ECG Business Intelligence

March 2020

Managing the risks of containment

Assessing the impacts of COVID-19 on the European automotive supply chain

ECG

AUTOMOTIVE FROM ULTIMAMEDIA

Global. Business. Intelligence.

Table of Contents

ECG Business Intelligence
powered by
Automotive from Ultima Media

Report by
Christopher Ludwig
Daniel Harrison

March 2020

1. Executive summary

- The coronavirus (covid-19) outbreak has disrupted automotive supply chain and logistics, most notably in China, then across global regions. Many global freight providers are facing a crisis. In Europe, suppliers and OEMS have had to adjust production or expedite parts, however most OEMS have been able to cope, with relatively little vehicle output currently lost as a result of supply shortages from China.

- The rising risk to supply of parts and vehicle flows is now restrictions from the recent country-wide quarantine in Italy, which strictly limits work and transport within the country. Carmakers in the country, notably FCA, are set to halt production at least temporarily, in part to minimise the spread of the disease among employees. Supply could also be affected, impacting all OEMs with close ties to Italian suppliers, including Renault, JLR and PSA. If other countries took similar measures, more plants will halt output.

- Despite these supply threats, the biggest impact in European automotive supply chain from the covid-19 impact looks likely to be economic declines from the spread and containment of the disease. In our forecast scenarios, drops in demand related to the outbreak could push down sales by as much as 15% in 2020 if the outbreak continues to spread.

- Manufacturers and their logistics providers need to work together to ensure they can cope with supply and demand volatility during the crisis, including by maintaining that capacity, service and visibility are in place across inbound and outbound supply chains – including when the outbreak eases and markets start to recover.

2. Covid-19 overview: Managing a supply and demand crisis

2.1 When supply is cut off

The spread of coronavirus (covid-19) has already brought major disruption to the Chinese and global automotive industry. With the disease continuing to spread, and governments taking more measures to contain it, the impact on the European automotive supply chains and logistics operations, including finished vehicle logistics, looks set to be significant.

Those effects will be felt in part because of continued limits to supply and logistics out of China, as well as regionally following the Italian quarantine. But while these will cause challenges, the economic impact from the disease and containment measures are likely to be far more significant, with drops in vehicle sales almost certain, at least in the short term.

The fallout in the first two months of this year has already been serious. The spread of covid-19 and containment measures essentially shut down China, where the disease originated in Hubei Province, for weeks beyond the normal Spring Festival holiday at the end of January. Automotive production and sales came to a standstill and logistics services were severely crimped both within the country, and for imports and exports.

Supply chain shortages and logistics bottlenecks also led to production stoppages or schedule changes at tier 1 suppliers or vehicle assembly lines globally, first in Japan and South Korea, and then further afield. In Europe, tier suppliers in Italy, Spain and Germany struggled with shortages from China, and FCA was forced to suspend production at its plant in Serbia for several weeks.

While the situation appears to have peaked in China, cases are rising elsewhere, with South Korea, Japan, Iran and Italy all severely hit. Already, many countries have taken emergency measures, including closing schools, cancelling large events and limiting public gatherings. Italy has taken the most drastic action – going even further than China in some ways – by putting in place an official quarantine nationwide until April 3rd. This was initially in the Lombardy region and northern provinces but was quickly extended to the entire country.

The measures, which limit travel to specific work purposes, have put automotive operations across Italy at risk, including for FCA, CNH Industrial, Ferrari, Lamborghini and many component suppliers. A number of plants have already announced temporary closures. Freight operations could be impacted as well, including major ports and airports. While it is not yet clear the scale at which operations here will have to shut, manufacturers were already struggling with supplies before the extra measures.

So far, however, European automotive supply chains have been resilient, with relatively little lost vehicle output as a result of supply shortages or logistics bottlenecks. The situation

might well worsen, especially if other European countries follow Italy's lead. However, manufacturers and logistics providers have so far found ways to manage through the crisis.

2.2 Lower demand is the biggest risk

Instead, the bigger threat to the European automotive sector looks likely to be the economic hit that the spread of the disease and measures to contain it have on vehicle demand, with consumer confidence likely to fall and a recession possible. Although official data is only just emerging, financial markets and oil prices have tumbled, with slowdowns in the global and European economy palpable.

Chinese total exports fell 17% in the first two months of the year. Chinese vehicle sales were down by around 80% in February compared to 2019, according to China's automotive manufacturers' association. Global vehicle sales have already taken a big hit, as data for January suggested one of the steepest worldwide declines since the financial crisis. Given the fall in China alone, February sales data are likely to show even steeper global falls.

Even if China starts to recover in March as expected, slowdowns elsewhere, notably in Europe, seem inevitable. European finished vehicle logistics providers will also soon feel the effects. Chinese and global sales declines will hurt European exports, with a likelihood of rising vehicle inventories and reduced production.

Even before the covid-19 outbreak, Automotive from Ultima Media had forecasted declines in European passenger and commercial vehicle sales of around 2.5% in 2020 compared to 2019, with the sector facing weak global trade and trade uncertainty, stricter CO2 targets and broader economic slowdowns. Carmakers including Ford, Jaguar Land Rover and PSA have already been making adjustments to production to account for lower demand, even before considering impacts from the coronavirus.

In our preliminary forecasts, we foresee the outbreak and its economic impact having significant effects on European passenger and commercial sales and production. Sales lost as a result of coronavirus-related economic slowdowns could range from nearly 470,000 to more than 2.5m units across the UK and European Union in 2020. For production, we forecast a coronavirus-related loss between 450,000 to nearly 2m units (see section 3). Should measures across Europe put even more restrictions than anticipated on movement, labour and economic activity, the impact could be even greater.

2.3 Opportunities in a crisis

The situation remains uncertain and volatile. There is, however, much that supply chain managers and logistics providers can do to prepare themselves, be proactive and even come out of the situation stronger. As the saying goes, don't let a good crisis go to waste.

Already, manufacturers and logistics providers have increased supply chain monitoring and communication for critical parts and supply from further upstream, making greater use of IT

tools and increasing sharing across companies and divisions to improve visibility. Such efforts should be extended to the outbound supply chain as well – and then adapted for after the crisis as well.

Whilst many companies will be in survival mode, there will be opportunities even in the coming disruption. OEMs will need space for extra vehicle inventory, with flexibility around PDI, installations and inspections when restrictions lift or when markets pick back up. Meanwhile, healthy and brave logistics providers who are able to invest in assets and companies are likely to find good bargains during difficult times.

But perhaps most important will be the relationships developed in the supply chain as companies work together to deliver critical products and maintain service during such an exceptional period. These include not only those between OEMs and tier suppliers, but also across inbound and outbound logistics providers, all of whom will play major roles in managing through the crisis – as well as delivering the recovery.

3. European vehicle sales and production forecast

3.1 Crisis at a time of weakening demand

While OEMs and logistics providers need to closely monitor material and vehicle inventories to ensure supply, the economic impacts that the coronavirus outbreak could have on vehicle sales and production will probably be more significant. OEMs will have to adjust production schedules to reduce output in response to rising vehicle stocks and lower demand. Logistics providers must consider the situation carefully in their asset and resource planning.

Big ticket purchases such as vehicles are likely to be deferred. In our preliminary forecast, European sales could drop by as much as 17% in 2020 compared to 2019, while production could fall more than 12.5% (see Figures 1 and 2). Our forecasted declines in production are almost entirely related to lower demand, rather than from supply constraints.

Despite the worsening situation, we do not yet foresee as drastic an impact as was seen in China. There is a reasonable chance coronavirus will be contained and the current panic will abate. We cannot predict this better than medical experts, but our base forecast assumes the situation will improve over the next three months, while our worst case assumes the situation continues for much of the year. However, if Italy-style lockdowns become the norm in many other European countries, we will need to revisit the forecast.

On a practical side, there are structural forces which should help maintain vehicle registrations in Europe to some degree. The market has a high proportion of vehicle sales based on leasing and personal contract plans, for example, which means a large number of sales occur thanks to fixed timings of leases expiring and customers renewing them.

Any forecast on the impact of the coronavirus on European new vehicle registrations and production is nonetheless subject to significant variation owing to the uncertainty around the spread of the disease. Likewise, fiscal measures and incentives to stimulate the economy could help to recover some volume, both later in 2020 and in 2021.

We have evaluated potential impacts on sales and production under four different scenarios: **business as usual** (for how we expected volume would have developed had the outbreak not occurred), **best case**, **base case** and **worst case**. These forecasts will require regular updates, but they include our realistic expectations based on current information.

The forecasts are modelled on passenger vehicle and commercial vehicle data from 2019 and for 2020 where available from ACEA across 26 markets – the UK and the EU (minus Cyprus and Malta) and excluding EFTA countries.

The forecasts take into account that both registrations and production are highly seasonal. We expect the outlook to follow the same seasonality over 2020, but at subdued levels according to the various scenarios predicted.

Figure 1 EU vehicle registration forecast 2019-2020

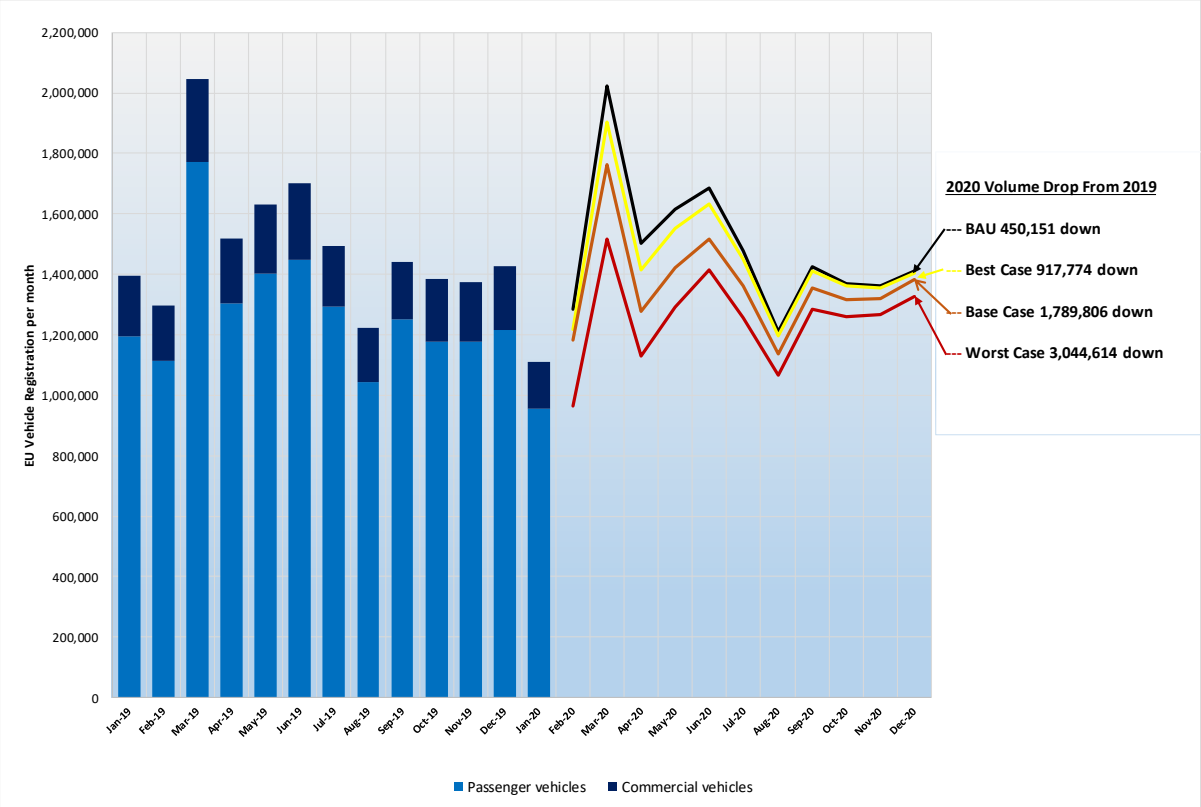
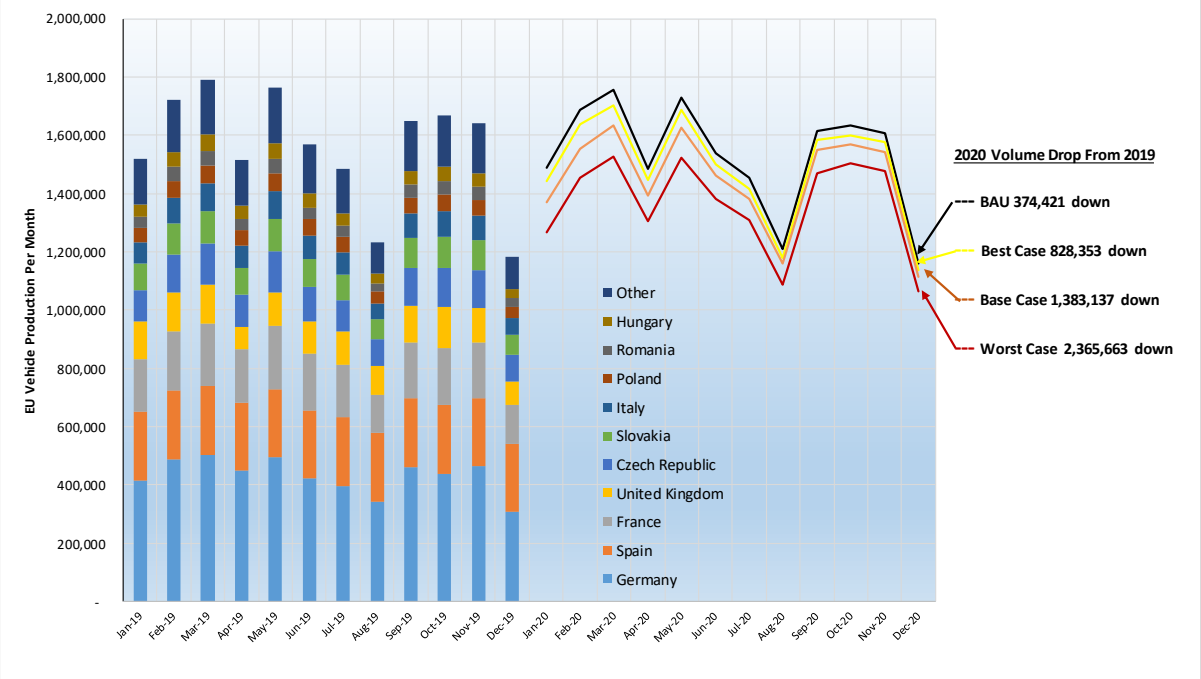


Figure 2 EU vehicle production forecast 2019-2020



Source: *Sales and production data from ACEA for UK and EU (minus Malta and Cyprus), 2020 forecast by Automotive from Ultima Media*

3.2 Business as usual forecast scenario

Our business as usual forecast reflects our outlook for Europe had the coronavirus not occurred. In this scenario, we already expected that demand and production would fall in the face of other headwinds, including weaker economic growth, stricter CO_2 regulations, trade uncertainty and the transition away from pure petrol and especially diesel powertrains.

In this scenario, we forecasted that European vehicle registrations across 26 markets would have fallen by 2.5% in 2020, from 17.92m to 17.47m units (see Figure 1).

We had forecasted a decline of 2% in European vehicle production in 2020, from 18.73m units in 2019 to 18.36m (see Figure 2). The decline relates both to weak European demand as well as softening exports, with stagnant or declining demand in global markets.

For more on Automotive from Ultima Media's original 2020 forecast, read more here.

3.3 Best case forecast scenario

In our best-case scenario, coronavirus would continue to retreat in China, and peak globally imminently, with cases gradually falling as the virus is eradicated. The impact on automotive markets would be felt especially over the next three months, but demand and consumer confidence would then rebound, with supply chains quickly resuming normal operations.

Even in our best-case scenario, we don't expect a 'V-shaped' recovery for Europe in which all lost demand would quickly be recovered within 2020. Overall, we forecast that the best outcome would see registration demand finish this year 2.7% below our business-as-usual forecast, and more than 5% down on 2019. The coronavirus impact in this scenario accounts for around 470,000 lost units of demand in Europe compared to our business-as-usual forecast (see Table 1). Some of this decline could be made up in 2021, which we will reflect in future forecasts.

Our best-case scenario allows for a relatively quick recovery in global vehicle demand, which supports strength in European vehicle exports and therefore overall vehicle production. As a result, we would anticipate 2020 European vehicle production to be 2.5% lower than our business-as-usual forecast, declining around 4.5% compared to 2019.

At 17.9m units, this scenario would see the economic fallout from the coronavirus account for around 450,000 units of lost European production compared to our business-as-usual forecast (see Table 2), as OEM reduced production to manage declines in demand.

Table 1 EU vehicle registration forecast: covid-19 economic impact on sales

Scenario	2020 Volumes	Volume Drop from BAU	% Drop from BAU
Business as Usual (BAU)	17,477,156	-	-
Best Case Scenario	17,009,533	467,623	-2.7%
Base Case Scenario	16,137,501	1,339,655	-7.7%
Worst Case Scenario	14,882,693	2,594,463	-14.8%

Source: Automotive from Ultima Media

3.4 Base case forecast scenario

Our base case is what we assume to be the most likely scenario. In this forecast, the number of cases would plateau in China, but continue to spread regionally, peaking in Europe in around three months. At that point, the situation would plateau, and the virus would gradually be brought under control over the following three months. The impact on automotive demand and supply chains would be significant, and likely continue be felt throughout most of 2020.

In this base case, we forecast that demand in 2020 would be 7.5% lower compared to our business-as-usual forecast for 2020, and 10% down compared to 2019. In this scenario, the impact from coronavirus would knock off more than 1.3m units of demand compared to business as usual. A share of this demand could likely be made up in 2021, which we will reflect in future forecasts.

For production, we assume the impact on exports will also be significant as other major regions feel the effects of the virus and its containment for much of the year. In this scenario, European vehicle output would be 5.5% lower compared to our business as usual forecast for 2020 and drop 7.5% compared to 2019. That would translate to around 1m units of lost European production as a result of the outbreak compared to business as usual, as OEMs reduced production in the face of declining European and wider global demand.

3.5 Worst case forecast scenario

In our worst case, the coronavirus outbreak will become a global pandemic, and could spread across the regions for many months to come, resulting in wider quarantines and restrictions in Europe. The virus would not peak until much later in the year and thus weigh on sales and production beyond 2020. The impact on automotive demand and production would be severe, comparable to the 2008-2009 financial crash, at least in the short term.

In this scenario, European vehicle demand would be around 15% lower than our business-as-usual forecast, or 17% down on 2019. The impact from coronavirus would knock nearly

2.6m units off demand compared to business as usual. Demand would likely continue to be depressed into 2021, with the overall impact possibly felt even into 2022.

In this scenario, production would also be hit hard, as global demand is severely crimped by the pandemic for the rest of the year and possibly beyond. We would foresee European production 10.8% lower than our business-as-usual forecast for 2020, and 12.5% lower than 2019. It would mean nearly 2m units of European production lost compared to business as usual in 2020.

While a global pandemic could well leak to further restrictions and possible further supply chain disruption, in this forecast almost all lost production would relate to much lower global vehicle demand for European vehicles and exports rather than from supply shortages.

Table 2 EU vehicle production forecast: covid-19 economic impact on output

Scenario	2020 Volumes	Volume Drop from BAU	% Drop from BAU
Business as Usual (BAU)	18,361,312	-	-
Best Case Scenario	17,907,680	453,632	-2.5%
Base Case Scenario	17,352,896	1,008,416	-5.5%
Worst Case Scenario	16,370,370	1,990,942	-10.8%

3.6 Longer-term outlook

At this stage, even with a significant short-term impact possible, the coronavirus has not altered our medium-to-long-term outlook for the European vehicle market.

The automotive industry remains in a period of transition as it adapts to new regulations and implements a range of electric and hybrid powertrains, whilst scaling down pure petrol and phasing out diesel in many cases. That continues to weigh on profits and even consumer demand to some extent. We continue to see relatively stagnant European demand for the first part of the 2020s, during which time peaks in registration from 2017 are unlikely to be reached. Fall from the coronavirus could, however, impact on volumes in 2021 and 2022, including potential recovery of earlier lost volume. It is too soon to account for these impacts as the situation is so fluid.

More broadly, we still anticipate a clearer path to market recovery from current headwinds (besides coronavirus) by the middle of the decade, which is around the time we expect electric vehicles to reach price parity with internal combustion engine vehicles in Europe. From that point, we expect higher growth in both European and global markets and for previous 2017 highs to be surpassed by the end of the decade.

4. Updates on European OEM supply chains and production

4.1 How Europe has mitigated disruption

While the impact on demand is likely to be most significant, in the short-term manufacturers and logistics providers will continue to manage supply chain and logistics disruption as a result of the coronavirus outbreak. In Europe, while there have been relatively limited disruptions to final assembly, supply chain managers are facing inventory issues, some of which could worsen out of China, Italy and elsewhere.

Air freight in and out of China remains extremely limited, leading to a rush for capacity and skyrocketing rates. Container shipping has taken major hits especially on east-to-west route, with carriers resorting to blank sailings; the result is many empty containers away from Asian production centres as China come back online. And even as China resumes production, the impacts on capacity, rates and equipment will be felt for months – and could be exacerbated further by containment measures in other countries.

For many international freight and logistics providers, the situation is a significant crisis. Some carriers face risks of bankruptcy and could go under in the coming months.

The China effect alone is also still a risk for the global automotive supply chain. Chinese supply accounts for a large share of electronics parts and components, including chips, screens and audio equipment. However, much of this supply is at the tier 2, 3 or lower level, and not necessarily directly visible to OEMs or major tier 1 suppliers. Carmakers including BMW, Renault, Nissan and Daimler have admitted that complexities in their purchasing arrangements mean it is not always immediately clear where production is at risk.

In general, a plant's vulnerability has depended on its proximity to China and how much buffer stock it carries. The shutdowns in China hit plants in Japan and South Korea relatively quickly, where suppliers and carmakers carry relatively low levels of inventory from Chinese sources. Issues then spread across the globe, with OEMs and tier suppliers working to identify and expedite critical parts, as well as rearranging assembly sequences or trim levels in response to parts shortages.

In general, larger OEMs have been able to manage the situation out of China more comfortable than others by buying more air freight capacity. We know of several carmakers who have chartered multiple daily flights to move critical parts out of the region to both Europe and the US. Securing this space is more difficult for smaller players and suppliers.

Besides material, OEMs and suppliers are also dealing with challenges to labour, travel and working patterns. German supplier Webasto, as well as BMW and Ford have all had incidents in Europe where employees contracted the disease. In several cases, we know specifically of OEM logistics and supply chain managers who have had to self-isolate or enter quarantines after travelling to affected areas. All of this contributes to the overall challenge of managing such supply chain uncertainty and disruption.

Nevertheless, the European automotive supply chain has proved resilient in terms of dealing with the China lockdown, with few impacts on vehicle output as a result of parts shortages, even if that masks significant scrambling to move supplies. Such continuity is thanks to shipping and lead times of eight weeks or more, as well as extra inventory built up ahead of the Chinese Spring Festival, and even as part of Brexit contingency planning in some cases. It is also down to measures to expedite freight, as well as flexibility built into OEM production systems.

Still, OEMs and tier suppliers have confirmed that further shortages could well emerge in the second and third week of March in both Europe and the US. Those OEMs and tier suppliers with factories and supply links in Wuhan, for example – including Nissan, Renault and PSA – are still facing plant and supplier shutdowns, which could lead to shortages elsewhere in their global networks. However, OEMs now expect to resume initial output in Wuhan in the third week of March, which could help alleviate some shortages.

Further global risks could also emerge if parts of Japan or South Korea were to be quarantined, with few alternative suppliers for many of the electronic components produced there.

But the most pressing risk is currently Italy.

4.2 Italy: Nation on lockdown

Italy's wider quarantine measures will add further complications to this scenario. Even before the extended measures were announced, suppliers and OEMs were facing shortages, as suppliers struggling to restart or maintain production, in part because of staff unable to come to work. In many ways, the sudden restrictions on one of Europe's major industrial areas is a more immediate threat to carmakers in the region than was the China shutdown. From Italy, some OEMs were likely to be carrying stocks of just a few hours or days, compared to much longer pipelines for Chinese supplies.

The quarantine restricts movement of people, sets rules on public gatherings and interactions, and allows only essential travel and work-related transport. It is set to last until April 3rd. It initially covered the Lombardy region, which includes Milan, as well as 14 provinces, before being extended to the entire country on March 9th.

At least two car factories were in the original restriction zone, Maserati in Modena and Ferrari in Maranello, along with other suppliers. But now production and supply across the country will face restrictions as well, not only for FCA, but also global and Italian suppliers including Magna, Faurecia, Marelli, Brembo and Pirelli that serve many OEMs.

While details are still emerging, initial indications are that the quarantine does allow businesses to carry out essential work, and thus for most automotive plants continue to operate. FCA, Maserati, Iveco, Lamborghini, Brembo and Pirelli initially said they were

running and receiving deliveries. However, FCA now plans temporary shutdowns at several facilities.

Automotive supplies were already dwindling before the lockdown. For example, carmakers had required special waivers to retrieve materials from electronics and audio supplier MTA, whose customers include FCA, PSA, Renault, Jaguar Land Rover and BMW. The quarantine is likely to make it more difficult for suppliers to field enough labour at plants to maintain levels of production. There could also be slowdowns in delivery and transport.

Further restrictions at the border, including movements between other European countries, would certainly bring more disruption.

4.3 Overview of major OEM impacts in Europe (as of week of March 9th)

4.3.1 BMW Group

BMW saw all of its Chinese locations, and its three joint ventures plants, closed until February 17th, with production now having resumed. However, the carmaker has not had any impacts on its European or global supply chain. At the end of February, it quarantined around 150 workers at its Munich headquarters after an employee there contracted the virus. This situation nonetheless has had no impact on production.

Italian supplier MTA cited BMW as a customer, highlighting that the carmaker could face shortages from it and other Italian suppliers affected by the quarantine. However, BMW officials have not cited any immediate danger.

Nevertheless, the complexity of purchasing and exposure to lower tier suppliers mean that BMW could be subject to unforeseen risks. The company maintains that its purchasing and supply chain teams are carefully monitoring the situation, especially if further measures are taken to close borders and restrict movements in Europe.

4.3.2 Daimler

Daimler and Mercedes-Benz have also restarted all production in China. Up to now, it has reported no supply chain impacts on its European and global production for passenger or commercial vehicles. However, official have acknowledged that complex purchasing and exposures at lower tiers could expose the company to unforeseen risks in the supply chain from China or elsewhere.

According to sources at Daimler, the manufacturer continues to take countermeasures to ensure supply, including expediting parts and using alternative sources. A task force across departments continues to meet daily to monitor supply risks.

4.3.3 FCA

FCA is broadly at high risk of disruption to production, particularly because of the Italian quarantine. Several plants are now set to stop production in March.

The company's challenges started even before the quarantine. FCA felt a relatively limited impact in China, reopening its Chinese factory in Guangzhou in the middle of February. But it was the first carmaker in Europe to stop production, temporarily halting output of the Fiat 500L at its plant in Kragujevac, Serbia following a lack of audio-systems and other electronic parts imported from China. Output was expected to resume by the end of February.

Italy's initial restriction measures in February were already affecting FCA suppliers in the region, notably electronics tier supplier MTA. According to MTA, its limited production had impacted schedules and output at FCA plants in Mirafiori, Cassino, Melfi and its joint venture van plant with PSA in Sevel. Before the full quarantine, MTA officials said that limits to its production and delivery could impact production at FCA and other OEMs.

Now with the outbreak and extended quarantine, FCA already plans temporary stops of two or three days at its plants in Pomigliano d'Arco, Melfi, Atessa and Cassino to protect the spread amongst employees. FCA dealers are also closing their doors for now. However, officials have maintained that the carmaker has put extensive supply chain contingency measures in places to mitigate supplier issues.

However, as restrictions nonetheless come into effect across the entire country, the likelihood of disruption at other FCA's assembly and powertrain plants is high – and with that its plants in Poland, Serbia and Turkey. Much will depend on suppliers' ability to produce and deliver parts. Currently, tier 1s including Brembo and Pirelli remain open, but sources there admit that there is a lack of visibility into the immediate future.

4.3.4 Ferrari

Ferrari, which was spun off from FCA in 2016, is also in the direct line of fire and at risk of disruption, although its low volume and niche operations may help it.

Its factory in Maranello, which produces all of its models and engines, is located in the initial exclusion zone, which has now been extended across all of Italy. As of the week of March 9th, the company reported that its plant remained open as the quarantine still allows for continued working activity.

However, officials made clear that this continuity depended on its suppliers' ability to produce and deliver goods.

The company is in discussion with authorities on how it should adjust security measures and respond to the situation.

4.3.5 Ford

Ford reopened its Chinese joint venture plants on February 10th. While Ford's primary manufacturing base in Chongqing is further inland from the main outbreak, it is likely nevertheless to continue to face disruptions in logistics services along the Yangtze River, which it uses to ship vehicles back to the east coast through transit hubs in Wuhan, the centre of the original outbreak.

In Europe, however, the carmaker has so far faced no manufacturing disruptions. On March 9th, a worker at its technical centre near Cologne tested positive for the virus, resulting in other workers being sent home. However, the company expected no impact on production.

Ford officials have confirmed that they have enough supply to continue production through much of March and should not see impacts from China. Its CEO in Europe, however, has said that Italy could be a bigger risk, as well as potential border closures to Germany or Austria. The company is carefully monitoring supply.

4.3.6 Jaguar Land Rover

JLR also seems to be at high risk of disruption, both from China-related shortages and the situation in Italy.

The carmaker restarted production at its joint venture plant in China at the end of February. Its European plants have so far not been affected, however its CEO Ralf Speth made headlines by highlighting the need to ship parts in suitcases to keep assembly lines running.

Speth said that the carmaker could run out of parts as early as this week (March 9th), but operations so far appear to be running normally. Italian supplier MTA also lists JLR as a customer, which suggests the OEM could see impacts if supplies from Italy dry up further.

Meanwhile, the carmaker has made adjustments to output at several factories, including plans to shut its Halewood factory in England for nine days in March. However, the shutdown is not related to the coronavirus outbreak, according to the company, but in response to slower demand.

4.3.7 PSA Group

PSA has faced extended shutdown at its joint venture plants in Wuhan, which could eventually hit production elsewhere. The company has said that, thus far, output in Europe, including for Opel and Vauxhall, has not been materially affected by shortages from China or elsewhere.

Although it has suppliers in Italy – including MTA – the carmaker did not see foresee impacts as of early March based on the initial exclusion areas. With the Italian quarantine now extended, however, stock from Italian suppliers will need closer monitoring.

In response to the situation, PSA has implemented a new, permanent working group with employees from purchasing, research and development, manufacturing and logistics. The group is evaluating stock levels and development daily to determine where adjustments are needed, including finding alternative supply or logistics routes.

PSA has also reduced output at its plant in Ellesmere Port, in the UK, but this is also in response to lower demand rather than supply issues related to the coronavirus.

4.3.8 Renault Nissan Mitsubishi Alliance

The Alliance is also at elevated risk of disruption, in part because of its supply base in Wuhan as well as in Italy.

The Alliance has seen significant disruption outside of Europe, especially with its Chinese joint venture factories located in Wuhan and Hubei province. Nissan's plants in Xiangyang and Zhengzhou remain closed indefinitely, while three other plants outside the region have reopened. Renault's two joint venture factories in Wuhan also remain closed.

The China closures have impacted Nissan production in Japan, where the carmaker carried out temporary stops and adjustments at various plants. The closures also impacted supplies at the Renault Samsung factory in Busan, South Korea, which shut for four days before reopening on February 17th.

European factories have so far been unaffected at both Nissan and Renault. However, with both carmakers' Wuhan supply chains facing extended closures, sources at the companies admit that Europe and North America could still feel impacts later this month.

Renault also faces direct shortages from Italy, including from MTA in Lombardy. According to officials, stock was set to run low this week (March 9th) if it could not access inventory in the region, which the full quarantine could exacerbate. In this case, sources said the carmaker would have to adjust production, as well as use alternative suppliers, including flying parts from Japan.

4.3.9 Toyota

Toyota was among the carmakers that was able to resume output in China reasonably quickly. Up to now, it has also had no impacts at its production plants in Japan, although the company said that shortages could still impact output there later in March.

In Europe, the carmaker has also seen no disruption to production or vehicle supply, whether from delays out of China or Japan. Officials said that European plants should have enough inventory to maintain production at least through March and that currently Toyota faced no shortages. It does, however, have suppliers in Italy, which Toyota's purchasing and supply chain teams are evaluating daily as part of coordinated task force team.

4.3.10 Volkswagen Group

Volkswagen Group's Italian luxury sports car brand, Lamborghini, could be at risk of disruption, although its low volumes should help it to mitigate issues.

The Volkswagen Group has also restarted all of its Chinese facilities and joint venture plants, with the situation improving. As of the first week of March, officials said that all of its European plants were running normally but declined to provide more information ahead of the release of annual media conference on March 17th. We understand from sources that Volkswagen Group is able to benefit significantly from its wider resources, including access to air freight and charters out of China.

However, it is unclear what impacts the Italian quarantines could have on both the wider Volkswagen Group, and especially for its Lamborghini assembly and powertrain factories in Sant'Agata Bolognese, which are located close to the heaviest hit areas in the north. Official at the company said that the plant was running as of the week of March 9th, but that it was too early to predict if it would run out of suppliers or have enough workers to maintain production.

5. Supply chain lessons from the covid-19 crisis

5.1 Changes to supply chain sourcing

The fallout for the automotive supply chain from the covid-19 outbreak in Europe should be considered carefully. Supply chain managers and logistics providers are working in overdrive to get to grips with inventory and supply issues, including continuing to use emergency freight where needed out of China, as well as reacting to the quarantine in Italy. A clear risk is now whether other countries will take similar measures as Italy, and if any border crossing are closed altogether.

Meanwhile, a possible recession and faltering markets are likely to weigh on sales, production and profits in the supply chain at a time when many companies were already under pressure. Things are set to remain bumpy from both a supply and demand point of view.

In the wake of the crisis, there will be questions over the structure of the supply chain, including the balance of inventory and of overseas sourcing. To some extent, the automotive industry is still poorly designed or prepared at the lower tier level for supply chains shocks and disruptions. There is no easy answer to this, as creating large stockpiles and warehouses of parts would be very costly insurance against rare events like the coronavirus outbreak.

More manufacturers will consider changing from single to dual sourcing where possible, a strategy many have considered in light of previous disruptions. Over the medium term, the crisis could even be good news for regional sourcing in North America and Europe, as manufacturers make more efforts to diversify supply chains closer to primary production sites. In some ways, the ongoing investments in localising electric vehicle battery production in Europe, with current supply almost entirely based in Asia, point to OEMs' understanding that concentrating value chains in one location would be a big risk.

However, the economies of scale required for mass automotive production do not always make this possible. And even alternative supplies for electronics or battery components are very likely to be in China, which would not have helped in this instance.

Regional sourcing can also be a risk, as the quarantine in Italy shows. Local sourcing almost certainly means carrying less inventory, which means that sudden events – such as delayed supplier shipments because of quarantines or sudden border checks – could hit automotive plants in a matter of hours. From Asia, meanwhile, there is usually buffer stock to account for longer transport time.

Ultimately, supply risks should not be exaggerated. The China shutdown has created headaches for European automotive supply chains, and it is a nightmare for many freight providers. However, it has not necessarily been as dramatic for automotive as for other industries more dependent on China, or as media reports might suggest. Most

manufacturers are managing through the disruptions. There are dangers to supply, but assembly lines have not fallen quickly as a result of Chinese stoppages.

The situation in Italy could become a bigger risk – especially if such measures are extended to other countries. So far, most OEMs are coping with this as well, thanks in part to lessons learned from past crises, as well as more flexible supply chain and production systems.

5.2 Improving visibility across inbound and outbound

However, the industry clearly has opportunities to improve further. Supply chain visibility, while better than it was a decade ago, remains murky in areas, especially at the lower tier 2 or tier 3 levels. Sources at major OEMs and tier suppliers admit that they often lack visibility between their own regions and production locations, let alone across other suppliers. In some cases, plants or divisions aren't willing to share information to protect their own inventory or operations. Such barriers only make total supply chain visibility more difficult.

Efforts by manufacturers and logistics providers to create crisis task forces and monitor critical supply constantly could be replicated post-crisis into a more strategic supply chain tracking and risk management approach. The key will be in sharing data standards and system interfaces across the industry; this is a long-standing issue, but the current crisis shows that progress is possible.

Such transparency needs to be just as strong for outbound vehicle logistics. Supply chain managers and vehicle logistics providers should consider forming special units to monitor vehicle stock and impacts on origins and destinations. Some may need to secure extra space for inventory where necessary, as well as to maintain reserve capacity that can respond quickly when the situation eases. Logistics providers will be essential in helping OEMs navigate potential blocks or holds at key logistics centres, for example if ports or borders are closed further or unexpectedly.

Perhaps the most important ingredient, even more than advanced IT systems and technology, will be maintaining trust and partnership between OEMs, suppliers and service providers. Only by sharing more information about supply sources, about forecast and critical inventory, can the industry move from being responsive to being proactive and even predictive.

5.3 Partnership – in good times and in bad

The partnership theme is equally if not more essential as the industry makes adjustments in the wake of weakening demand and production. Logistics providers, including for outbound, have critical roles to play both in managing a sudden drop in demand. OEMs will need to know where every vehicle is, and carriers may have to hold and monitor excess stock for longer periods.

Likewise, where demand picks back up, vehicles must quickly re-enter the supply chain, including receiving any necessary inspections or modifications following extended periods in stock. A coordinated outbound chain will be key to responding quickly to recovery.

We don't underestimate the impact a sudden drop in demand would have on logistics providers. Investment in transport capacity would dwindle, while providers and carriers already facing weak demand could hit financial trouble. By and large, we would expect there to be pain on both sides, as well as flexibility in exceptional circumstances.

But a long view is necessary. Drastic measures to cut rates and fleets would weaken the ability of the sector to respond to recovery. It would also hurt the industry's long-term prospects at a time when more investment in needed in facilities and equipment to reduce emissions, handle electric vehicles and implement new technologies.

This crisis, too, will pass. But it has the opportunity for manufacturers and providers to introduce new technology and processes that improve communication and transparency. It can also help develop and renew partnerships, whether between OEMs and their service providers, or logistics providers working together to coordinate exceptional operations. Our recommendation and hope would be to ensure that the new ideas and partnerships forged in such heated times can solidify into something that lasts well into the future.

6. Appendix

ECG – The Association of European Vehicle Logistics
Bd. Auguste Reyers 80
B-1030 Brussels
www.ecgassociation.eu
+32 2 707 82 80

Ultima Media Ltd *part of* Süddeutscher Verlag
401 King Street
Hammersmith
London, W6 9NJ
www.ultimamedia.com
+44 (0)20 8987 0900

Disclaimer

All facts and figures are believed to be accurate at the time of publication; Ultima Media accepts no responsibility for inaccuracies due to future developments in the market or incorrect information provided by Ultima Media's sources. Ultima Media is unable to accept any legal liability for any consequential loss or damage, however caused, arising as a result of any actions taken on the basis of the information provided in this report.

Contact Details

Mike Sturgeon
Executive Direction, ECG
mike.sturgeon@ecgassociation.eu
+32 2 707 82 82

Christopher Ludwig
Editor-in-Chief, Ultima Media
christopher.ludwig@ultimamedia.com
+44 (0)208 987 0968

Daniel Harrison
Automotive Analyst, Ultima Media
daniel.harrison@ultimamedia.com
+44 (0)208 987 0946