

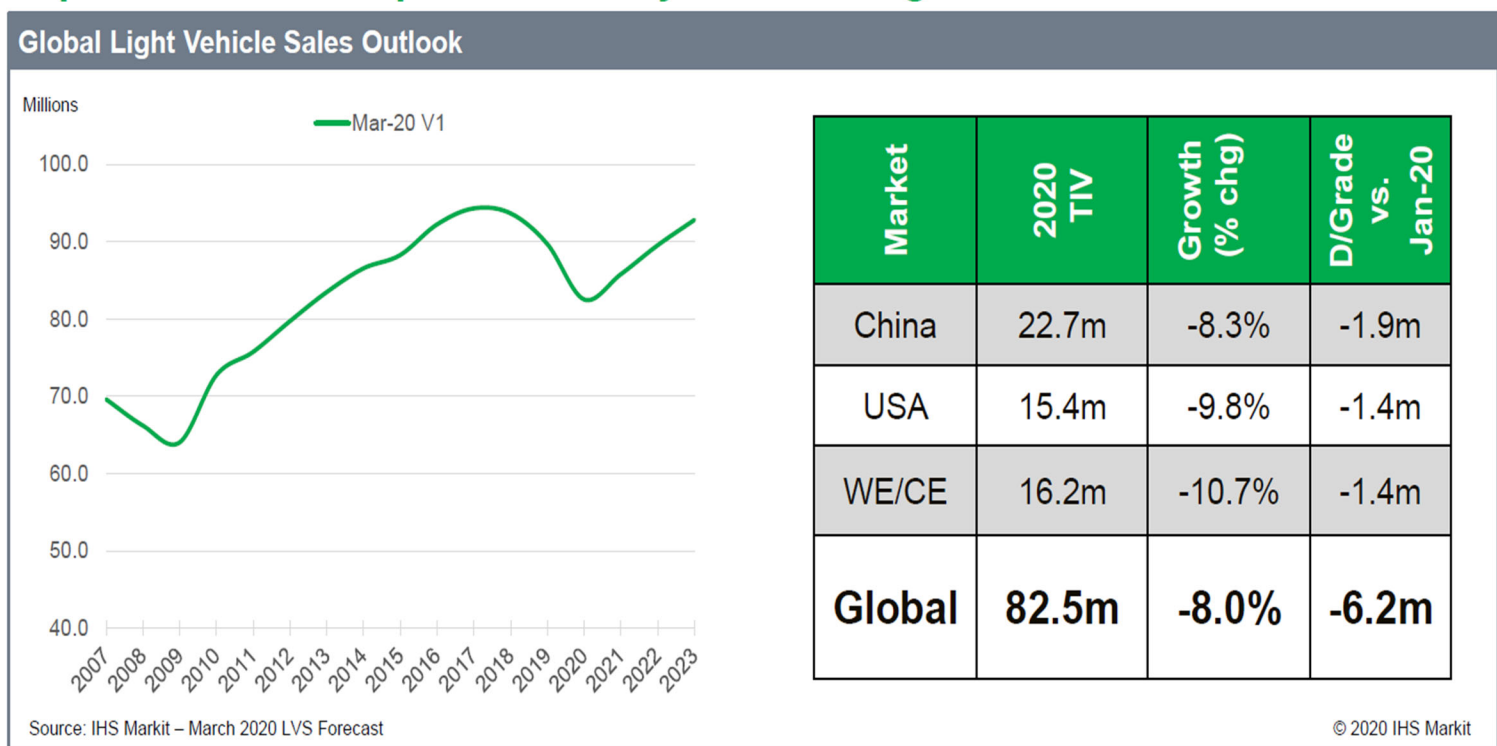
COVID-19 UPDATE [AUTOMOTIVE]

19 March 2020

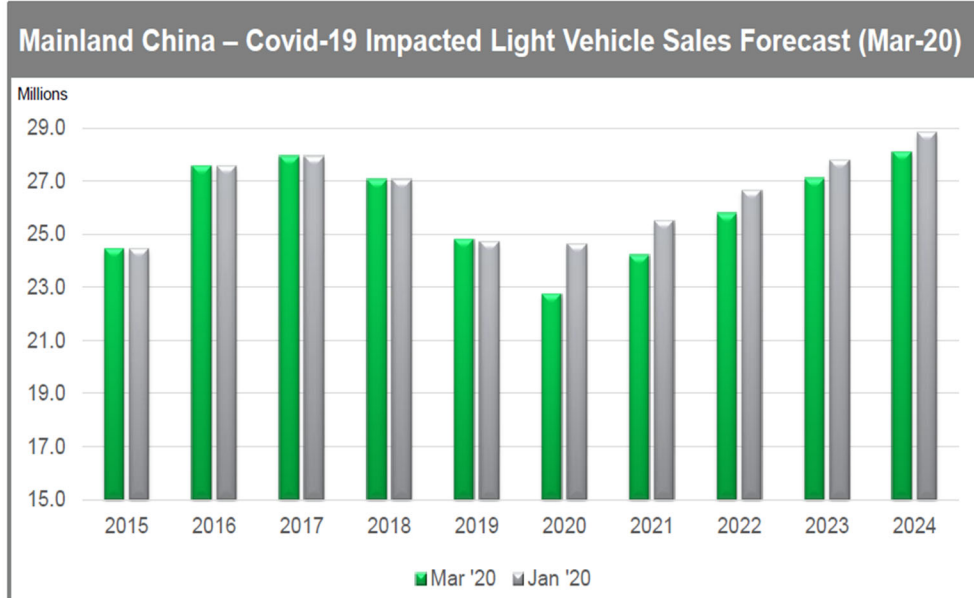
2020 Forecast Outlook

1. **Coronavirus uncertainty adds to already-pressured autos industry—2020 expected to witness unprecedented instant stalling of demand—impacts will be rolling as coronavirus spreads**
2. **Expected global 2020 slump similar to 2-year decline global recession 2008/2009—with risks skewed to downside & ultra-dependent on govt. action & support/stimulus packages**
3. **“Patient zero” China market should bottom out in 2020—hopes for beginnings of recovery from 2021—some demand likely to have been destroyed**
4. **Europe gripped by full-scale coronavirus crisis with demand conditions worsening by the day—region faces months of disruption (Brexit talks & EU30 CO2 plans might require delays)**
5. **Expected US recession leads to sharp consumer contraction & immediate LV demand slump**
6. **ROW mixed prospects—early crisis markets seem to be coping but risk “flare-ups” & early days for Brazil, Russia, India. Iran shows how virus can hit hard in less developed economies**
7. **Remote/flexible crisis working arrangements could influence future mobility patterns...**

Stalling global demand as coronavirus contagion spreads around the world Expected 2020 slump similar to 2-year decline global recession 2008/2009



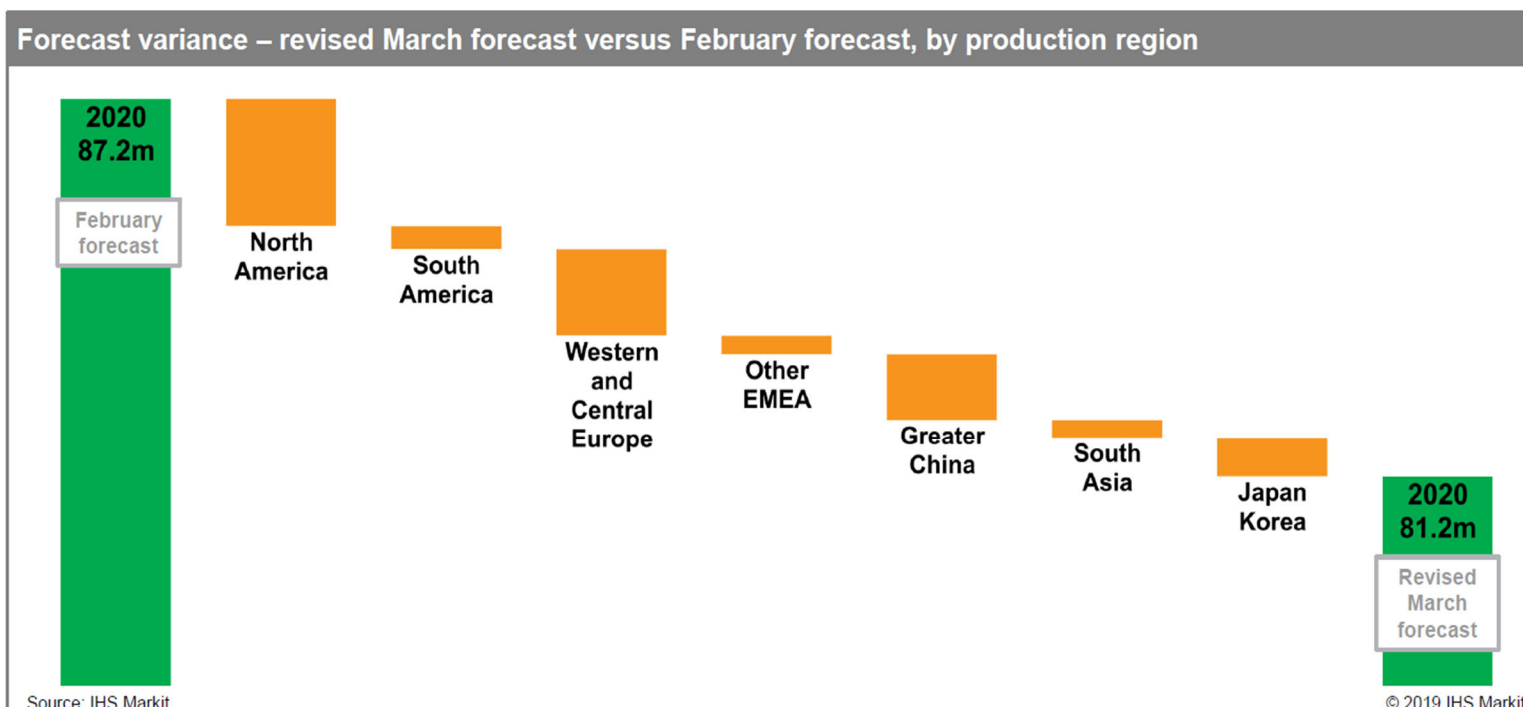
China—deeper & longer gouge to normal consumption pattern due to COVID-19 creates a more severe downgrade to vehicle demand



| | 2020 | 2021 | 2022 | 2023 |
|---------------------------------------|------------|------------|----------|----------|
| % Growth YoY | -8.3% | 6.5% | 6.5% | 5.1% |
| Vol Delta vs. Pre-Crisis Jan Forecast | -1,875,000 | -1,280,000 | -870,000 | -660,000 |

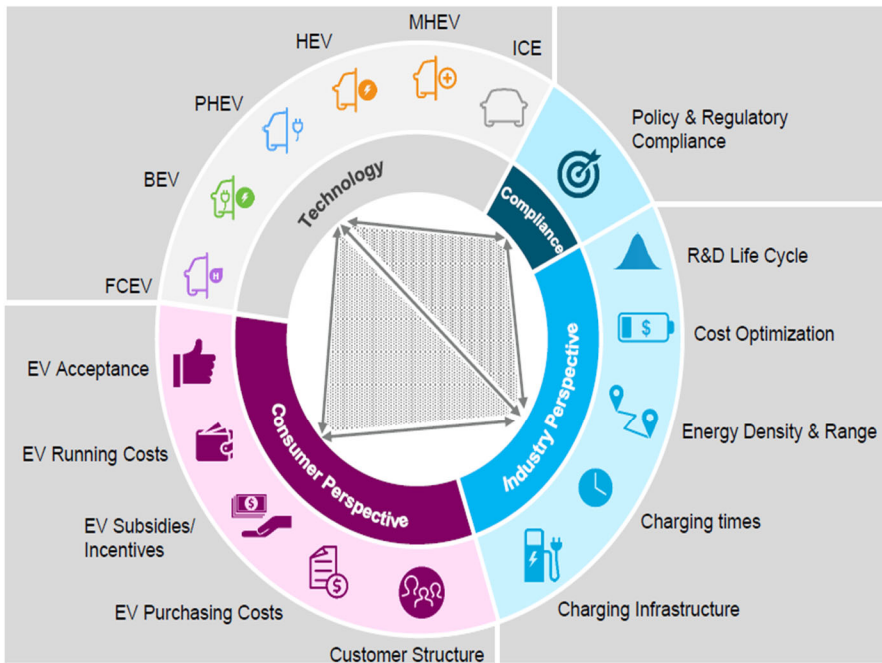
- Economic slowdown disproportionately felt by private companies (non-SOE) & SMEs. Key buyers of new cars
- **Demand Shock:** dealer sales level in 1st week of March only reached 38% of that same period in 2019 (CADA) although numbers of confirmed cases have fallen sharply across provinces for the past month
- Slow ramp up in new model launches as OEMs struggling for seamless cooperation among supply chain, production, sales & logistics. OEM production resumption rate hit +85% (MIIT) & suppliers capacity utilization rate climbed to 75% in the 1st week of March (IHSM)
- We expect Q1 2020 sales to drop by 41% with modest rebound of 6% in April
- Aversion to public transport post-outbreak could help vehicle sales but we only expect modest demand rebound due to much higher vehicle density & slower economic growth
- More significant incentives required to substantially change this picture. Easing licence place restrictions in key cities only limited impact

Revised global outlook for 2020:



Global Powertrain Selection: The Demand Diamond

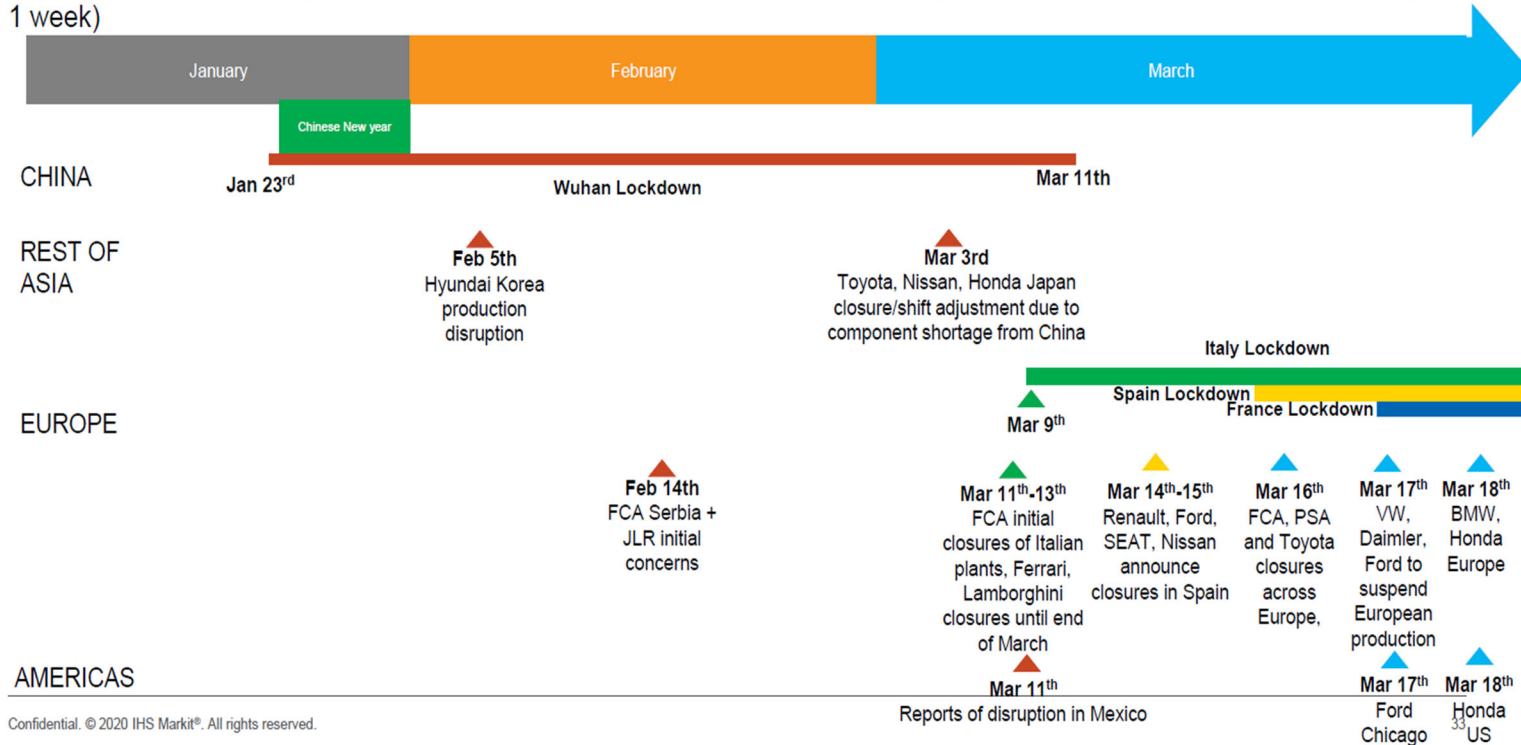
Multi-dimensional, complex interrelatedness and with variable sensitivities



- Propulsion strategies are now governed by an increasingly complex set of interactions and influences, which vary in impact across the 3 major automotive regions
- In broad terms, we see the emergence of a 3 speed world, where EU industry appears well poised to cater for the diametrically opposed markets of China and the U.S.
- We feel its highly unlikely that COVID-19 has a strong enough influence on this framework

A timeline of COVID-19 Automotive Supply Chain disruption so far






Initial supply chain impacts of Wuhan and Hubei lockdown have emerged about 20 days after the measure has been imposed, with a peak around 50 days afterwards. As expected, the European outbreak impact has taken much less to materialize (about 1 week)



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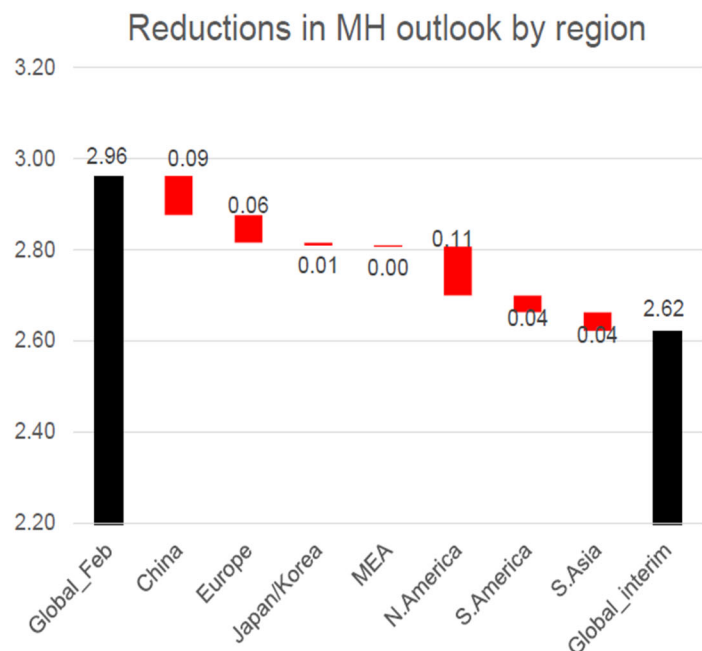
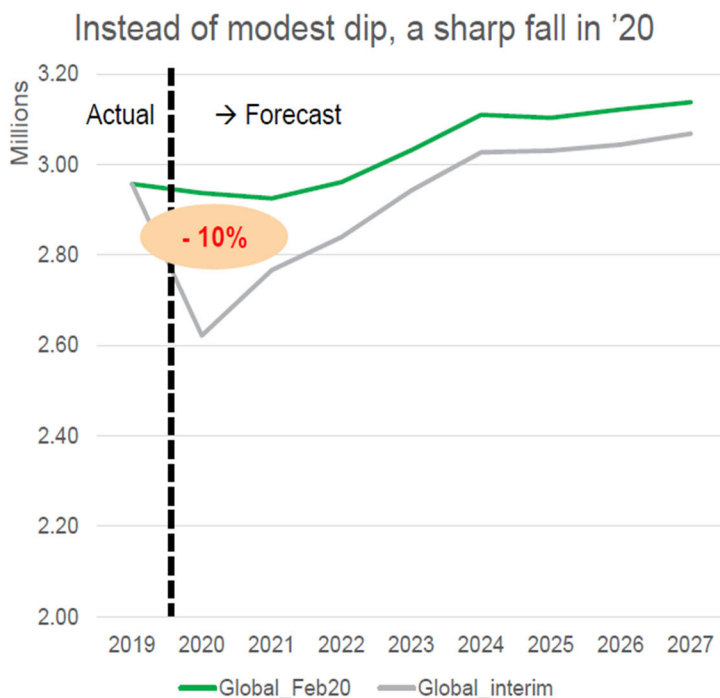
IHS Markit Survey of China's automotive suppliers

IHS Markit has conducted in-depth surveys with auto suppliers in China about COVID-19 impacts and combined results with its supply chain mapping. The main findings so far:

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"LIGHTS BACK ON" EVERYWHERE
 The share of Auto suppliers with facilities in operation in China increased from 80% on Feb 17th to 99% on March 17th
- 
OUTPUT RATE IMPROVING
 Share of suppliers operating at less than 50% of normal output rate has dropped from 70% to only 20% as of March 17th.
- 
LABOUR SHORTAGES
 Controls on residents' movement in some provinces as precautionary measure to prevent spread of the virus continues to hamper the resumption of normal operations. Some 40% of suppliers in Hubei are still facing labour shortages. Remains the main source of complaints also outside Hubei.
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LOGISTICS HURDLES
 Logistics within China have been impacted by goods transit checks and limitations (for example the driver permit regime) or port disruption. Port disruption from China to the rest of the world is slowly being resolved, but concerns are now emerging on inbound vessels from COVID-19 high risk areas. Ongoing ground transportation hurdles continue.
- 
"RED TAPE" IN HUBEI
 Special permits from the local Center for Disease Control Command are still required. CDC will inspect facilities, checks that there are adequate supplies of antibacterial gel and face masks for employees. 8% of suppliers in Hubei have yet to receive this permission to resume manufacturing.

Prospects for MHCV demand in 2020 deteriorate rapidly

Comparison of interim March forecasts for 2020 with published February data shows ca. 10% cut



Just as China's MHCV plants are coming fully back on line... Blackout periods at China's >70 commercial-vehicle plants are ending (RHS)

- MHCV plants in China are geographically dispersed, and only a minority of capacity is located in and around the key affected Hubei province
- MHCV plants in China in many cases extended the lunar New Year holidays for an additional 1-3 weeks; however, these measures were taken mainly by smaller producers
- As of now, nearly all plants are back on line
- The last to re-start were those facilities in Hubei itself
- IHS Markit continues to expect significant government support to the industry (e.g. via infrastructure programs that encourage truck use) in the remainder of the year will help to offset much of the production-volume loss experienced in February & March 2020



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