



Coronavirus and beyond

Europe vehicle demand
and logistics outlook
2020-2030

Table of Contents

<u>1. Executive summary</u>	5
<u>2. Restarting European automotive supply chains</u>	6
2.1 A sudden, deep and prolonged downturn	
2.2 Tentative signs of recovery	
2.3 Accelerating change in vehicle logistics	
<u>3. Forecast methodology and definitions</u>	10
3.1 Market definition	
3.2 Lockdown period analysis	
<i>Table 1 Top 25 European automotive markets Covid-19 status update</i>	
3.3 Scenario terminology: business as usual, base case, best case, worst case	
3.4 Forecasting assumptions and rationale	
<u>4. Europe vehicle monthly volume forecast 2020</u>	14
4.1 Europe vehicle monthly sales forecast	
<i>Figure 1 Europe vehicle monthly sales forecast under 3 scenarios 2020</i>	
<i>Table 2 Europe vehicle sales forecast under 3 scenarios 2020</i>	
<i>Table 3 Europe vehicle sales forecast under 3 scenarios 2020</i>	
4.2 Europe vehicle monthly production forecast	
<i>Figure 2 Europe vehicle production forecast under 3 scenarios 2020</i>	
<i>Table 4 Europe vehicle production forecast under 3 scenarios 2020</i>	
<i>Table 5 Europe vehicle production forecast under 3 scenarios 2020</i>	
<u>5. Europe vehicle sales forecast 2020-2030</u>	19
<i>Table 6 Europe vehicle sales forecast under 3 scenarios to 2030</i>	
<i>Figure 3 Europe vehicle sales forecast under 3 scenarios to 2030</i>	
<i>Figure 4 Europe vehicle sales demand drop under 3 Scenarios to 2030</i>	
5.1 Europe national market disparities	
<i>Table 7 Comparison of vehicle demand drops by country under 3 scenarios 2020</i>	
<u>6. Germany</u>	23
6.1 Germany vehicle sales forecast to 2030	
<i>Table 8 Germany vehicle sales forecast under 3 scenarios to 2030</i>	
<i>Figure 5 Germany vehicle sales forecast under 3 scenarios to 2030</i>	
<i>Figure 6 Germany vehicle sales drop under 3 scenarios to 2030</i>	
6.2 Germany vehicle production and export outlook	

7. UK	26
7.1 UK vehicle sales forecast to 2030	
<i>Table 9 UK vehicle sales forecast under 3 scenarios to 2030</i>	
<i>Figure 7 UK vehicle sales forecast under 3 scenarios to 2030</i>	
<i>Figure 8 UK vehicle sales drop under 3 scenarios to 2030</i>	
7.2 UK vehicle production and export outlook	
8. France	29
8.1 France vehicle sales forecast to 2030	
<i>Table 10 France vehicle sales forecast under 3 scenarios to 2030</i>	
<i>Figure 9 France vehicle sales forecast under 3 scenarios to 2030</i>	
<i>Figure 10 France vehicle sales drop under 3 scenarios to 2030</i>	
8.2 France vehicle production and export outlook	
9. Italy	32
9.1 Italy vehicle sales forecast to 2030	
<i>Table 11 Italy vehicle sales forecast under 3 scenarios to 2030</i>	
<i>Figure 11 Italy vehicle sales forecast under 3 scenarios to 2030</i>	
<i>Figure 12 Italy vehicle demand drop under 3 scenarios to 2030</i>	
9.2 Italy vehicle production and export outlook	
10. Spain	34
10.1 Spain vehicle sales forecast to 2030	
<i>Table 12 Spain vehicle sales forecast under 3 scenarios to 2030</i>	
<i>Figure 13 Spain vehicle sales forecast under 3 scenarios to 2030</i>	
<i>Figure 14 Spain vehicle sales drop under 3 scenarios to 2030</i>	
10.2 Spain vehicle production and export outlook	
11. Other EU 20	36
<i>Table 13 Other EU 20 vehicle sales forecast under 3 scenarios to 2030</i>	
<i>Figure 15 Other EU 20 vehicle sales forecast under 3 scenarios to 2030</i>	
<i>Figure 16 Other EU 20 vehicle demand drop under 3 scenarios to 2030</i>	
<i>Table 14 Comparison of other EU 20 vs top 5 vehicle demand drops under 3 scenarios 2020</i>	
12. Changes to European vehicle logistics	39
12.1 Entering the Covid era of disruption	
12.2 Tools and processes to manage volatility	
12.3 The online outbound opportunity	
12.4 Sharing the pain and the gains together	
13. Appendix	43

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1. Executive summary

- The European automotive market and vehicle logistics sector are stirring back to life, with most markets ending restrictions on vehicle sales by the end of May. That will allow vehicle production, sales and distribution to gradually lift from historic lows over the coming months. As long as further restrictions are avoided, a combination of backorders, delayed seasonal peaks and government incentives could see monthly volume temporarily reach or surpass monthly norms later in the year.
- However, the recovery will not make up for lost demand or for damaged consumer confidence. We forecast that European vehicle sales will decline around 20% in the base case, and by 25% in our worst-case scenario. That will range from low double-digit declines in less-affected regions like central and eastern Europe, to drops of 30% or more in hard-hit countries like the UK, Italy, Spain and France.
- The long-term forecast for European markets is also subdued, with economic and regulatory headwinds going into 2020 likely to be compounded by the crisis. In most markets, 2019 volume levels are not expected to return until later in the 2020s, though central and eastern European markets have higher growth prospects. In some markets, however, previous volume highs are not forecasted to return before the end of the decade.
- The impact for European vehicle logistics will be painful as the sector responds to structural changes in the automotive industry. However, the crisis is also set to accelerate trends, including the use of advanced data and software planning tools, as well as in market dynamics such as higher electric vehicle sales and more online vehicle ordering. In a difficult period ahead, the sector still has opportunities, especially where OEMs, suppliers and providers work closely together to share pain and gain.

2. Restarting European automotive supply chains

2.1 A sudden, deep and prolonged downturn

The coronavirus global pandemic brings few guarantees besides uncertainty. Even in countries and regions which have passed the peak of new transmissions, and where governments are restarting economies – in some cases more quickly than others – there are concerns that new waves of infection could emerge, requiring further restrictions.

The full scale of damage is far from clear, including how high unemployment will climb, how much economies will contract as governments phase out financial support, or how deeply consumer confidence will be damaged by lockdowns and ongoing social distancing.

That is especially true for the European automotive industry. Even before the crisis, European vehicle sales were facing headwinds, including higher regulatory costs – notably those related to stricter EU CO₂ emissions targets and fines that came into effect in the EU this year – a continuing decline in diesel sales, slowing economic growth, trade uncertainty including around Brexit, as well as changing vehicle ownership and mobility patterns.

But compared to relative stagnation, the coronavirus has struck down demand, supply chains and manufacturing on a scale never before seen. Some markets have had sales and much production almost completely turned off for 8-10 weeks. Along with the depth of that sudden demand shock, Europe is facing a downturn in vehicle sales that is likely to be felt for years to come.

We expect Europe to be the most severely impacted global region by the coronavirus crisis in terms of new vehicle sales and production in 2020 and beyond. While we forecast that global demand for passenger and commercial vehicles will fall by around 15% compared to 2019, total sales across Europe are set to decline around 20% in the base case, and by 25% in our worst-case scenario. The worst-hit national markets could decline by 30% or more in 2020 and fail to recover to 2019 levels before the end of the 2020s.

There will be segments of the automotive supply chain that suffer from profound structural change. Europe already had under-utilised plants in some countries, including France and Italy. Nissan is the first to confirm a closure, when it shuts its van assembly plant in Barcelona, Spain later this year. There are other shuttered lines that OEMs may never fully reopen or eventually close permanently. Elsewhere, the sector could see further consolidation and insolvencies.

That will include logistics, perhaps especially for the specialised, yet fragmented outbound sector. The profitability of most production and logistics operations is after all based on maximising asset, capacity and labour utilisation. And yet, demand shocks, social distancing

restrictions and safety protocols could make it harder, or even impossible in some cases, to reach sustainable levels.

The industry that emerges from lockdown is likely to have higher costs for manufacturing and distribution at the same time that consumer spending and confidence will be low. For some suppliers and logistics providers, that will be an existential equation.

2.2 Tentative signs of recovery

Despite the bleak outlook, the European automotive industry is moving out of the trough. New coronavirus cases and deaths are on the decline across the continent, and countries continue to open more parts of the economy. It looks likely that April would have been the cruellest month for most markets, with vehicle sales across Europe down nearly 80% and production at even lower levels. It was also likely the period of the worst logistics disruption. Many EU member states shut borders for people, leading to queues and checks for goods. Carriers and operators cut shipping services where possible, while ports and yards were crowded with inventory.

May, while not a month of resurgence, has hinted at recovery. By June, most vehicle assembly plants in Europe will have resumed some level of production or pre-production, although output is set to remain low. And while many logistics lanes and border areas are still disrupted, moving vehicles and cargo is becoming less of a challenge. Many logistics providers have also demonstrated that they could quickly adapt to new safety protocols.

Most importantly, personal mobility and vehicle sales channels have stirred back to life. After Germany in late April, more major European countries are allowing vehicle sales activity to resume, at least partially, whether at dealers – under social distancing requirements – or through online transactions and home deliveries.

The outlines of a tempered recovery can be glimpsed. OEMs will be pushing to deliver backorders and make back some lost demand, including through aggressive marketing and low financing offers.

While European economies will face a deep recession, governments and central banks have intervened on a huge scale to support the economy and job market. Now, the automotive industry is encouraging national governments to offer consumers incentives to buy new vehicles, including scrappage schemes, tax breaks and subsidies. France was the first major market to commit to an expanded incentive programme for low-emission vehicles and trade-in offers for older, higher polluting models. The German government is also expected to make a decision in June, although it has expressed caution in renewing the type of scrappage incentives it used following the 2009 downturn.

There is also expectation for an EU stimulus package, led by France and Germany, that could include around €100 billion (\$110 billion, £90 billion) to support the broader transport sector, of which €20 billion would be for the automotive industry – much of it likely targeted at low-emission and electrified vehicles in line with EU CO₂ targets.

There are other indications that European vehicle sales might see some recovery. China and South Korea have seen vehicle sales growth after containing outbreaks in their countries. The US, despite still being in the midst of the crisis, has seen pent-up demand for certain vehicle segments, including SUVs and pickup trucks. More broadly, shifts away from public transport and shared mobility during the pandemic and toward individual vehicle use might further support the automotive sector.

Overall, if European countries are able to further open up economies and to lift lockdown restrictions, we expect that monthly sales levels could return, or even surpass, 'normal' levels by the end of the summer or autumn – at least for a brief period, before settling back to lower volumes.

These factors don't indicate a full-bodied 'recovery' in the European automotive market anytime soon. Even in our best-case scenarios, demand increases are short-lived, with the medium-term forecast for vehicle demand to remain at relatively subdued levels. After a short-term boost, government incentives would likely result in demand drops once they are withdrawn. Further increases in unemployment could also mean that vehicle purchases that have for now been put on hold – including lease renewals, fleet sales and company vehicles – could simply disappear. Even for those open to buying cars, an overall drop in the value of vehicles could also pull more consumers to lower-priced used vehicles.

Supply chains are also fragile, with supplier insolvencies increasing and shortages of critical parts from many regions in Europe and elsewhere. Some plants have also stopped in the face of concerns that conditions were still unsafe.

Likewise, the crisis has not impacted Europe equally, with many countries at different stages of restrictions and potential recovery. The UK market, for example, looks set to be significantly worse hit in relative terms than the German market will be, or than countries in eastern Europe, where the outbreak appears to have been relatively mild.

And even if Europe is able to maintain low infection rates and avoid further restrictions, it will be dependent on progress in its major export and supply markets. The risks are only too evident from the disruption ongoing in the US, Mexico, Brazil and Russia, for example.

2.3 Accelerating change in vehicle logistics

The crisis has severely impacted the European vehicle logistics sector. Along with costs related to the shutdowns, providers have faced an almost total loss of revenue. Many face liquidity shortages, and have adjusted their businesses to survive, including furloughing and reducing staff, cutting working hours, mothballing fleets, and scaling back or eliminating transport services where possible. Many would have turned to government employment and financial support where available, as well as extending credit lines and loans, and halting investments.

Any return to higher volumes would of course be good news for vehicle logistics, reactivating dormant networks and bringing relief to cash-starved providers.

But a lumpy recovery also presents other challenges. Demand and production are likely to remain volatile, which will make planning and allocating vehicle inventory difficult. While many OEMs have been carrying high vehicle inventories, key product segments could deplete quickly given the long production pause, leaving companies burdened with too much stock they won't be able to sell, and not enough of the models in demand. That could especially be the case with government and EU incentives targeting low-emission and electric vehicles, with capacity to produce and supply such models more constrained than other segments.

Such bullwhips in the market could lead to periods of capacity shortages for vehicle logistics. However, few providers will want to risk expanding fleets that are then under-used in the longer term. Meanwhile, many of the smaller carriers that have worked as subcontractors are those likely to exit the market first, reducing the sector's ability to use assets flexibly.

But here, too, the Covid crisis could accelerate a number of trends across the supply chain and for vehicle logistics. To be more agile, for example, both OEMs and logistics providers will have to adapt new tools to manage fleets, dynamically plan routes and loads, and work more closely with new partners and even competitors.

Structural shifts in the market could also bring more opportunities to vehicle logistics. The rise of online sales, home delivery and test drives, for example, should allow for a range of new service models and solutions for vehicle logistics. A faster shift to EVs, meanwhile, would support investment in the supply chain, including transport and infrastructure services in vehicle logistics and yard management.

There are other positive signals in the vehicle logistics sector. As well as supporting the relief effort directly in various ways, OEMs, suppliers and logistics providers have all reported increased levels of collaboration and partnership in the wake of the crisis.

That has included closer planning and communication. The industry has worked together to establish new playbooks for operating safely in the coronavirus era, for example. OEMs have also tried to support the creditworthiness of carriers, including paying invoices on time, and not compounding financial stress by immediately clawing back costs.

Such solidarity will not supersede the need for OEMs to reduce costs and get to grips with their own cashflow challenges. But many in the sector so far seem to understand that any recovery – fast, slow or halting – will require collaboration across the value chain. Sources at OEMs stress that they are aiming to catch up some demand where possible. That is no guarantee that they will. But the message from many to their supply chain and logistics providers is that they should work together carefully to operate safely – but that they should get ready to be on the move again.

3. Forecast methodology and definitions

For the purposes of this forecast, we have used a specific definition and dataset representing 25 European markets for passenger and commercial vehicles, outlined below.

The key factors in this analysis are related to the length of 'lockdowns' in national European markets, together with a number of other factors related to the health and economic crisis, including coronavirus deaths per 100,000 population, expected falls in GDP, and other automotive headwind and growth factors.

3.1 Market definition

We use a dataset of 25 countries from ACEA, the European automotive manufacturers' association. This includes the five largest European markets: Germany, the UK, France, Italy and Spain. It also includes 20 other smaller EU markets: Austria, Belgium, Denmark, Finland, Greece, Ireland, Luxembourg, Netherlands, Portugal, Sweden, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia.

This dataset does not include small EU markets Cyprus, Malta and Slovenia, nor does it include EFTA countries of Iceland, Norway, Liechtenstein and Switzerland.

Data includes **passenger cars (PC)** and all **commercial vehicles (CV)**.

3.2 Lockdown period analysis

For this automotive analysis, we consider the 'lockdown period' to be to the closure of non-essential retail, most notably new passenger vehicle sales operations at dealerships. By contrast, commercial vehicles and service parts were mostly deemed essential.

The length of the lockdown period will have the most drastic impact on vehicle demand. However, a range of social distancing and other restrictions will remain in place well beyond these dates for months to come and possibly even indefinitely.

For production, we have assumed that whilst lockdowns are imposed, most assembly plants would struggle to operate at anything approaching 'normal' capacity. While demand will be the biggest factor, this is also related to employee and union concerns about safety, as well as supplier risks and disruptions. It is only with the broader lifting of the lockdowns, and the resumption of vehicle sales, that manufacturing output can ramp up further.

Europe was almost entirely in lockdown during April and well into May (see table 1), with the exception of Sweden and a number of other countries with partial lockdowns. However, most EU countries are now lifting their restrictions gradually – and more specifically for automotive, allowing non-essential retail including dealerships to re-open.

In assessing the length and impact of lockdowns, we have also monitored public health metrics related to the crisis, including official Covid-19 cases confirmed and deaths. Up to

this stage, we think the most revealing metric has been deaths per 100,000 population, as reported by John Hopkins University (see table 1 below). This has given a clear indication of which countries are going to require the longest lockdown and which will experience the most severe impact upon vehicle demand. However, as deaths in Europe subside, the key metric to determine if lockdown restrictions will loosen or tighten further is likely to be based on new cases, and the so-called reproduction value, or R-value, which measures the rates at which the infection is passed on.

Table 1 Top 25 European automotive markets Covid-19 status update

Rank	Country	2019 PC and CV Sales	Lockdown started	Official Lockdown end (non-essential retail opening i.e. car dealerships)	Automotive Lockdown Period	CV-19 Deaths Per 100,000 Population
1	Germany	4,017,059	22 nd March	20 th April	5 weeks	10.16
2	UK	2,676,918	24 th March	1 st June	11 weeks	56.46
3	France	2,693,977	16 th March	11 th May	8 weeks	42.69
4	Italy	2,131,916	9 th March	4 th May	8 weeks	54.73
5	Spain	1,501,260	15 th March	1 st May	7 weeks	58.04
6	Poland	656,265	13 th March	4 th May (partial)	7 weeks	2.71
7	Belgium	644,041	18 th March	11 th May	8 weeks	81.98
8	Netherlands	538,742	16 th March	19 th May (partial)	9 weeks	34.18
9	Sweden	418,478	N/A	-	-	41.44
10	Austria	382,333	16 th March	14 th April	4 weeks	7.29
11	Czech Rep.	281,423	16 th March	17 th April	4 weeks	2.98
12	Portugal	271,817	16 th March	4 th May	8 weeks	13.19
13	Denmark	264,256	13 th March	10 th May	8 weeks	9.75
14	Romania	189,025	25 th March	12 th May	7 weeks	6.30
15	Hungary	162,659	28 th March	4 th May	5 weeks	5.17
16	Finland	155,147	27 th March	1 st June	9 weeks	5.67
17	Ireland	142,494	27 th March	18 th May	7 weeks	33.60
18	Greece	122,366	23 rd March	1 st June	11 weeks	1.61
19	Slovakia	113,863	16 th March	20 th April (partial)	5 weeks	0.51
20	Croatia	72,072	19 th March	27 th April (partial)	5 weeks	2.47
21	Luxembourg	60,239	15 th March	11 th May	8 weeks	18.10
22	Lithuania	47,382	16 th March	31 st May	11 weeks	2.37
23	Bulgaria	43,767	13 th March	13 th May	9 weeks	1.89
24	Estonia	37,211	12 th March	18 th May	10 weeks	5.00
25	Latvia	19,488	13 th March	12 th May	8 weeks	1.19
Average=7.5						

CV-19 Deaths per 100,000 population

0 to 10

10 to 20

20+

Source: Automotive from Ultima Media, death per 100,000 data as of 28th May 2020 from John Hopkins University Coronavirus Resource Center

<https://coronavirus.jhu.edu/data/mortality>

3.3 Scenario terminology: Business as usual, best case, base case, worst case

Our outlook for sales and production is outlined in three scenarios, each based on the length of lockdown restrictions in European markets and their impacts on vehicle demand and the supply chain.

Business as usual (BAU)

This is the outlook for Europe had the coronavirus not occurred. For most markets, we were already forecasting declining vehicle sales and production in the first half of the 2020s.

Best case scenario

In this scenario, we would expect an average lockdown period of six weeks across Europe from the middle of March to early May in most cases. The worst impact on automotive markets would be over that period, but demand and consumer confidence would start to rebound in June.

For production, plants that began to reopen in April and May would start to approach 'normal' levels in July as demand starts to pick up, and bottlenecks in the supply chain are worked through.

Under this scenario, we would anticipate a relatively 'V-shaped' recovery during several months of 2020, although volumes would still be much lower than even our business-as-usual forecast over the next several years.

Base case scenario

In this scenario, we expect an average lockdown across Europe of eight weeks from the middle of March until around the middle of May. The impact on automotive demand and supply chains will be significant in that period and only start to recover by July.

For production, plants that began to reopen in April and May would start to approach 'normal' levels at the end of the summer, with output restrained mainly as a response to lower demand, but also in part from disruptions in the supply chain.

Under this scenario, we would expect more of a 'U-shaped' recovery in the months later in 2020, and volume impacts felt into 2021 and beyond.

Worst case scenario

In this scenario, we expect an average lockdown across Europe of ten weeks from the middle of March to around early-to-mid June, with demand only starting to recover by the end of summer and into autumn.

For production, plants that began to reopen in April and May would start to approach 'normal' levels in the autumn, mainly in response to lower demand, but also from increased disruptions in the supply chain.

Under this scenario, we would expect more of a deeper and extended 'U-shaped' recovery in 2020, but the impact will be felt for several years, in some markets lowering the demand for the rest of the decade.

3.4 Forecasting assumptions and rationale

- Due to the lockdown and closure of vehicle dealerships, some demand will be 'lost' this year. The projected demand recovery fundamentally hinges upon consumer confidence and the impact of a sharp contraction in GDP. However, the full impact of the downturn may only become clearer as governments wind down employment and other support measures.
- It may appear in our forecasts that volumes in the third and fourth quarter recover up to 10-20% above 'business-as-usual' levels. However, this is not quite the case. The immense disruption of the Covid crisis has removed any semblance of the usual monthly seasonality for 2020. It would be more accurate to say that under pre-Covid 'business as usual', we would normally expect an average of 1.5m unit sales per month throughout the year. Therefore, the demand recovery we forecast in the second half of 2020 of 1.6m units per month only slightly exceeds those normal average demand levels. However, the peaks in some of those months may be larger than usual.
- We have considered the possibility of a second lockdown in response to a second peak of the coronavirus. Clear risks remain, but we have deemed such a lockdown relatively unlikely for the purposes of this analysis. European governments have locked down economies until there were clear signs of falling rates of infection, despite economic damage. Many are now planning to introduce track-and-trace systems to mitigate the infection rate, including the potential of more localised restrictions. In our view, European governments would find it economically and politically untenable to re-impose nationwide shutdowns. However, if there were a second lockdown, the outlook would worsen considerably.

4. Europe vehicle monthly volume forecast 2020

4.1 Europe vehicle monthly sales forecast

During the lockdown periods, we expect an unparalleled drop off in vehicle demand in markets where restrictions are most severe. This was already evident during the month of April, where European vehicle demand declined by more than 75% across the markets analysed compared to the same month in 2019.

Most of the activity that did occur in this month was attributable to regions with fewer restrictions and where dealerships sales did not completely stop, including Sweden, the Netherlands and countries such as Poland. Germany reopened dealerships earlier than most western European markets.

Governments also deemed commercial vehicles as essential business, leading to lower proportional declines in segments like vans, as demand increased for e-commerce deliveries and for overall supply of essential food, medicine and pharmaceuticals. A low level of online sales activity has continued and has been increasing in a number of markets.

Some European countries will see improvements in May with the reopening of dealerships, but overall levels are still likely to remain low. The UK government, for example, will only allow dealerships to open from 1st June.

Most of Europe is already in recession and there will be ongoing damage to consumer confidence. Social distancing requirements and ongoing restrictions look set to limit economic output even further, reducing the likelihood of big-ticket purchases like vehicles.

However, under all three forecasting scenarios, we foresee a short-term sales rebound due to pent-up demand and government stimulus following the easing of restrictions, with a temporary return to 'normal' monthly levels even in our worst-case scenario.

However, once that short-term unwinding of pent-up demand occurs in later 2020, we then expect sales volumes to level out in 2021 and only slightly improve upon 2020 volumes (see European vehicle forecast to 2030).

Figure 1 Europe vehicle monthly sales forecast under 3 scenarios 2020 (monthly PC and CV units)



Source: Automotive from Ultima Media

Table 2 Europe vehicle sales forecast under 3 scenarios 2020 (monthly PC and CV units)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Business As Usual 2020	1,366,824	1,270,401	2,003,800	1,488,898	1,598,258	1,667,080	1,463,779	1,197,928	1,412,171	1,355,645	1,347,167	1,396,811
Volume change from 2019	-27,894	-25,927	-40,894	-30,386	-32,618	-34,022	-29,873	-24,448	-28,820	-27,666	-27,493	-28,506
% change from 2019	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%	-2.0%
Best Case Scenario 2020	1,110,196	1,112,249	942,604	361,590	896,981	1,275,827	1,493,652	1,601,311	1,642,730	1,646,140	1,635,845	1,624,861
Volume change from 2019	-284,522	-184,079	-1,102,090	-1,157,694	-733,894	-425,276	0.0	+378,936	+201,739	+262,829	+261,185	+199,544
% change from 2019	-20.4%	-14.2%	-53.9%	-76.2%	-45.0%	-25.0%	0.0%	+31.0%	+14.0%	+19.0%	+19.0%	+14.0%
Base Case Scenario 2020	1,110,196	1,112,249	942,604	361,590	538,189	916,894	1,344,287	1,564,640	1,628,320	1,653,057	1,642,719	1,624,861
Volume change from 2019	-284,522	-184,079	-1,102,090	-1,157,694	-1,092,686	-784,208	-149,365	+342,265	+187,329	+269,746	+268,059	+199,544
% change from 2019	-20.4%	-14.2%	-53.9%	-76.2%	-67.0%	-46.1%	-10.0%	+28.0%	+13.0%	+19.5%	+19.5%	+14.0%
Worst Case Scenario 2020	1,110,196	1,112,249	942,604	361,590	326,175	510,331	1,090,366	1,454,626	1,613,910	1,646,140	1,635,845	1,624,861
Volume change from 2019	-284,522	-184,079	-1,102,090	-1,157,694	-1,304,700	-1,190,771	-403,286	+232,251	+172,919	+262,829	+261,185	+199,544
% change from 2019	-20.4%	-14.2%	-53.9%	-76.2%	-80.0%	-70.0%	-27.0%	+19.0%	+12.0%	+19.0%	+19.0%	+14.0%

Source: Automotive from Ultima Media

Table 3 Europe vehicle sales forecast under 3 scenarios 2020 (annual PC and CV units)

Scenario	2019 Volumes	2020 Volumes	2020 Volume Drop from BAU	2020 % Drop from BAU	2020 Volume Drop from 2019	2020 % Drop from 2019
Business As Usual	17,927,307	17,568,761	-	-	-358,546	-2.0%
Best Case Scenario	-	15,343,684	-2,225,077	-12.7%	-2,583,623	-14.4%
Base Case Scenario	-	14,439,302	-3,129,459	-17.8%	-3,488,005	-19.5%
Worst Case Scenario	-	13,428,591	-4,140,170	-23.6%	-4,498,716	-25.1%

Source: Automotive from Ultima Media

4.2 Europe vehicle monthly production forecast

As with sales, the longer the lockdowns, the more extreme will be the impact on production, in large part because of lower vehicle demand, lower exports from Europe and supply chain disruption.

We expect ongoing challenges in extended supply chains even after lockdown restrictions are lifted. These include inventory mismatches and component shortages, as well as insolvency issues at tier suppliers or even logistics providers. Outbound vehicle logistics markets, which depend almost solely on the vehicle market, could be a particular risk.

Meanwhile, social distancing and health protocols in place at plants and facilities could also constrain capacity in some instances, which is partly why we expect production declines to be worse than the fall in European new vehicle registrations.

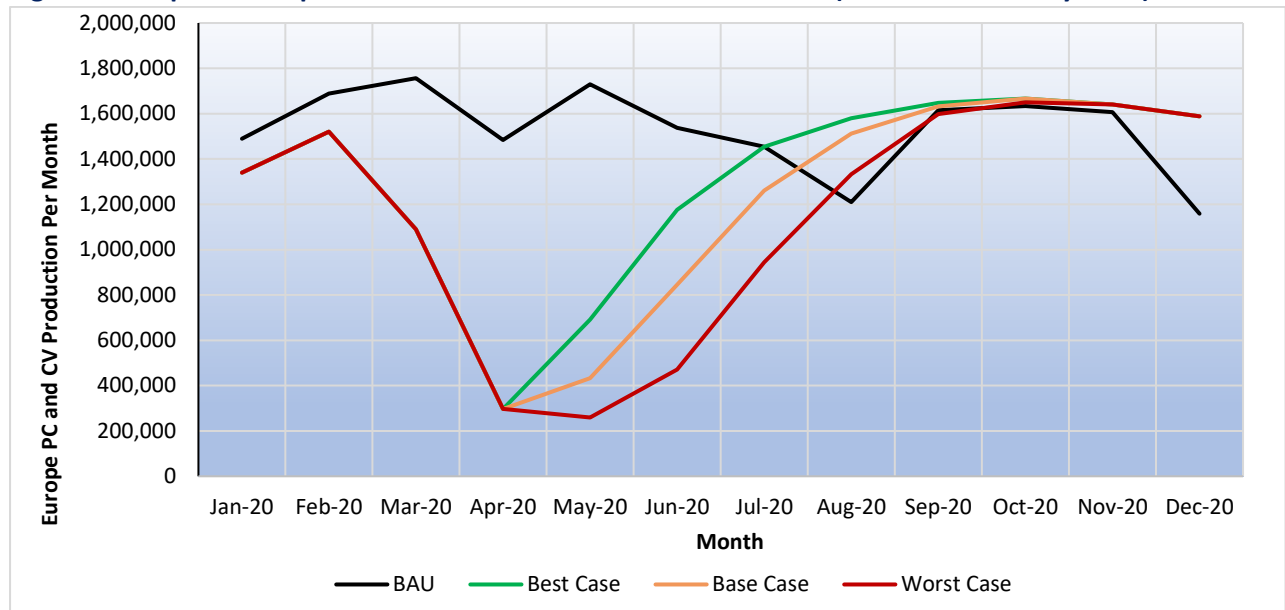
Any wider recovery in output will also depend on recovery in global markets, notably North America and China, as well as regional supply to key trading partners like Turkey and the Middle East.

A sustained recovery in China, for example, will help drive demand for some vehicle production, especially for premium OEMs. While sales have been improving in the world's largest market, our base-level forecast for China is a decline this year of around 12%.

The US is something of a contradiction. Although it is the country worst affected by the pandemic, more vehicle markets have remained open than in Europe, and some OEMs are reporting signs of recovery. Our base-level forecast is for a decline of 15% this year. However, that could worsen if the outbreak in the US is not brought under control.

Despite these risks, we still expect some recovery in production later in the year in line with demand under each of the three scenarios. That could even lead some facilities to run at higher rates than normal seasonal levels, for example cancelling summer shutdown periods, or maintaining higher levels later in the year. However, such an increase would be relatively short lived. By 2021, we expect monthly production to subside in line with lower demand and a more traditional seasonality.

Figure 2 Europe vehicle production forecast under 3 scenarios 2020 (PC and CV monthly units)



Source: Automotive from Ultima Media

Table 4 Europe vehicle production forecast under 3 scenarios 2020 (PC and CV annual units)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Business As Usual 2020	1,488,817	1,688,853	1,756,452	1,483,712	1,729,141	1,536,892	1,453,737	1,209,445	1,615,032	1,633,371	1,607,194	1,158,666
Volume change from 2019	-30,384	-34,466	-35,846	-30,280	-35,289	-31,365	-29,668	-24,683	-32,960	-33,334	-32,800	-23,646
% change from 2019	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%
Best Case Scenario 2020	1,339,935	1,519,967	1,089,717	296,742	691,657	1,176,193	1,453,737	1,579,684	1,647,992	1,666,705	1,639,994	1,587,845
Volume change from 2019	-179,266	-203,352	-702,581	-1,217,250	-1,072,773	-392,064	-29,668	+345,556	0.0	0.0	0.0	+405,533
% change from 2019	-11.8%	-11.8%	-39.2%	-80.4%	-60.8%	-25.0%	-2.0%	+28.0%	0.0%	0.0%	0.0%	+34.3%
Best Case Scenario 2020	1,339,935	1,519,967	1,089,717	296,742	432,285	845,291	1,260,894	1,511,807	1,631,512	1,666,705	1,639,994	1,587,845
Volume change from 2019	-179,266	-203,352	-702,581	-1,217,250	-1,332,145	-722,966	-222,511	+277,679	-16,480	0	0	+405,533
% change from 2019	-11.8%	-11.8%	-39.2%	-80.4%	-75.5%	-46.1%	-15.0%	+22.5%	-1.0%	0.0%	0.0%	+34.3%
Worst Case Scenario 2020	1,339,935	1,519,967	1,089,717	296,742	259,371	470,477	944,929	1,332,858	1,598,552	1,650,038	1,639,994	1,587,845
Volume change from 2019	-179,266	-203,352	-702,581	-1,217,250	-1,505,059	-1,097,780	-538,476	+98,730	-49,440	-1.0	0.0	+405,533
% change from 2019	-11.8%	-11.8%	-39.2%	-80.4%	-85.3%	-70.0%	-36.3%	+8.0%	-3.0%	-1.0%	0.0%	+34.3%

Source: Automotive from Ultima Media

Table 5 Europe vehicle production forecast under 3 scenarios 2020 (PC and CV annual units)

Scenario	2019 Volumes	2020 Volumes	2020 Volume Drop from BAU	2020 % Drop from BAU	2020 Volume Drop from 2019	2020 % Drop from 2019
Business As Usual	18,736,033	18,361,312	-	-	-374,721	-2.0%
Best Case Scenario	-	15,690,168	-2,671,144	-14.5%	-3,045,865	-16.3%
Base Case Scenario	-	14,822,695	-3,538,617	-19.3%	-3,913,338	-20.9%
Worst Case Scenario	-	13,730,427	-4,630,885	-25.2%	-5,005,606	-26.7%

Source: Automotive from Ultima Media

5. Europe vehicle sales forecast 2020-2030

Even before the crisis, we expected European vehicle sales to decline for several years. Slowing economic growth was set to weigh on demand, along with rising regulatory costs and changing mobility patterns, as well as the risk of wider trade disputes. We had already forecasted new vehicles sales to decline by 2% in 2020 compared to 2019, and to continue sliding for several years. The Covid-19 crisis looks likely to accelerate those existing challenges and decline.

Even under the best-case scenario, we do not expect volumes to recover to pre-crisis levels before 2027 across the wider region. We foresee a sharp global recession in 2020, followed by a fiscal drag that will constrain economic growth for several years, including higher unemployment and low consumer confidence, and likely tax increases.

The scale of losses to the automotive industry will be huge, even just measured in lost sales volume. In our base case scenario, the total reduction in passenger and commercial vehicle demand from 2020-2030 from our business-as-usual forecast will amount to 8m lost units; in the worst case, we will see a cumulative loss of nearly 12m units across the decade.

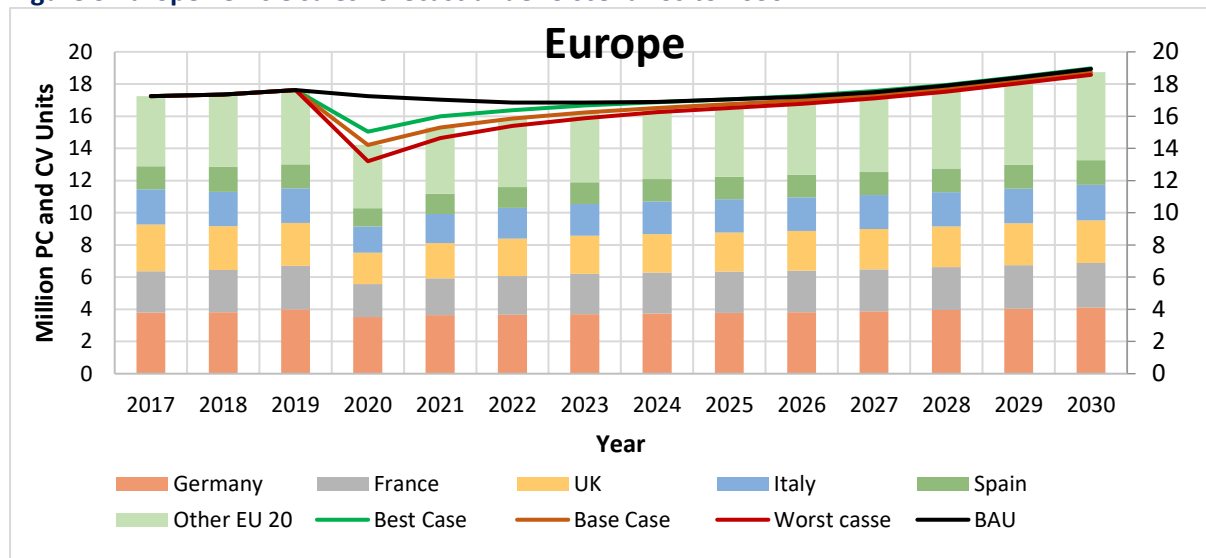
Such a decline is likely to lead to significant structural change in the sector, including further consolidation, plant closures and even outright market withdrawals.

Table 6 Europe vehicle sales forecast under 3 scenarios to 2030 (million annual PC and CV units)

Scenario	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
BAU	17.25	17.35	17.63	17.24	17.02	16.85	16.85	16.89	17.05	17.21	17.49	17.90	18.41	18.93
Best Case	17.25	17.35	17.63	15.04	15.99	16.38	16.67	16.86	17.06	17.27	17.56	17.94	18.45	18.98
Volume +/-	0.0	0.0	0.0	-2.2	-1.0	-0.5	-0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Base Case	17.25	17.35	17.63	14.22	15.31	15.85	16.23	16.51	16.75	17.00	17.29	17.69	18.21	18.73
Volume +/-	0.0	0.0	0.0	-3.0	-1.7	-1.0	-0.6	-0.4	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2
Worst Case	17.25	17.35	17.63	13.20	14.65	15.39	15.88	16.25	16.51	16.78	17.11	17.52	18.05	18.57
Volume +/-	0.0	0.0	0.0	-4.0	-2.4	-1.5	-1.0	-0.6	-0.5	-0.4	-0.4	-0.4	-0.4	-0.4

Source: Automotive from Ultima Media

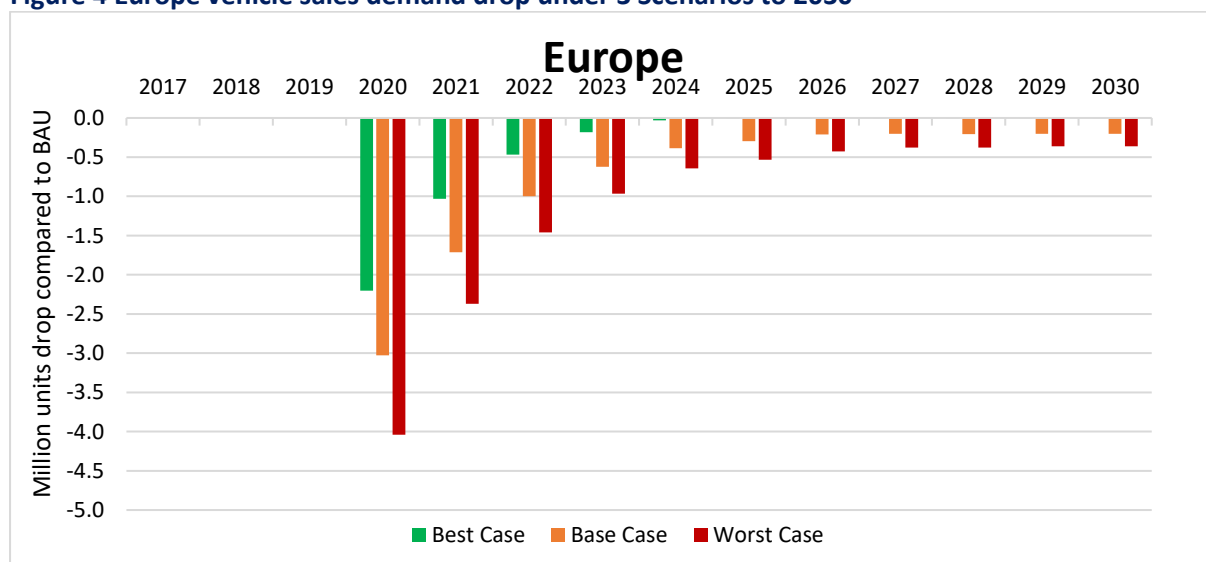
Figure 3 Europe vehicle sales forecast under 3 scenarios to 2030



Source: Automotive from Ultima Media

Note: the column chart shows the base case scenario for each country.

Figure 4 Europe vehicle sales demand drop under 3 Scenarios to 2030



Source: Automotive from Ultima Media

5.1 Europe national market disparities

Just as with the spread of the pandemic, the effects of the coronavirus crisis on vehicle demand and production will not be equal across European countries. Our forecast and analysis reveal how some markets are likely to see lower declines in vehicle sales, such as Germany, central and eastern European countries, compared to harder-hit countries, such as the UK, Italy, Spain and France.

These dichotomies could be closed or exaggerated further depending on incentives from national governments, including scrappage schemes, subsidies and tax breaks. France, for

example, has unveiled an €8 billion set of incentives targeted mainly at increasing EV and hybrid subsidies.

However, individual stimulus measures will only go so far in helping the broader sector. European economies are deeply entwined, with automotive supply chains closely linked for components and vehicle exports. The sector depends on recovery across the EU, as well as many global export markets. That is just as true for the UK, where a failure to secure a free trade arrangement with the EU this year would weigh even further on the country's worsening automotive outlook.

The wider EU-led stimulus currently under discussion would help support a wider recovery, however our long-term expectation is still for most major markets to suffer. Following the shock of the crisis over the coming years, all of the five major European markets – Germany, the UK, France, Italy and Spain – will share a low growth trajectory.

The situation is somewhat different in the short and longer term across other parts of the continent. Eastern European states have so far been spared the worst of the epidemic, and look set to benefit from shorter lockdowns and fewer restrictions. Some, including Poland and other central European states, also have better growth prospects.

But these countries are also going to feel the impacts of recession and long-term decline in Europe's major markets. For example, even though Sweden never went into full lockdown, it is already seeing significant falls in vehicle sales as its wider economy and supply chain suffer. And many of the economies of eastern Europe depend on exports to western and northern Europe, as well as neighbours such as Turkey and Russia. No part of the continent is set to be unscathed.

Table 7 Comparison of vehicle demand drops by country under 3 scenarios 2020 (%)

	Drop from BAU	Drop from 2019
Germany	Best Case -6.2%	Best Case -6.2%
	Base Case -9.3%	Base Case -12%
	Worst Case -15.5%	Worst Case -18%
Other EU 20	Best Case -10.2%	Best Case -12%
	Base Case -13.3%	Base Case -15%
	Worst Case -18.4%	Worst Case -20%
European Average	Best Case -12.8%	Best Case -14.7%
	Base Case -17.6%	Base Case -19.4%
	Worst Case -23.4%	Worst Case -25.1%
France	Best Case -17.2%	Best Case -18%
	Base Case -23.2%	Base Case -24%
	Worst Case -29.3%	Worst Case -30%
Italy	Best Case -17.2%	Best Case -18%
	Base Case -23.2%	Base Case -24%
	Worst Case -29.3%	Worst Case -30%
Spain	Best Case -15.5%	Best Case -18%
	Base Case -21.6%	Base Case -24%
	Worst Case -27.8%	Worst Case -30%
UK	Best Case -17.5%	Best Case -20%
	Base Case -24.7%	Base Case -27%
	Worst Case -30.9%	Worst Case -33%

Source: Automotive from Ultima Media

6. Germany

6.1 Germany vehicle sales forecast to 2030

Before the crisis, Germany's sales volumes had been steadily increasing, growing from 3.7m passenger and commercial vehicles in 2016 and exceeding 4m units in 2019. However, the country was already suffering an economic stagnation, with GDP growth slowing from 1.5% in 2018 to just 0.6% in 2019, narrowly missing a recession in the second half of the year. This clearly impacts on investment levels, economic activity, job creation, disposable incomes and consumer confidence.

Vehicle sales volumes in January 2020 were 7% down year-on-year and forecasted to decline by 3% for the year in our business-as-usual forecast. Although Germany appears to have handled the pandemic better than others so far, the crisis has severely compounded economic challenges.

On 16th March, the government ordered the closing of non-essential business, including car dealerships; vehicle sales fell by 38% in March and were 61% down in April compared to 2019.

Germany's strategy of widespread testing and isolation of coronavirus cases appears to have limited the outbreak of coronavirus compared to other countries. As a result, Germany is set to have had a shorter lockdown of around five weeks – although many restrictions will remain in place for longer. On 20th April, for example, Germany allowed federal states to reopen car dealerships, and the majority have since done so. On 6th May, more retail, travel and business restrictions were lifted.

However, Germany's 16 federal states will take individual control of timing reopening and will operate an 'emergency brake' if there is a resurgence in cases. After the lifting, there were initial signs of an increase in the R value to 1 – the rate at which exponential spread of the virus will follow – however subsequent data has suggested the rate has subsided. Such volatility demonstrates the danger of lifting lockdowns too early and risking a second peak.

The German government is taking huge measures to support its economy, including a stimulus package of €750 billion, and significant support to pay shares of employees' wages. The country's automotive industry is also pushing for further direct stimulus, something that the government has said it won't decide on until June.

Germany has already been seeing a large increase in the share of low emission and electric vehicles, driven in part by incentives implemented last year. These include increased subsidies from €4,000 to €6,000 for EVs priced under €40,000. Purchases of plug-in hybrids in this price range get a subsidy of €4,500, up from €3,000. For hybrid cars priced from €40,000 to €60,000, the incentive increased to €5,000.

However, regardless of how well Germany contains its own outbreak and primes sales in its domestic market, its export-driven economy depends highly on global growth. Declines in

global trade will have a disproportionate impact in Germany – both for domestic vehicle sales and production.

Our forecast is for German vehicle sales to decline less than other European markets, with our baseline forecast for volumes to fall by 12% in 2020 compared to 2019, and 18% in the worst case.

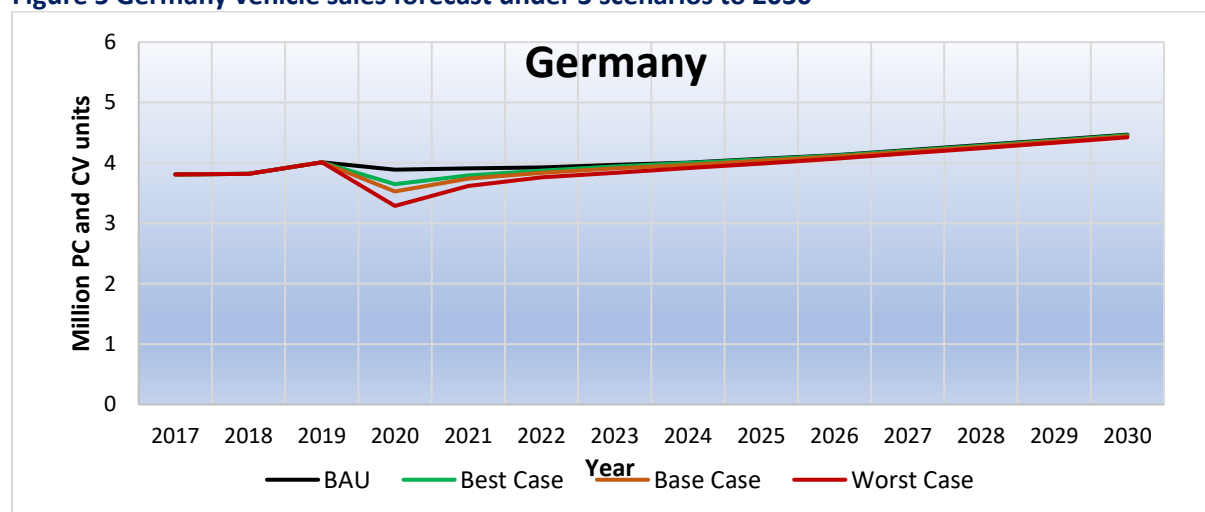
Although it could be among the first to benefit from any global recovery, its vehicle sector will feel long-term pain. Even in the best case, overall volumes are not expected to return to 2019 volumes until the end of the decade.

Table 8 Germany vehicle sales forecast under 3 scenarios to 2030 (million annual PC and CV units)

Scenario	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
BAU	3.81	3.82	4.01	3.89	3.85	3.81	3.81	3.81	3.83	3.85	3.91	3.98	4.06	4.15
Best Case	3.81	3.82	4.01	3.65	3.72	3.76	3.80	3.83	3.85	3.89	3.95	4.03	4.11	4.19
Volume +/-	0.00	0.00	0.00	-0.24	-0.13	-0.05	-0.02	0.01	0.02	0.04	0.04	0.04	0.04	0.05
Base Case	3.81	3.82	4.01	3.53	3.63	3.67	3.71	3.74	3.78	3.82	3.88	3.95	4.03	4.11
Volume +/-	0.00	0.00	0.00	-0.36	-0.22	-0.14	-0.10	-0.07	-0.05	-0.03	-0.03	-0.03	-0.03	-0.03
Worst Case	3.81	3.82	4.01	3.29	3.55	3.62	3.67	3.70	3.74	3.78	3.84	3.92	4.00	4.09
Volume +/-	0.00	0.00	0.00	-0.60	-0.30	-0.19	-0.14	-0.11	-0.09	-0.07	-0.06	-0.06	-0.06	-0.06

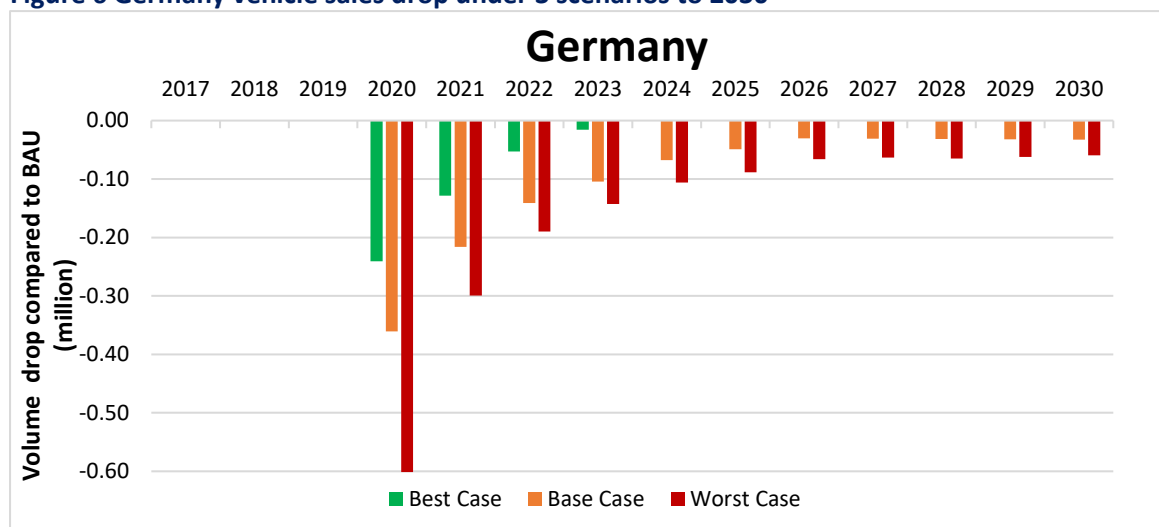
Source: Automotive from Ultima Media

Figure 5 Germany vehicle sales forecast under 3 scenarios to 2030



Source: Automotive from Ultima Media

Figure 6 Germany vehicle sales drop under 3 scenarios to 2030



Source: Automotive from Ultima Media

6.2 Germany vehicle production and export outlook

Germany exported nearly 3.7m units out of 4.95m vehicles built in 2019. Of this total, 58% went to the EU, 19% of exports to Asia and 12% of exports go to the US. Output will thus be hurt by declines in all of Germany's major destinations, including the rest of Europe, the US, Turkey and China.

Germany's powerful automotive manufacturers are all set to be hard hit by the crisis, with Volkswagen Group, BMW and Daimler burning through significant cash while increasing credit lines. These companies are, however, in relatively strong financial positions, and better positioned to weather the crisis than many others. Most are likely to continue investing in new technology, including electric vehicles.

They will, however, review costs carefully, and are likely to delay model launches and investments in some cases.

While most OEMs are likely to maintain their plants in Germany, reviewing capacity in the country is not out of the question – especially for harder-hit brands like Ford and Opel. Tesla, on the other hand, is pressing ahead with its plan to build a new vehicle and battery manufacturing plant close to Berlin.

7. UK

7.1 UK vehicle sales forecast to 2030

Before Covid-19, UK vehicle sales volumes had been in decline, falling from 2.91m passenger and commercial vehicles in 2017 to 2.68m units in 2019, with a highly uncertain outlook. This was in part due to slowing economic activity, the fall in the value of the pound and uncertainty over Brexit, all of which has impacted consumer confidence and investment.

Although the UK formally left the EU in January 2020, it remains in a transition period for the rest of the year – and could face a ‘cliff edge’ if no free trade agreement is reached, including the prospect of tariffs on components and vehicles. Indeed, a majority of economists believe that Brexit, in any scenario, will result in lower economic growth at least in the short term, along with constraints on trade and exports with the EU.

With these risks, we were already expecting something of a ‘lost decade’ in UK vehicle demand, with 2019 levels only to return by 2028.

The Covid crisis has compounded the situation severely. As of 4th May 2020, the UK overtook Italy and Spain as having the most coronavirus-related deaths in Europe. In our forecast, it is also set to be the country with the sharpest vehicle sales decline.

The UK’s lockdown, although not as strict as Italy’s or Spain’s, began unofficially on 16th March and officially on 24th March and required all non-essential business to close, including car dealerships. As a result, the UK vehicle market declined 44.4% in March 2020 and a drastic – though unsurprising – 97% in April compared to 2019.

The situation won’t be much better in May as car dealerships will only be allowed to reopen on 1st June if they comply with certain rules – although the government has also made provisions for more online sales.

The UK economy is set to be hit very hard. Around a quarter of the UK workforce is estimated to have been furloughed, supported by a government scheme that pays a large share of employees’ wages. Withdrawal of this programme, which will begin over the summer, will likely lead to significantly higher levels of unemployment. The Bank of England has forecasted that GDP will fall by 14% in 2020. Although it does anticipate a strong bounce back in 2021, the economic scars are likely to be evident for years to come.

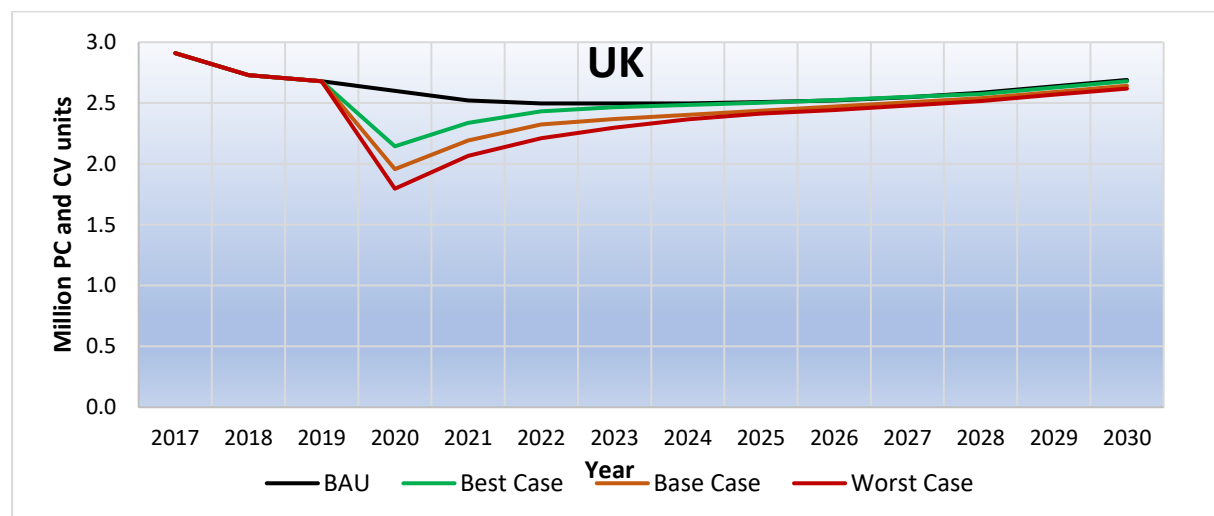
In view of these factors, we forecast a significant fall in annual volumes in 2020, dropping 27% in our base case and 33% in the worst case. Our base case assumption is that volumes remain well below our business-as-usual forecast through the entire decade.

Table 9 UK vehicle sales forecast under 3 scenarios to 2030 (million annual PC and CV units)

Scenario	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
BAU	2.91	2.73	2.68	2.60	2.52	2.50	2.50	2.50	2.51	2.52	2.55	2.59	2.64	2.69
Best Case	2.91	2.73	2.68	2.14	2.34	2.43	2.47	2.48	2.50	2.52	2.55	2.58	2.63	2.68
Volume +/-	0.00	0.00	0.00	-0.46	-0.18	-0.07	-0.03	-0.01	-0.01	0.00	0.00	-0.01	-0.01	-0.01
Base Case	2.91	2.73	2.68	1.96	2.19	2.32	2.37	2.40	2.44	2.47	2.50	2.54	2.59	2.64
Volume +/-	0.00	0.00	0.00	-0.64	-0.33	-0.17	-0.13	-0.09	-0.07	-0.05	-0.04	-0.05	-0.05	-0.05
Worst Case	2.91	2.73	2.68	1.80	2.07	2.21	2.30	2.37	2.41	2.44	2.48	2.52	2.57	2.62
Volume +/-	0.00	0.00	0.00	-0.80	-0.46	-0.29	-0.20	-0.13	-0.09	-0.08	-0.07	-0.07	-0.07	-0.07

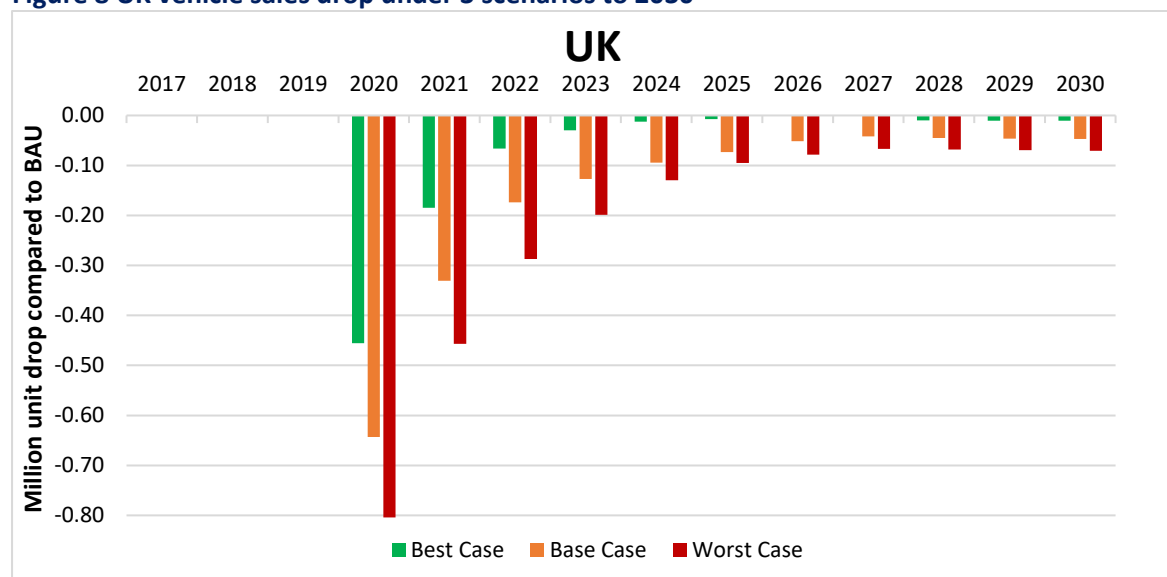
Source: Automotive from Ultima Media

Figure 7 UK vehicle sales forecast under 3 scenarios to 2030



Source: Automotive from Ultima Media

Figure 8 UK vehicle sales drop under 3 scenarios to 2030



Source: Automotive from Ultima Media

7.2 UK vehicle production and export outlook

The UK automotive industry is a significant exporter of vehicles. Of the 1.37m vehicles produced in 2019, 1.05m were exported. About 55% of that volume was to the EU, which makes production highly sensitive both to the scale of decline across the continent, as well as potential fallout from Brexit.

Nearly 19% of exports go to the US, which makes the UK particularly sensitive to recovery in North America as well. Around 5% of volume goes to China.

With all of its major OEMs foreign owned, assembly plants in the UK are considered more at risk than in countries like Germany. Honda had already announced plans to close its factory in Swindon, while brands including BMW Mini, Toyota, Vauxhall and Jaguar Land Rover have alternative capacity in mainland Europe. The country's two biggest carmakers, JLR and Nissan, are also set to be hard hit by the crisis, although both have invested in their UK's plants recently. Nissan has confirmed that it will keep its UK plant open, even as it will shutter another factory in Barcelona.

JLR is reportedly in talks with the UK government for a loan worth more than £1 billion (€1.11 billion, \$1.23 billion).

Overall, however, the UK is at risk of seeing more manufacturing plants or lines close.

8. France

8.1 France vehicle sales forecast to 2030

France's total vehicle sales rose from 2.55m in 2017 to 2.69m in 2019. Like other western European countries, its outlook before the crisis was for relative stagnation in vehicle demand. Along with weaker economic growth, the country also faced even higher regulatory costs, while the wider European collapse in diesel vehicle sales was even more evident in France. French drivers have also demonstrated a faster adaption of shared mobility compared to other European countries, suggesting more shifts away from vehicle ownership.

Now, as one of the countries worst-affected by the coronavirus, France is facing significant declines in demand and output.

The French government introduced strict lockdown measures on 16th March, including shutting down car dealerships sales. As a result, vehicle sales fell 72% in March 2020 and were down 89% in April 2020 compared to the corresponding months in 2019.

The lockdown has had a serious effect on French businesses and consumers, with the French government also expressing concern about economic collapse.

France has outlined its 'deconfinement' strategy, which has allowed most businesses to reopen from 11th May, including car dealerships. The French government is also the first major European market to commit to a vehicle sales stimulus package.

The incentive package is worth €8 billion starting 1st June, and primarily targets the purchases of lower emission vehicles. Private consumers who purchase electric vehicles (up to €45,000 in price) will see the state rebate increase from €6,000 to €7,000, with a €5,000 rebate for business customers. Buyers of plug-in hybrids will also get a €2,000 rebate for the first time.

The government has also doubled the scrappage incentive on up to 200,000 vehicles. Buyers who exchange older models can get €3,000 back on a new or used latest-generation petrol or diesel model, while EV models are eligible for €5,000. Notably, these trade-in bonuses can be combined with the low-emission rebates, with some buyers of EVs who trade in older vehicles able to get as much as €12,000 off.

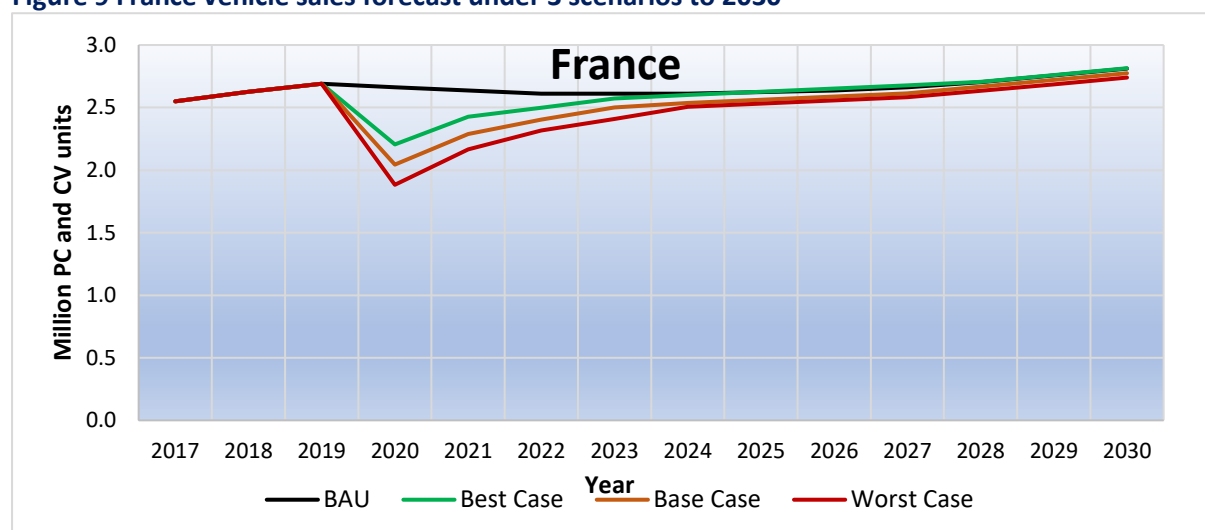
Nonetheless, after losing several months of vehicle sales, as well as a number of supply and regulatory disruptions that could constrain the automotive industry further, we forecast a significant fall in French annual volumes in 2020, dropping 24% in our base case and 30% in the worst case. The impact will be felt until at least the middle of the next decade, while in the base and worst case we don't expect volume to recover to 2019 levels until around 2029.

Table 10 France vehicle sales forecast under 3 scenarios to 2030 (million annual PC and CV units)

Scenario	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
BAU	2.55	2.63	2.69	2.66	2.64	2.61	2.61	2.61	2.62	2.64	2.66	2.70	2.76	2.81
Best Case	2.55	2.63	2.69	2.21	2.43	2.50	2.57	2.60	2.63	2.65	2.68	2.70	2.76	2.81
Volume +/-	0.00	0.00	0.00	-0.46	-0.21	-0.11	-0.04	-0.01	0.00	0.02	0.02	0.00	0.00	0.00
Base Case	2.55	2.63	2.69	2.04	2.29	2.40	2.50	2.54	2.56	2.59	2.61	2.67	2.72	2.77
Volume +/-	0.00	0.00	0.00	-0.62	-0.35	-0.21	-0.11	-0.07	-0.06	-0.05	-0.05	-0.04	-0.04	-0.04
Worst Case	2.55	2.63	2.69	1.88	2.17	2.32	2.41	2.51	2.53	2.56	2.58	2.63	2.69	2.74
Volume +/-	0.00	0.00	0.00	-0.78	-0.47	-0.29	-0.20	-0.10	-0.09	-0.08	-0.08	-0.07	-0.07	-0.07

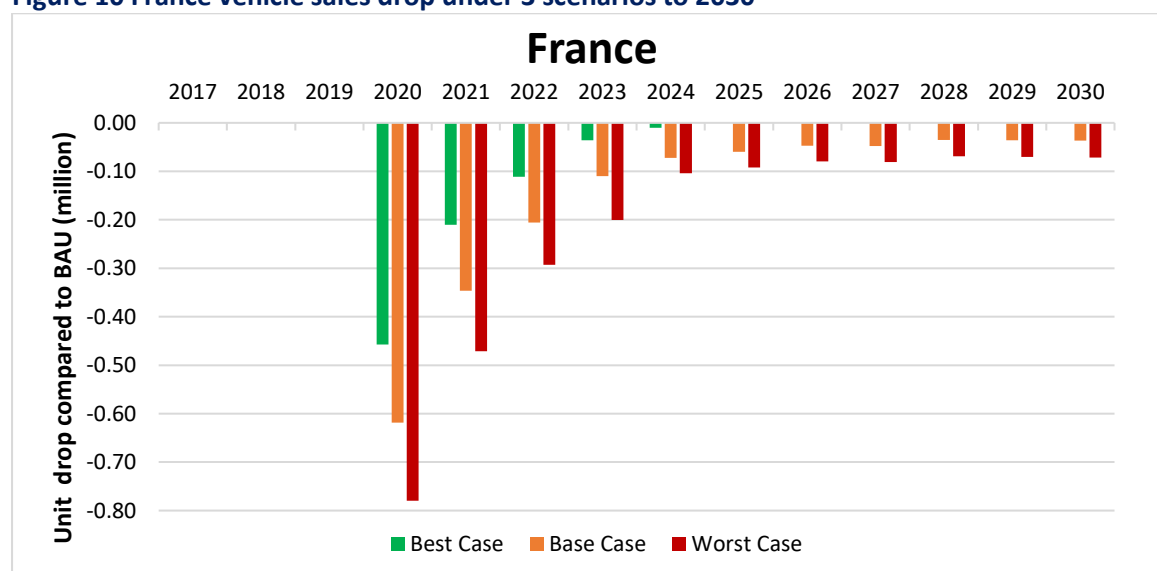
Source: Automotive from Ultima Media

Figure 9 France vehicle sales forecast under 3 scenarios to 2030



Source: Automotive from Ultima Media

Figure 10 France vehicle sales drop under 3 scenarios to 2030



Source: Automotive from Ultima Media

8.2 France vehicle production and export outlook

French vehicle production is also largely exported, with around 80% of the 2.2m units produced in the country in 2019 destined for other countries. However, the main export destinations for French production are overwhelmingly in Europe, and particularly southern Europe and the UK, which are all likely to be among the worst hit by the crisis with the worst declines in demand.

France has struggled with high cost and competitiveness issues in some areas of its manufacturing, and it already had excess production capacity before the crisis. The fall in diesel sales has also hurt French manufacturers, which have a large production base in the country geared towards diesel powertrains.

A review of the French manufacturing footprint is likely in the wake of the crisis. Strength can be seen in the PSA Group, which had seen profit rise and the successful integration of Opel, while also accelerating its transition to electric vehicles. It is also in the process of merging with FCA. However, PSA will be very hard hit by the crisis.

Renault is also expected to be among the worst affected, and there are already reports that it may consolidate its manufacturing footprint in France and elsewhere, including as part of a new alignment with its alliance partner, Nissan.

However, the French government's 15% stakes in both PSA and Renault will make plant closures more difficult in France, where the cost of laying off workers is also very high (although the French government has signalled that it would not block closures).

As a wider part of its support to the French automotive industry, the government has pushed the expansion of local supply chain initiatives, including for Renault to join PSA and energy giant Total in investing in battery production in the country, as well as committing to more model and electric vehicle production in France.

Additional state loans to Renault were also conditional on the carmaker and its unions reaching agreements on job losses and cost reduction measures.

9. Italy

9.1 Italy vehicle sales forecast to 2030

Italy's vehicle market was already in gradual decline before the crisis, from 2.19m passenger and commercial vehicles in 2017 to 2.13m in 2019. Like much of western Europe, it is a fairly saturated and stagnant market, which has also faced wider macroeconomic challenges, including very high public debt and lacklustre consumer spending. The phasing in of EU CO₂ targets also impacts Italy particularly hard, as OEMs may no longer be able to afford to build and sell the smaller vehicles that have tended to dominate the domestic market.

The crisis will compound these issues. Italy was initially the most severely affected European country by the coronavirus and imposed a strict lockdown on 9th March. Consequently, sales fell 85.4% in March and were down 97% in April 2020.

Despite the scale of the impact, Italy has begun to lift restrictions, with more business starting to reopen on 4th May, including car dealerships, as well as other restrictions on manufacturing. Other restrictions will be lifted through May and into June.

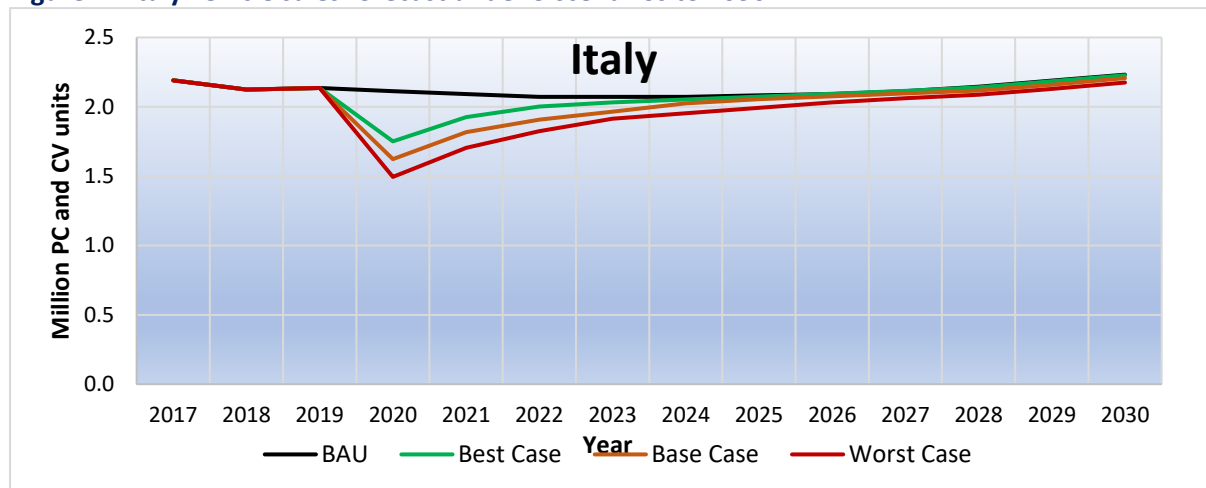
However, along with eight weeks of lost vehicle sales directly, the medium and longer-term impact on Italy's vehicle sales will be significant. The Italian government's weak finances will also likely constrain its ability to support the sector with incentives. Our base case forecast for 2020 is to decline by 24% compared to 2019, and 30% in the worst case. We also do not expect sales to approach 2019 levels until the end of the decade.

Table 11 Italy vehicle sales forecast under 3 scenarios to 2030 (million annual PC and CV units)

Scenario	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
BAU	2.19	2.12	2.13	2.11	2.09	2.07	2.07	2.07	2.08	2.09	2.11	2.14	2.19	2.23
Best Case	2.19	2.12	2.13	1.75	1.93	2.00	2.03	2.05	2.07	2.09	2.12	2.14	2.18	2.23
Volume +/-	0.00	0.00	0.00	-0.36	-0.17	-0.07	-0.04	-0.02	-0.01	0.00	0.00	0.00	0.00	0.00
Base Case	2.19	2.12	2.13	1.62	1.82	1.91	1.97	2.02	2.05	2.08	2.10	2.12	2.16	2.21
Volume +/-	0.00	0.00	0.00	-0.49	-0.28	-0.16	-0.11	-0.05	-0.03	-0.02	-0.02	-0.03	-0.03	-0.02
Worst Case	2.19	2.12	2.13	1.49	1.70	1.82	1.91	1.95	1.99	2.03	2.06	2.09	2.13	2.17
Volume +/-	0.00	0.00	0.00	-0.62	-0.39	-0.25	-0.16	-0.12	-0.09	-0.06	-0.05	-0.06	-0.06	-0.06

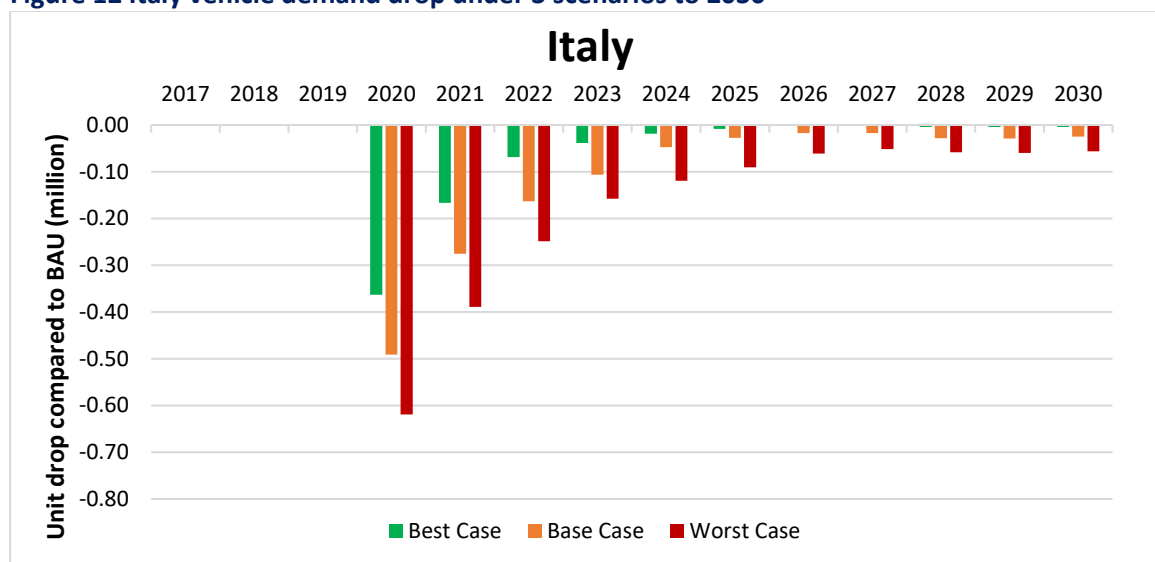
Source: Automotive from Ultima Media

Figure 11 Italy vehicle sales forecast under 3 scenarios to 2030



Source: Automotive from Ultima Media

Figure 12 Italy vehicle demand drop under 3 scenarios to 2030



Source: Automotive from Ultima Media

9.2 Italy vehicle production and export outlook

Like other European countries, most Italian vehicle production is exported. Of the 915,305 units built in the country in 2019, 604,000 were sold abroad. While some of this output is to global markets, including Jeep models, and low-volume Maserati and Ferrari vehicles, most exports are to southern Europe and the UK, which will be among the worst impacted by the crisis.

In terms of its manufacturing, Italy has had chronic under-utilisation across plants in recent years, particularly for FCA. It is likely that some reduction in capacity will be required, though the political negotiations will again be complex as FCA merges with PSA. At the end of May, FCA was reportedly close to securing a state-backed loan in Italy worth €6.3 billion.

10. Spain

10.1 Spain vehicle sales forecast to 2030

Spain's vehicle sales had been relatively stagnant before coronavirus, growing slightly from 1.43m units in 2017 to 1.5m in 2019. In our business-as-usual forecast, we foresaw a 3% decline in the market in 2020, partly as a result of high volumes of used car sales and anticipation that OEMs will have to withdraw some models popular in Spain from the market in the wake of stricter EU emission targets.

Like many European economies, Spain was also suffering from a weakening macroeconomic climate, including persistently high levels of unemployment especially amongst the young.

Spain has been one of the most severely affected by the coronavirus pandemic. The government imposed one of the world's strictest lockdowns on 14th March 2020. Along with confinement of the population, all non-essential businesses were closed including car dealerships. Vehicle sales declined by 69.3% in March 2020, and 96.5% in April compared to the corresponding months in 2019.

With daily new cases numbers and deaths down significantly, Spain has begun a complicated four-phase, eight-week plan to gradually lift restrictions, which will vary in timing from province to province, including the reopening of more shops and businesses. However, a state of emergency is still in place and was extended to the end of May, as the country takes a careful approach to reopening its economy.

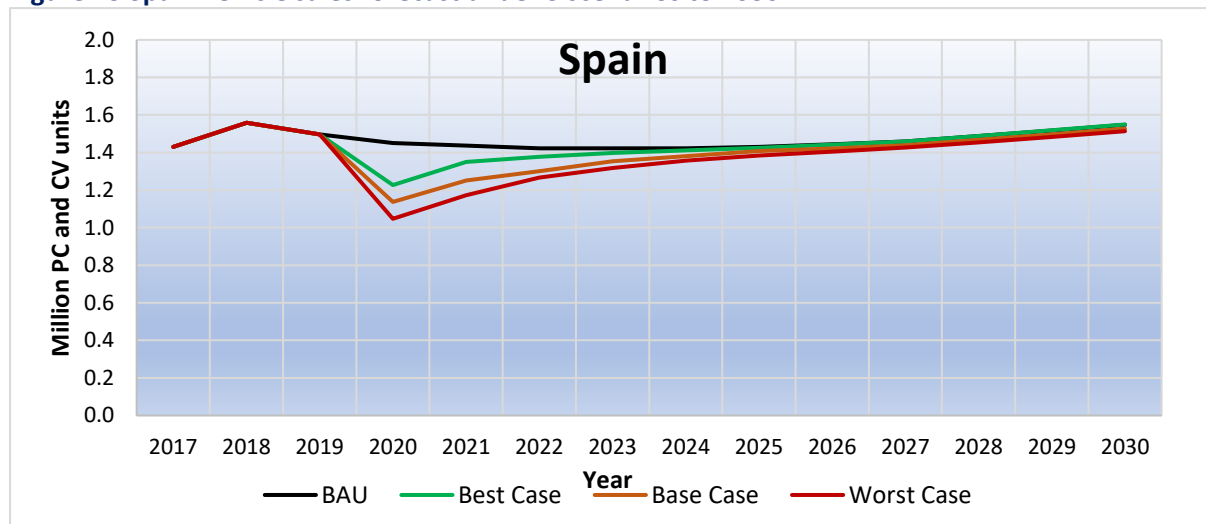
Spain will feel severe impacts in the new vehicle market, with our base forecast for a decline of 24% compared to 2019 and drops of 30% in the worst case. Weak government finances are also likely to limit its ability to provide vehicle purchase incentives. As with other western European countries, the declines will be felt for several years, and 2019 sales levels are not expected until the end of the decade.

Table 12 Spain vehicle sales forecast under 3 scenarios to 2030 (million annual PC and CV units)

Scenario	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
BAU	1.43	1.56	1.50	1.45	1.44	1.42	1.42	1.42	1.43	1.44	1.46	1.49	1.52	1.55
Best Case	1.43	1.56	1.50	1.23	1.35	1.38	1.40	1.41	1.43	1.44	1.46	1.49	1.52	1.55
Volume +/-	0.00	0.00	0.00	-0.22	-0.09	-0.05	-0.03	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Base Case	1.43	1.56	1.50	1.14	1.25	1.30	1.35	1.38	1.41	1.42	1.44	1.47	1.50	1.53
Volume +/-	0.00	0.00	0.00	-0.31	-0.19	-0.12	-0.07	-0.04	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Worst Case	1.43	1.56	1.50	1.05	1.17	1.27	1.32	1.36	1.38	1.41	1.43	1.45	1.48	1.51
Volume +/-	0.00	0.00	0.00	-0.40	-0.26	-0.16	-0.10	-0.07	-0.05	-0.04	-0.03	-0.03	-0.03	-0.03

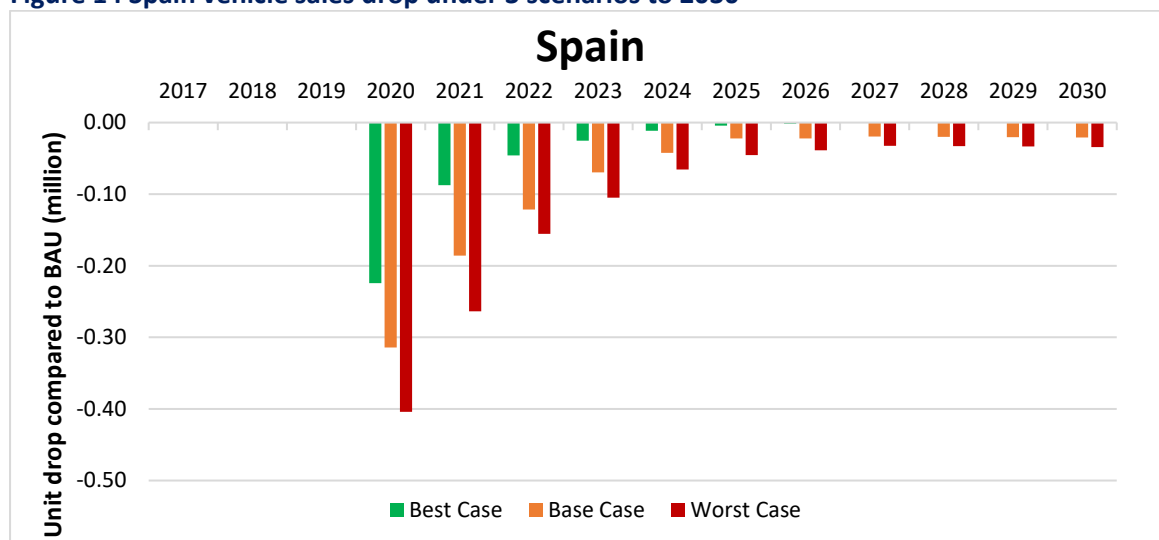
Source: Automotive from Ultima Media

Figure 13 Spain vehicle sales forecast under 3 scenarios to 2030



Source: Automotive from Ultima Media

Figure 14 Spain vehicle sales drop under 3 scenarios to 2030



Source: Automotive from Ultima Media

10.2 Spain vehicle production and export outlook

Spain is Europe's second largest producer of vehicles after Germany, with 2.82m units built in 2019. Of that total, more than 80% – 2.25m units – were exported, and 90% of vehicle exports go to the rest of the EU and UK. That means Spain's output is largely dependent on recovery in these hard-hit markets.

Spain benefits from competitive labour costs and flexibility, including changes negotiated following the financial and eurozone crises. However, Spain's manufacturing footprint is under threat in the wake of the crisis. Like the UK, its major brands are all part of foreign-owned groups. Already, Nissan has confirmed that it will permanently close its plant in Barcelona by the end of this year. Spain's other major producers – SEAT, Renault, PSA, Opel and Ford – are expected to be among those most negatively impacted.

11. Other EU 20

11.1 Other EU 20 vehicle sales forecast to 2030

With the notable exceptions of Sweden, most countries across the rest of the EU implemented lockdowns of some form or another. However, the strictness of these approaches varied, including the so-called 'smart lockdown' in the Netherlands, and early lifting of measures in some countries.

On the whole, countries in this grouping – and particularly in central and eastern Europe – have been less affected by the crisis, and we expect smaller impacts to their vehicle markets in 2020 and beyond.

Sweden's controversial strategy in the face of the crisis has relied on voluntary social distancing and protecting specific parts of the population rather than a nationwide lockdown. While it has not had outbreaks at the level of the UK, Italy or Spain, it has seen a much higher proportion of cases compared to its Nordic neighbours. However, Sweden has largely kept businesses open, including car dealerships. In March, it had a much less severe decline of 8.6% in new vehicle registrations compared to a year earlier.

But Sweden's economy and supply chains are still affected by the crisis. Volvo Cars and Volvo Group shut down their Swedish factories in line with the rest of Europe. Meanwhile, April saw vehicle sales drop by a steeper 38% compared to April 2019 – although that was a much smaller decline compared to Europe as a whole.

Many central and eastern European countries have experienced lower rates of Covid-19 infections and deaths, with Poland, the Czech Republic, Hungary, Slovakia, Croatia, Bulgaria, and Latvia all with death rates at or below 5 per 100,000 population, compared with more than 50 per 100,000 in the worst-hit countries. Most implemented shorter lockdowns that were, on average, around six weeks compared to the eight weeks in western Europe. Croatia and Slovakia had partial lockdowns, while Poland never closed its vehicle dealerships.

This relative success should translate into a less severe decline for these markets. Indeed, countries such as Slovakia were among the first to see a return to vehicle production after the shutdowns. Tiny Slovenia – though not included in this forecast – was the first European country to declare an end to its coronavirus crisis.

We forecast a base-case decline of 15% for this grouping in 2020, ahead of the European average of nearly 20%, and much better than the outlook for worst-hit UK, Spain, France and Italy. Overall volume is also expected to return to 2019 levels by the middle of the 2020s, several years ahead of larger markets.

However, these markets are relatively small, representing less than a quarter of overall European vehicle sales. These countries are likely to be less able to stimulate automotive

demand and may rely more on EU support. An example is that Slovakia has already withdrawn an EV subsidy, diverting the money to support small-and-medium-sized enterprises.

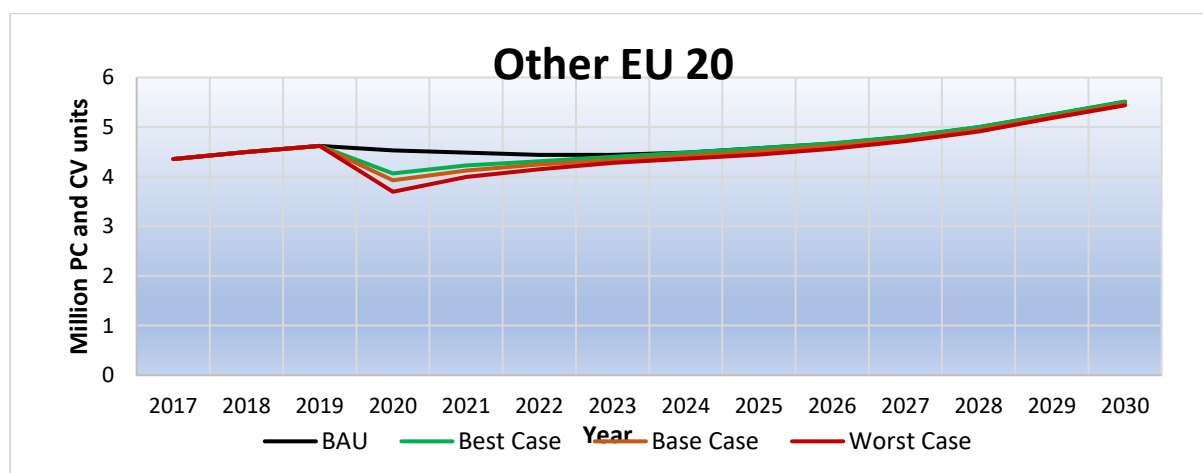
The region will also struggle with slower overall EU and UK economic growth, particularly as it impacts export and foreign investment. The delay of BMW's planned plant in Hungary for at least a year is a case in point.

Table 13 Other EU 20 vehicle sales forecast under 3 scenarios to 2030 (million PC and CV units)

Scenario	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
BAU	4.36	4.50	4.62	4.53	4.48	4.44	4.44	4.48	4.57	4.66	4.80	5.00	5.25	5.51
Best Case	4.36	4.50	4.62	4.07	4.23	4.31	4.40	4.49	4.58	4.67	4.81	5.00	5.25	5.51
Volume +/-	0.00	0.00	0.00	-0.46	-0.25	-0.12	-0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Base Case	4.36	4.50	4.62	3.93	4.12	4.25	4.33	4.42	4.51	4.62	4.76	4.95	5.21	5.47
Volume +/-	0.00	0.00	0.00	-0.60	-0.36	-0.19	-0.11	-0.06	-0.06	-0.04	-0.04	-0.05	-0.04	-0.04
Worst Case	4.36	4.50	4.62	3.70	3.99	4.15	4.28	4.36	4.45	4.56	4.72	4.91	5.18	5.44
Volume +/-	0.00	0.00	0.00	-0.83	-0.49	-0.29	-0.16	-0.12	-0.12	-0.10	-0.08	-0.09	-0.07	-0.07

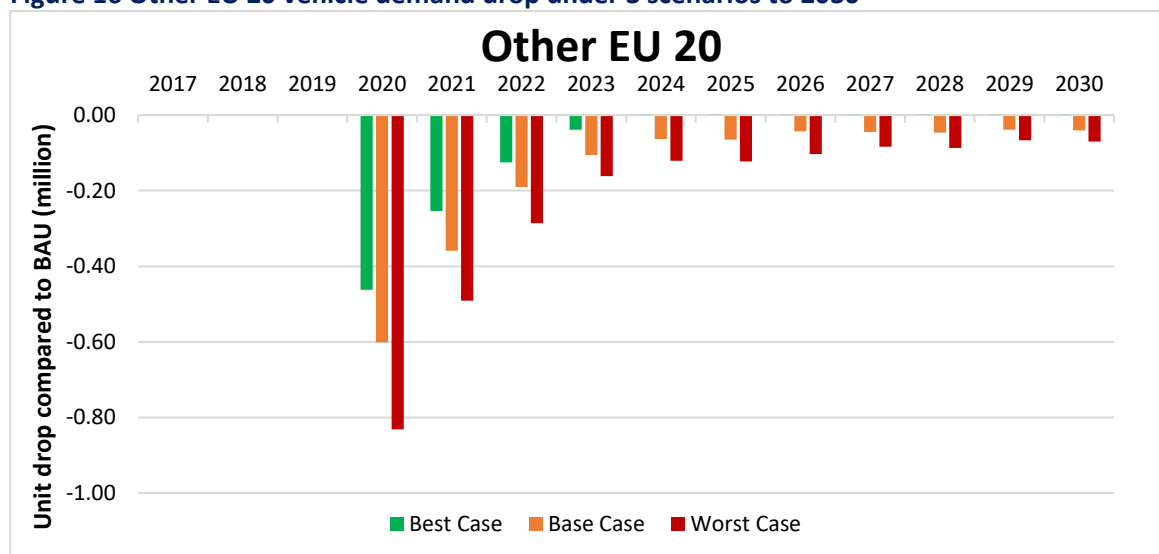
Source: Automotive from Ultima Media

Figure 15 Other EU 20 vehicle sales forecast under 3 scenarios to 2030



Source: Automotive from Ultima Media

Figure 16 Other EU 20 vehicle demand drop under 3 scenarios to 2030



Source: Automotive from Ultima Media

Table 14 Comparison of other EU 20 vs top 5 vehicle demand drops under 3 scenarios 2020 (%)

	Drop from BAU	Drop from 2019
Other EU 20	Best Case -10.2%	Best Case -12.0%
	Base Case -13.3%	Base Case -15.0%
	Worst Case -18.4%	Worst Case -20.0%
European Average	Best Case -12.8%	Best Case -14.7%
	Base Case -17.6%	Base Case -19.4%
	Worst Case -23.4%	Worst Case -25.1%
Top 5	Best Case -13.7%	Best Case -15.8%
	Base Case -19.1%	Base Case -20.9%
	Worst Case -25.2%	Worst Case -26.9%

Source: Automotive from Ultima Media

12. Changes to European vehicle logistics

12.1 Entering the Covid era of disruption

The European vehicle industry is entering a period of extreme instability that will be felt across sales demand, as well as in production and supply chain operations. This volatility is likely to be a feature of vehicle logistics planning and operations for some time to come. Although the sector has always had to manage uncertainty, changes in forecasts, and seasonal peaks and troughs, rarely has the level of variation been so great as it is likely to be in the Covid era.

For example, while production restarts have gone reasonably well in Europe, some plants have run into issues around supply shortages, with others also seeing output hit by lower-than-expected demand or potential health and safety issues. According to sources at logistics providers, for example, around a third of Jaguar Land Rover's UK and European suppliers were still not up and running by the middle of May, limiting the ability of the company to ramp up production quickly.

The financial health of suppliers and dealers will also be critical. Some analysis suggests that five or more suppliers are already facing insolvency every day. The scale of this risk will become more apparent as production continues to come back online and parts shortages are more evident. Union, labour and other regulatory concerns could also slow output. Some plants that had restarted, including Nissan in Barcelona, Spain and Renault in Sandouville, France, have had to halt lines again following protests or government orders about inadequate safety precautions.

OEMs in the US have faced similar challenges. Mercedes-Benz, which was the first to re-open its plant in Alabama in early May, ran into parts shortages from Mexico and had to idle lines just two weeks later. Volvo Cars opened its plant in South Carolina the week of May 11th, and also ran into parts issues and temporarily closed again a little more than a week later. GM too has seen shortages and delays from Mexico. Ford briefly halted production at several plants after workers or supplier employees tested positive for Covid-19.

The importance of such stoppages should not be overblown. Plants often have to make adjustments; when launching new models, for example, it is common to see production delays or stops on shipments to address quality or operational issues. It is not surprising to see more incidents following so many shutdowns, and with so much of the global sector still facing restrictions of sorts.

Nonetheless, this halting pace is likely to be an even more common feature and will contribute to the rising cost of manufacturing and distribution. For vehicle logistics, the sudden stops will make asset and route planning more challenging. There will also be more costs related to diverting trucks or holding inventory for longer periods.

Production stops and lower volume overall will also have a knock-on effect on service levels and delivery lead times. It will take carriers and transport providers longer to build full loads,

with trade-offs between carrying incomplete loads at higher costs per unit, waiting longer to fill trucks and vessels, or adding more stops to delivery routes.

There are also risks for vehicle logistics associated with the short-term rises or temporary spikes in demand that we forecast. For example, these could expose bullwhip operational and financial pain points for vehicle logistics and inventory management. An executive at one major German carmaker told us that, as the company tried to make up some lost demand, it was expecting at least some period of capacity shortages later in the year should restrictions lift further.

That would put some pressure on vehicle logistics providers to reactivate equipment or subcontract trucks or vessels – although likely for a relatively short period as demand settles back to lower overall levels. This will make operating costs higher, while smaller carriers might be harder to come by for short-term subcontracting. Some providers could miss out on revenue opportunities if they are unable to meet demand quickly.

Vehicle inventory management could also prove to be a rollercoaster ride in the coming months. The sudden end of vehicle sales left vehicle stocks for many brands at high levels. Both Volkswagen and Kia, for example, have slowed or halted production temporarily in response to low demand and high vehicle stocks.

OEMs have generally been able to move this inventory from their plants but have relied on storage yards at extra cost at ports, compounds and temporary lots during the extended shutdown period.

However, the inventory crisis could be short lived. In the US, some OEMs are already reporting shortages of key model types, such as pickup trucks and SUVs, even as there is a glut of other models. In Europe, where more countries shut down vehicle sales in April, it is too soon to see whether certain vehicle segments will pick up quicker than others. However, global shutdowns and a reduced production output would mean it takes longer to restock higher-selling models – especially those for which incentives might stoke demand.

12.2 Tools and processes to manage volatility

Covid-19 may yet prove to be the great accelerator, especially of digitalisation processes. Volume volatility will make it more important than ever that OEMs have accurate and up-to-date visibility of vehicle inventory across the network. OEMs and logistics providers will need to build vehicle loads and routing more dynamically, turning to more advanced software and data tools.

Manufacturers are already looking to such solutions. Volkswagen, for example, has started to employ the inventory management and simulation tools that it used during the transition to WLTP, in which vehicles were stored ahead of updates, and then shifted quickly to market. That software used digital modelling and simulation to identify the most optimised storage and routing based on demand developments, helping the carmaker reach pockets of

demand as quickly as possible. It includes decisions on where vehicles might be temporarily stored for quicker delivery to market.

Such tools could play critical roles, helping both OEMs and logistics providers to allocate limited assets and resources more flexibly. Such technology already exists, along with many other network design and optimisation systems. This should combine with the use of vehicle telematics and connectivity, which has picked up pace in recent years, to support more strategic vehicle transport and inventory management.

It is not just about digital and technology tools. More than ever, supply chains need coordinated planning, data analytics and constant updating to reflect demand and operational constraints. The 'war room' footing that many companies have taken since the start of the crisis, which includes more frequent supply and demand planning, and more sharing of information with suppliers and providers, should evolve into industry standard practice even as things improve.

For example, the crisis has significantly increased the frequency of sales and operations planning (S&OP), in which multiple departments feed into supply chain planning.

That should apply as much to outbound as other parts of the supply chain, in terms of assessing inventory changes, monitoring dealer footfall, online activity as well as available transport and storage capacity – including the operational and financial status of logistics providers.

Those OEMs that succeed will be those that involve their outbound logistics carrier and provider base closely in planning and involve them in market initiatives as much as possible.

12.3 The online outbound opportunity

Beyond digital tools and efficiency, there are also real opportunities for vehicle logistics in online vehicle sales and supporting operations. Many OEMs, including Volkswagen Group, PSA and Daimler, see the growth of online orders and home deliveries, which have accelerated in some markets as a necessity, as a permanent shift. As is often the case with digital services, the trend is already evident in China.

This shift could bring further changes to vehicle distribution networks. For example, dealers may rely on more local storage distribution centres to help facilitate test drives, along with inspection, repair and accessory installation, in some instances. That would require more decentralised locations for storage and processing. There is potential as well for logistics providers to play a greater role in supporting dealers to manage these transport, PDI and reverse logistics processes.

In the Covid era, this will of course also come with social distancing and contactless delivery processes. But with the right technology and customer approach, service providers should be able to adapt.

12.4 Sharing the pain and the gains together

Solidarity has not necessarily been a term often associated with vehicle logistics. However, in a specialised, tight knit sector, it has emerged over the past few months.

While there have been large numbers of furloughs and layoffs, many automotive firms, including suppliers and providers, have played roles in supporting the relief effort, whether in manufacturing and supplying ventilators, PPE or charity work. This has included vehicle logistics providers as well, whether using ro-ro vessels to move essential goods, donating equipment, developing new IT systems, and much more.

Besides the relief effort, a heightened sense of partnership is notable. To some extent, many vehicle manufacturers have, at least temporarily, stopped acting like publicly traded companies, and have focused more on supporting employees, communities and even suppliers than they have on their shareholders.

There are positive signs as well for vehicle logistics. Rather than tearing up contracts and pushing down prices immediately – something many companies did during the financial crisis – many providers report more understanding from their customers.

Our sources at OEMs confirm their sense of solidarity with suppliers and logistics providers, including reimbursing shutdown-related costs, maintaining payment terms and stepping in to support suppliers in more extreme cases. Logistics and supply chain executives have also been notably more engaged with their logistics partners, whether in sharing plans and new protocols, or in participating in more online calls and meetings.

However, as our demand forecast suggests, the European vehicle sector is not heading for fast recovery. As we move into the next phase of industry restart, it is becoming clearer that there will be no quick transition to ‘post-Covid’. Many of the new operating and economic realities could be here for a long time to come. Shareholders will expect to see changes to reflect that.

While trying to remain supportive, OEM supply chain executives will expect to share pain in the supply base. Even if most OEMs have resisted sweeping contract changes, our sources confirm that there will be a point at which they look for something back from providers and long-term partners. That could come in the form of rate cuts or other cost measures. And over the coming years, aggressive cost reduction is likely to be a feature of most operations.

But such cuts can be done with partnership in mind. A sacrifice today could be compensated by a bonus when sales improve, for example. It is also in the interest of vehicle logistics providers to remain competitive and find ways to keep costs down, especially with the new requirements that the crisis has ushered in. A shared approach to implementing and using new IT and digital systems, for example, could bring shared savings to both sides.

Such partnership has proved essential in the first months of the crisis. It won’t be any different in the months and years ahead.

13. Appendix

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