ & DE):
-€8.7 billion (-35%)

Brexit winners (RoW & UK):
+€1.5 billion (+10%)

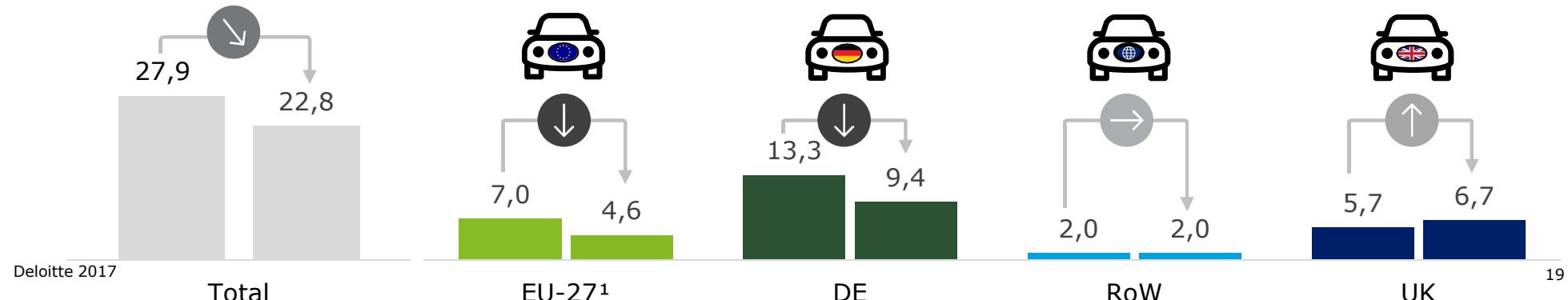


Premium segment

-€5.1 billion (-18%)

Brexit losers (EU-27¹ & DE):
-€6.3 billion (-31%)

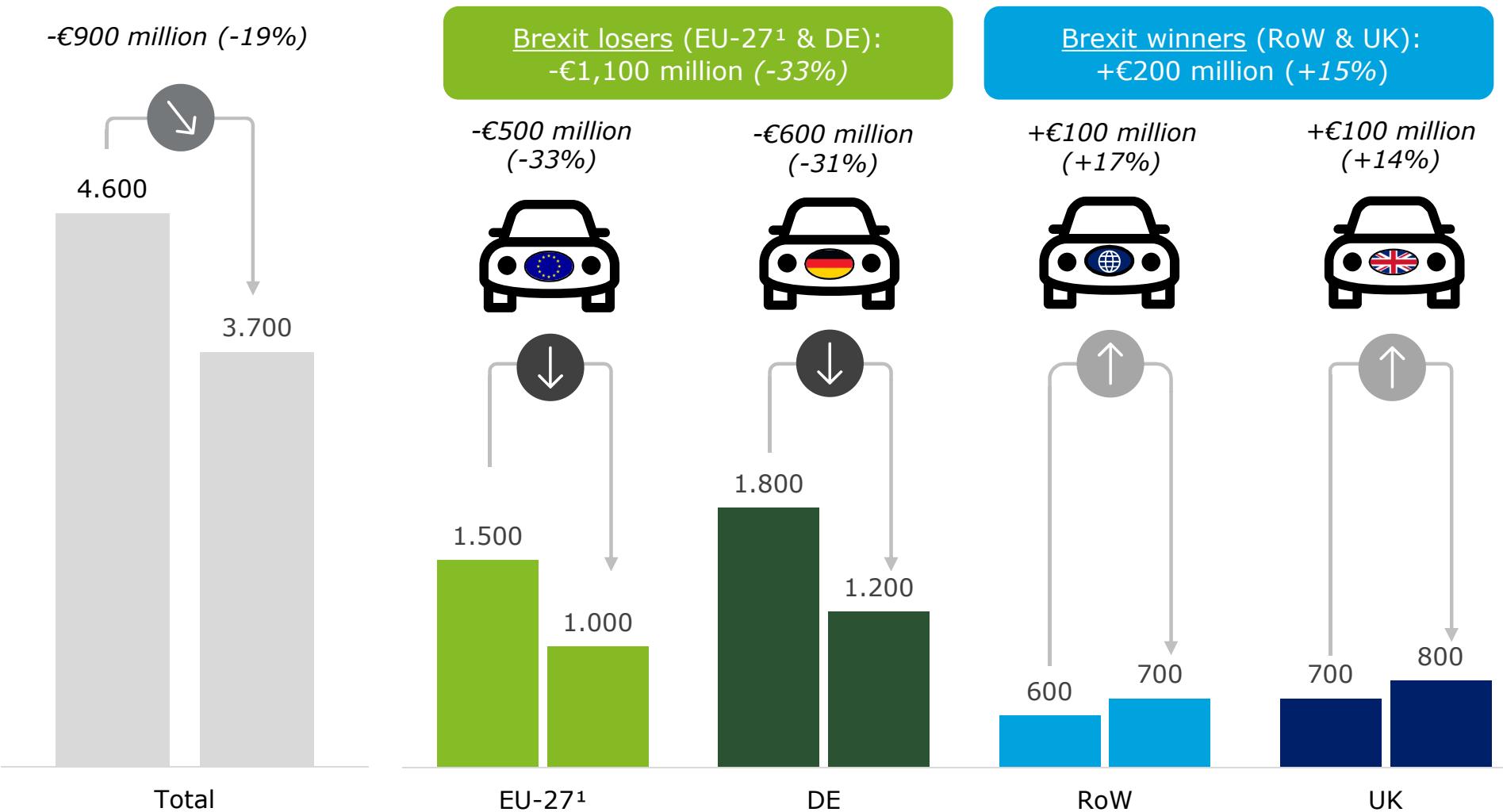
Brexit winners (UK):
+€1.0 billion (+18%)



Profit development | Manufacturing regions

Sector profits would fall by around €900 million after a hard Brexit; EU-27¹ and DE would lose over 30%

Profit development by manufacturing region after hard Brexit (in € billion)



Effect on jobs | Germany

Based on the declines in sales and turnover, approx. 18,000 jobs would be directly endangered in Germany

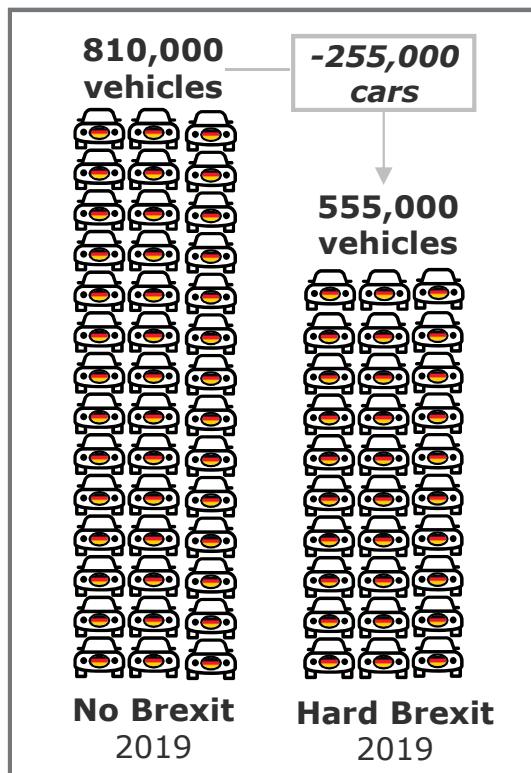
Chain of effects from a hard Brexit on jobs in Germany

If German manufacturers' **sales figures fall** in the UK...

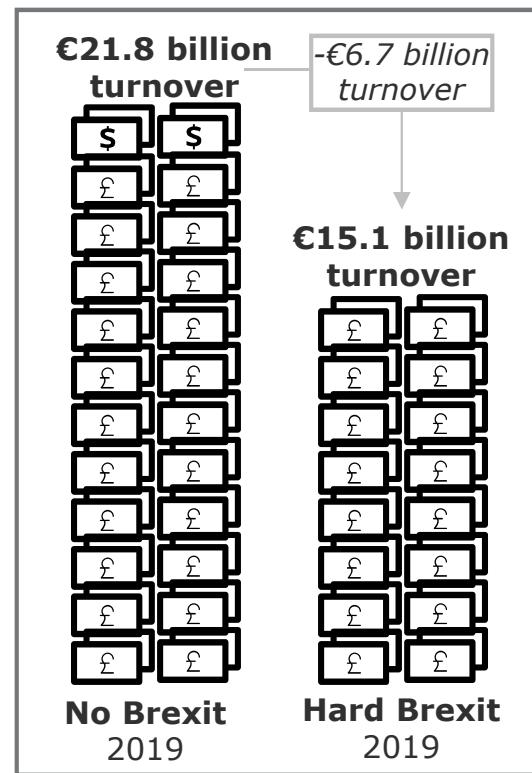
...**turnover falls as well** for the German automotive industry in the UK...

...endangering **18,000** of the **60,000 jobs** in German manufacturing for vehicle exports direct to the UK.

DE cars sold in UK



DE turnover in UK



Jobs in DE

60,000 employees manufacture cars for the UK





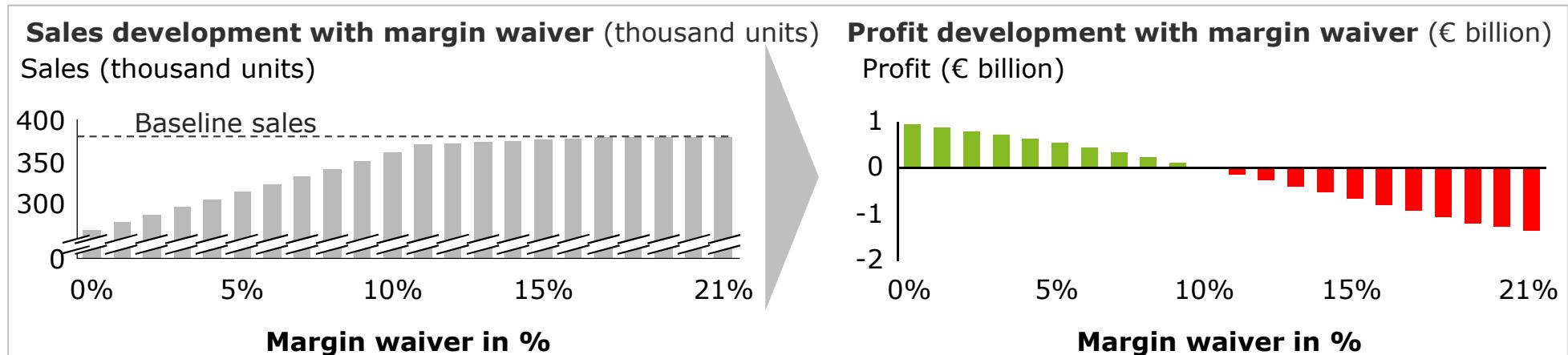
Outlook

Options after a hard Brexit

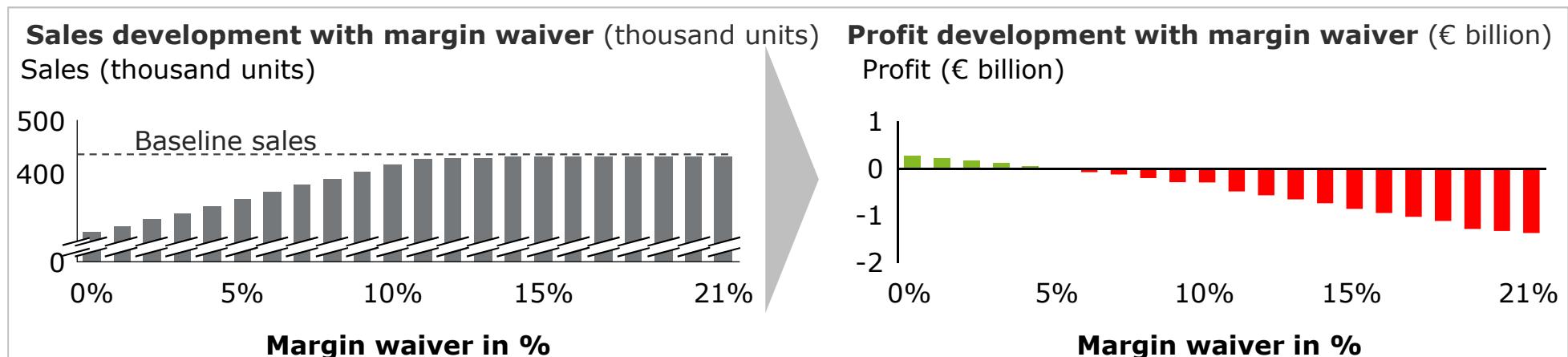
Outlook (1/2)

If automotive manufacturers waive margins, it would cushion the sales decline, but always at the expense of profit

DE premium segment: turnover and profit development if manufacturers waive margins



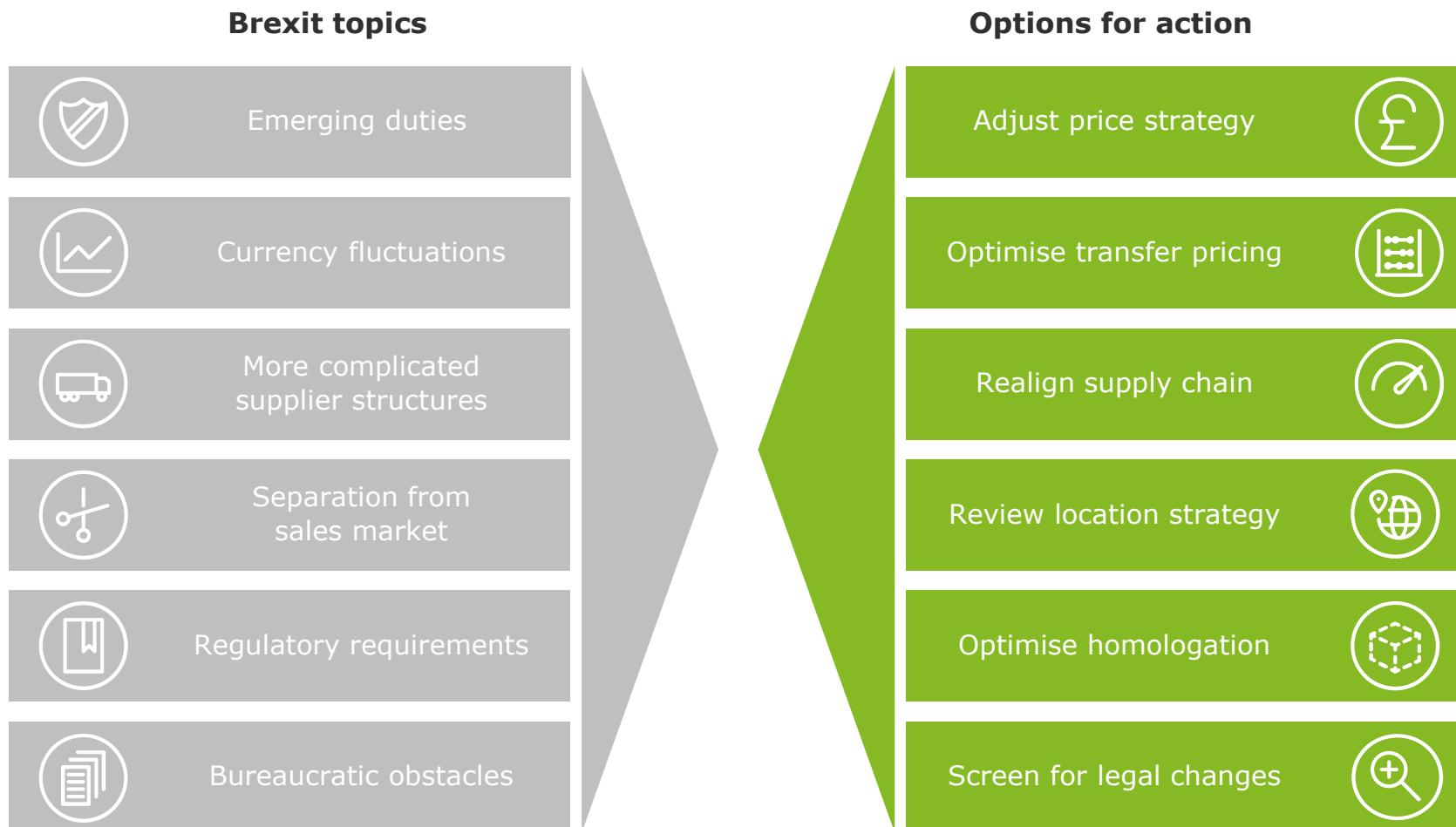
DE volume segment: turnover and profit development if OEMs waive margins



Outlook (2/2) | Options for action

The issues for automotive manufacturers are varied and require analysis of individual effects

Potential options for action as building blocks for an effective Brexit strategy



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