

Automotive Industry Weekly Digest

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[OEM Highlights] Great Wall steps up efforts to expand globally, to begin sales in Thailand during 2021

IHS Markit perspective

Implications

Geely Auto and Volvo Cars announced on 24 February that the two companies have agreed to deepen their collaboration to involve a wide range of core business areas to deliver synergies and tap new growth opportunities.

Outlook

Compared to a full merger plan, this arrangement in the form of an alliance will help both companies tap into each other's resource pool to cope with rising costs associated with the launch of EVs and new technologies, without potentially going through restructuring.

Great Wall Motor has renewed its efforts to expand sales in key global markets, including Germany, this year despite challenges brought by the coronavirus disease 2019 (COVID-19) pandemic. The automaker is expected to present the latest models from its upper-market WEY brand at this year's Frankfurt Motor Show in Germany. According to Chinese media reports, in September, the automaker plans to showcase the new-generation WEY VV7 sport utility vehicle (SUV) at the largest auto exhibition in Europe, delivering on its promise to launch sales of the WEY brand in the region. The model, which will feature Great Wall's latest powertrain technologies and have 5G-enabled capacities, will be introduced in Germany first and later in several other markets in the European region. Future WEY-branded SUVs for export are also expected to be produced at the automaker's joint venture (JV) plant with BMW, according to Chinese media reports. The Spotlight Automotive JV, set up by Great Wall and BMW, is expected to begin production in China in 2022. The JV's Zhangjiagang plant gained approval from the local government authorities in 2019 for production of passenger ICE vehicles for export. The WEY VV5 and VV7 are likely to be the first two models to be produced at the facility for sales in Europe. The automaker has yet to confirm its reported plans, at the time of writing.



In the Association of Southeast Nations (ASEAN) market, Great Wall officially launched the 'Great Wall Motor' brand in Thailand on 9 February, marking its official entry into the Thai market. The Chinese automaker said it will introduce the Haval H6 and Ora Haomao electric vehicle (EV) in Thailand in 2021. The models will be joined by two more new vehicles from the Haval brand and Ora brand later this year. Between 2021 and 2023, Great Wall plans to expand its product line-up in the country to nine models, covering ICE vehicles and EVs. These new models are to be produced at Great Wall's Rayong plant, which was acquired from General Motors (GM) last year. The facility has been revamped to accommodate production of SUVs and pick-up trucks. According to Zhang Jiaming, Great Wall vice-president for the ASEAN region, the Rayong plant will serve as the automaker's manufacturing base to supply both Thailand and the rest of the ASEAN market.





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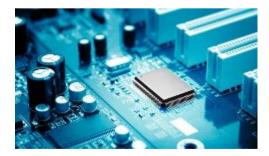
Outlook and implications

Great Wall's plan to launch sales in Europe has been delayed by the COVID-19 pandemic; however, during the course of 2020, the Chinese automaker still achieved several milestones in its efforts to expand sales overseas. According to a Cailian Press report, Great Wall has begun to prepare for the opening of the first experience centre of the WEY brand in Munich, Germany, an indication that the plan to launch the brand in Germany is approaching a new stage since the debut of a WEY concept EV at the Frankfurt Motor Show in 2017. In South Asia, Great Wall Motor (GWM) has closed a deal with General Motors (GM) on the acquisition of GM's Rayong production facilities. The handover of the Rayong plant was completed in November last year. According to Great Wall, the facility will have a production capacity of 80,000 units per annum of ICE vehicles, plug-in hybrid vehicles, and battery EVs. The Thailand plant, once up and running in the first quarter of this year, will support Great Wall's model launches in the region and enable the automaker to compete with SAIC Motor, which produces MG models in Thailand and India.

Great Wall's global sales are forecast to reach over 1.34 million units in 2023, up from 1.18 million units forecast for 2021. South Asia is forecast to become Great Wall's largest sales region outside Greater China by 2022 thanks to the automaker's efforts to start production and begin sales in Thailand. Additionally, sales of Great Wall's models are also expected to begin in India by as early as 2022, adding to the automaker's presence in the South Asian market.

[OEM Highlights] SAIC partners with chipmaker Horizon Robotics on smart vehicle development

SAIC Motor has entered into an agreement with Horizon Robotics to jointly develop technologies related to smart vehicles. According to China Daily, SAIC will use its SAIC Passenger Vehicle unit as a platform to create a collaborative ecosystem with the top companies in related areas, including automotive AI development and smart vehicle. Horizon Robotics will provide a full series of chips for SAIC's new models.



Outlook and implications

Horizon is one of the leading manufacturers of automotive-grade microchips in China. Its microchips are specifically designed to facilitate the deployment of Level 2 and Level 3 automated operation solutions in electric vehicles. Earlier this month, Horizon secured an investment from Great Wall and the two companies will also work together





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to develop artificial intelligence (AI) microchips for Great Wall's premium vehicles. Local media reports indicate that Horizon will also supply microchips for electric vehicles (EVs) to be introduced by SAIC Motor's premium EV brand, IM. In January, Horizon secured investment of USD400 million from a group of investors including Baillie Gifford, CATL, and CloudAlpha Tech Fund. The total amount the company has raised through the C funding round has reached around USD900 million, exceeding its target of USD700 million.





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[Policy Highlights] Shanghai to stop offering free NEV licence plates for PHEVs in 2023

Shanghai's authorities have announced the city's latest policies regulating the issuance of licence plates for new energy vehicles (NEVs). From 1 March 2021 to 31 December 2022, consumers who have ready been granted a licence plate through the monthly bidding process organised by the city's transportation bureau will no longer be eligible for free licence plates for NEVs if they purchase a plug-in hybrid vehicle (PHEV). Under the new programme, consumers who purchase a battery electric vehicle (BEV) will still be granted a free licence plate on condition that they do not already own a locally registered BEV. The city will no longer provide free licence plates for PHEVs starting from 1 January 2023. Range-extended electric vehicles (REEVs) are recognised as a type of PHEV.



Outlook and implications

The new policies on NEVs announced by Shanghai indicate the city will continue to favour BEVs while gradually phasing out preferential policies on PHEVs. Shanghai does provide a transitional period of nearly two years, during which consumers opting for PHEVs will still be granted NEV licence plates if they meet certain criteria. However, given the fact that the access to free licence plate is the one of the most important factors, among others such as subsidies, in NEV buyers' decision-making process, the city's decision to stop providing free licence plates for PHEVs in 2023 is likely to significantly affect sales of such models in the city. The availability of PHEVs has been increasing in the past two years. Honda has recently kicked off sales of its first PHEV model, the Honda C-RV PHEV, in China. In addition, Toyota plans to launch two new plug-in hybrid sport utility vehicles, the Toyota RAV4 PHEV and Wildlander PHEV, with its Chinese joint venture partners this year.

[Policy Highlights] Beijing releases data on autonomous vehicle testing

China's capital city Beijing has released the latest annual company reports on testing results of autonomous vehicles (AVs), reports China Daily. The report covers the number of AVs deployed by each company and the kilometres they drove in Beijing. In 2020, Beijing authorised 14 companies to test AVs on roads in designated areas. Road tests of more than 2.21 million km were driven by 87 AVs. Baidu's fleet accounted for 75% of the total number of tested AVs and travelled almost 1.1 million km, taking the top position.









Outlook and implications

Beijing has over 200 roads allocated for AV operation in four districts, covering nearly 700 km. In December 2019, Beijing allowed autonomous car road tests to transport qualified passengers (volunteers), as well as goods for delivery. The city announced plans to finish setting up a connected cloud-controlled high-level demonstration zone for AVs by the end of 2020.





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[Technology and Mobility Highlights] BYD to roll out DM-i hybrid technology across Dynasty product line in March

IHS Markit perspective

Implications Pre-sales of the Qin Plus, Song Plus, and Tang Plus, which are three new models featuring the

DM-i system, have already begun in China and they are expected to officially enter the market in

March.

Outlook BYD's PHEV production output in China is forecast to increase by 55% y/y to 81,000 units in

2021, and further grow by 28% y/y during 2022.

BYD will begin the rollout of its latest plug-in hybrid technology, the DM-i, across its Dynasty vehicle line-up during the first quarter of 2021. Pre-sales of the Qin Plus, Song Plus, and Tang Plus, which are three new models featuring the DM-i system, have already begun in China and they are expected to officially enter the market in March. The Qin Plus, a sedan based on BYD's Qin Pro sedan, is offered with a pre-sale price range from CNY107,800 (USD16,701) to CNY147,800, while the price of the Song Plus, a mid-size sport utility vehicle (SUV), will start at CNY153,800. Information released by BYD indicates that this new hybrid system, referred by BYD as the DM-i super hybrid, is expected to deliver outstanding fuel economy for its new models. Combined fuel consumption of the Qin Plus and Song Plus is just 3.8 litres/100 km and 4.5 litres/100 km, respectively. According to BYD, the DMi will consist of a new engine product line, the electric hybrid system (EHS) and its 'blade battery' technology. The 1.5-litre gasoline (petrol) engine, which is designed specifically for the DM-i plug-in hybrid models, will have thermal efficiency of 43.04%. The engine can produce maximum output of 81 kW and peak torque of 135 N.m. The automaker will also offer a 1.5-litre turbocharged gasoline engine on the larger Tang Plus SUV. The battery pack on the new models will have maximum capacity of 18 kWh, which can deliver an electric range of up to 120 km. The automaker will also provide the option of a smaller 8.3-kWh battery pack, which on the Song Plus can deliver an electric range of 51 km. Fast charging will be made available on the three new models to shorten charging time and encourage consumers to drive under electric-only mode.



Outlook and implications

BYD's three new DM-i models slated for market launch in the first quarter of 2021 will help the automaker increase its share in the plug-in hybrid electric vehicle (PHEV) market and strengthen the competitiveness of its Dynasty product line, which consists of five nameplates: Tang, Song, Yuan, Qin, and Han. The main selling point of the upcoming DM-i models is their outstanding fuel economy performance. BYD claims that with the batteries running at low capacity, fuel consumption of the Qin Plus and Song Plus can still stay below 4 litres/100 km. If the new





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models can deliver the performance promised by BYD, then they will enable BYD to compete head to head with PHEVs and internal combustion engine (ICE)-powered models offered by Japanese automakers.

During the past three years, BYD has broadened its product offering in the passenger vehicle market by adding model variants to some of its best-selling nameplate under the Dynasty product line. The Song, for instance, is available in the SUV and multi-purpose vehicle (MPV) variants. The Qin offers a classic model, the Qin sedan, which is based on BYD's B3 platform, as well as the Qin Pro based on BYD's new BMP platform. The expansion of the Dynasty line-up is expected to continue in the next few years with a focus on electric vehicles (EVs) and PHEVs. IHS Markit expects the automaker to increase its PHEV production over the next three years as new models featuring the DM-i technology gain traction in the market. BYD's PHEV production output in China is forecast to increase by 55% year on year (y/y) to 81,000 units in 2021, and further grow by 28% y/y during 2022.

[Technology and Mobility Highlights] ZF launches Level 2+ automated system integrated on 2020 Dongfeng Aerolus Yixuan

German automotive industry supplier ZF Friedrichshafen, in partnership with Chinese automaker Dongfeng Motor, has launched its Level2+ semi-automated driving system, called coASSIST. The system, which is integrated on the 2020 Dongfeng Aerolus Yixuan, meets Euro NCAP 2025 test protocols. The system uses camera technology from Mobileye and short-range radars from Hella to enable functions such as adaptive cruise control, traffic sign recognition, lane change assist, and lane keeping assist. In future, the coASSIST system will also be equipped with ZF's medium-range Gen21 radar. Christophe Marnat, executive vice-president for the ZF Electronics and advanced driver assist systems division, said, "The launch of coASSIST with Dongfeng Motor marks an important milestone in bringing the advantages of Level2+ systems to affordable passenger vehicles. At ZF we believe that Level2+ systems that meet advanced safety test protocols and help relieve the stress on the driving task will be the primary driver for light vehicles in the near future and it is exciting to see these systems on world roadways".



Outlook and implications

ZF is increasingly positioning itself as a supplier of complete systems for autonomous vehicle (AV) functions and is collaborating with other players to expand its presence in the market. ZF has formed partnerships with Aeva to put the sensors for AVs into production and TuSimple to co-develop sensors required for autonomous trucks' operation. ZF has confirmed plans for a Level 4 automation system for commercial vehicle applications, which it expects to introduce in 2024 or 2025.





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[GSP] South America Sales and Production Commentary -2021.02

South America sales

January 2021: -11.8%; 300,000 units vs. 340,000 units

- January sales experienced an 8.4% decline, very much in line with the pace of contraction in December (-8%). IHS Markit saw a solid display by Argentina, whereby sales were up 10%, but all other major markets were in negative territory. February is expected to be the last month for a decline in sales before entering positive territory, given the low base COVID-19 left, starting in March 2020.
- Needless to say, 2020 was a rollercoaster ride for the world as a whole and vehicle sales in South America, without exception. Demand contracted in the region by an estimated 27%, to 3.277 million units. This is owing to the severity of the lockdowns, which in most countries in the Andean region was more than 100 days, generating significant distress from an economic standpoint. As a result, the contraction in the Andean nations was of roughly 31% versus 27% seen in Mercosur.



- The macroeconomic model for Brazil signals toward sales of 2.3 million units in 2021. The affordability model suggests a market about 2.4 million units. Sales will likely break the 2.4-million-unit milestone, given that Brazil's SAAR rate is running at a stronger clip than what the models are signaling to.
- Sales within the region were at 4.5 million units in 2019; not an all-time high, but this is the benchmark being used globally for how long it will take to recover from COVID-19. Sales in 2020 are expected to have closed with 3.3 million units and will increase to nearly 4.0 million units in 2021. The long-term outlook projects sales to approach 5.0 million units by 2025, as the region heals.

South America Production

January 2021: +3.4%; 220,400 units vs. 213,216 units

- Following the steps of the previous two months, South American production volumes were again on the rise in January 2021 with an increase of 3.4% year on year (y/y), or about 220,000 units built.
- Brazil built nearly 190,000 units in January 2021—up 3.6% from January 2020. This allowed to maintain a trend initiated in the later part of 2020 when monthly comparisons started to display positive evolution. However, this does not mean Brazilian manufacturers are out of the woods. First, the January 2021 output was not particularly high in absolute terms, but just positive because it was compared with a rather weak January 2020. Brazil had been on a recovery mode since 2017 after a long period of decline beginning in 2014. Therefore, the start of 2021 was good but, by no means, extraordinary. There are still a lot of reasons for caution. The most obvious reason is that Brazil is still far from having the COVID-19 pandemic under control. Conditions widely vary, depending on the localization with some parts of the country already returning to a semblance of normality when others are hit even further as illustrated by the relapse recently





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suffered in the State of Amazonas. Authorities are hoping that the roll out of vaccination will put an end to this crisis. However, in all likelihood, no dramatic gains are expected before the second half of the year, at best. More specific to the local automotive industry, another element is putting further pressure on production's capacity to accelerate, namely difficulties within the supply chain. Indeed, local demand has been recovering quite strongly despite effects of the pandemic. This has put manufacturers and suppliers under constraint because several bottlenecks have been materializing at the same time. Raw materials prices, such as steel or rubber, have been on the rise and harder to obtain. Also, despite some existing stocks, parts, and components availability has started to dwindle, pushing many suppliers to adapt their logistics processes to meet manufacturers' demand. The most visible example has certainly been the recent shortage of semiconductors that affected the industry globally. All in all, this very volatile situation leads to a rather cautious approach to 2021, at least in the first half. The first quarter is expected to remain under a lot of pressure from the pandemic and supply chain sides. If global disruptions are not resolved soon, production pressure is expected to extend into the second quarter in Brazil, given that, by then, any remaining part or component stock would have reach critical level. Still, even if this latter case materializes, Brazilian plants would be able to compensate for most of the lost ground before the year ends. This is why the annual forecast is kept largely unchanged for this update with a 32% y/y growth in 2021, slightly above the 2.5-million mark. However, the seasonality is now more skewed toward the second part of the year, when some catch up might be happening. Yet, in this scenario, production is still unlikely to pass the 2019 tally before 2023. Any return to the peak level registered in 2013 (at 3.5 million units) is only anticipated to happen by the end of the decade (2027), and the country's aspirational goal of breaking the 5-million-unit barrier is not even considered in the forecast horizon.

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[VIP ASSET] COVID-19: Asia production trackers

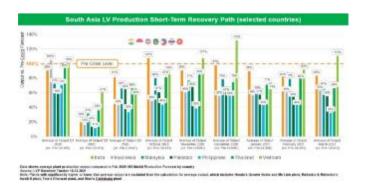
Key findings

- The situation regarding the coronavirus disease 2019 (COVID-19) virus pandemic in Asia is the same as in the rest of the world.
- Automakers in the region adjusted the length of downtimes as governments strengthened containment measures
 in an effort to curb the spread of the virus.
- They have now resumed production operations and are making efforts to ensure that production matches demand.
- By the end of 2020, there had been reports of disruptions in the supply of semiconductor chips to the automotive sector. This will affect vehicle production in the first guarter of 2021.
- This report highlights how quickly we expect key countries' production to return to pre-crisis levels.

The situation regarding the coronavirus disease 2019 (COVID-19) virus pandemic in Asia is the same as in the rest of the world and changed rapidly in the first half of 2020. Automakers in the region adjusted the length of downtimes as governments strengthened containment measures in an effort to curb the spread of the virus. They also cited supply-chain issues and weak sales demand as factors that affected their return-to-work timing. All automakers have now resumed production operations in the Asia region. Production resumed slowly initially, affected by new safety protocols and training in those measures, as well as managing the supply chain. Automakers are making efforts to ensure that production matches demand. Some plants' operations in the Asian region were affected during the second half of 2020 because of weak demand. However, by the end of 2020, there had been reports of disruptions in the supply of semiconductor chips to the automotive sector, as recovery in the automotive industry clashed with the wider consumer electronics sector. IHS Markit expects that vehicle production will be affected by the semiconductor-component-shortage issue in the first quarter of 2021.

Given the highly volatile and fluid nature of the outbreak, it is IHS Markit's aim to provide a measured and analytical view of the landscape as the situation unfolds. Having tracked the restart of the majority of plants, the final downtime tracker was released earlier in July, and it has been replaced by new production trackers that track the rate of recovery of sites as well as future stoppages attributable to each brand/parent. This new tracker was updated on a weekly basis. However, owing to reduced levels of activity at plants we are moving this tracking exercise to a monthly update.

South Asian light-vehicle production impacts and recovery pattern







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China light-vehicle production impacts and recovery pattern



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