



Automotive Industry Weekly Digest

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[OEM Highlights] Xpeng launches P5 sedan in China

Chinese electric vehicle (EV) startup Xpeng has launched its third mass-produced model, the P5 sedan, in China, priced between CNY157,900 (USD24,495) and CNY223,900, reports Gasgoo. The vehicle will be available in six trim levels and will be equipped with the standard XPILOT 2.5 system, with an option to upgrade to the XPILOT 3.0 and 3.5 hardware systems depending on the variant.



Outlook and implications

The P5 is a C-segment sedan based on the 'David' platform, which it shares with the G3 sport utility vehicle (SUV). IHS Markit forecasts that P5 sales will total around 3,700 units in 2021 and around 11,200 units next year. The model uses the in-house-developed XPILOT 3.5 autonomous system and Xmart OS 3.0 – Xpeng's latest in-car operation system. The new architecture comprises 32 perception sensors including 2 LiDAR units, 12 ultrasonic sensors, 5mm wave radars, 13 high-resolution cameras, and 1 high-precision positioning unit (GNSS+IMU) integrated into a 360-degree dual-perception fusion to provide sufficient redundancy across the perception sensors to support challenging and complex road conditions. The Xmart OS 3.0 platform supports full-scenario all-voice interaction, answering the complex needs of driver-vehicle and passenger-vehicle interactions. The vehicle is likely to be a credible competitor to the Tesla Model 3.

[OEM Highlights] China's Great Wall to introduce new brands for European market entry

IHS Markit perspective

Implications

Great Wall is the latest Chinese OEM to make the bold gambit of trying to enter the European passenger car market, introducing two new brands for the purpose. Wey is the premium brand, while Ora will enter the market with an all-new electric city car.

Outlook

It is an extremely brave strategy for a Chinese OEM to enter the European market with two new brands at opposite ends of the market spectrum. While other Chinese carmakers such as SAIC are making gradual inroads into the European market, these are with brands with an existing heritage such as MG, and volumes remain somewhat limited.

Chinese carmaker Great Wall is entering the European market with a bold strategy of bringing two new brands in opposing market segments; Ora is a relatively low-cost battery electric vehicle (BEV) brand, while it will enter the



premium segment with the Wey brand. The first product from this nameplate will be a premium plug-in hybrid (PHEV) SUV-D. Ora has sold a relatively small number of BEV city cars already in China since 2018, while Wey is already reasonably well established in China, having been launched in 2017 as a premium sport utility vehicle (SUV) brand.

Ora

Great Wall first showed its new city car BEV, the Ora Cat, at the Chendu Motor Show in 2020. It is a B-segment BEV city car with attractive, funky, and retro styling. The Cat is due to go on sale first in Europe in Germany in 2022, before being rolled out in other Western European markets. The car is powered by a single motor producing 169 bhp and 184 lb/ft of peak torque, and accelerates from 0–31mph in 3.8 seconds, while the range is quoted at an impressive 249 miles. The Ora Cat will also have a number of advanced driver-assistance systems that are rare in the B-segment.

Wey

Great Wall also showed the first model from its Wey sub-brand, the Coffee 01 plug-in SUV, at the IAA Mobility 2021 in Munich at the start of September. The PHEV Coffee 01 is powered by a 2.0-litre, four-cylinder gasoline (petrol) engine, which works in combination with electric motors on the front and rear. The model has the biggest battery of any PHEV yet launched; the 40-kWh battery gives the model an electric-only range of 93 miles and a combined powertrain system output of 469 bhp. The car is styled in a sharp and contemporary SUV body and features an interior design with four interior screens, face-recognition technology, Wi-Fi, and over-the-air (OTA) updates capability. It also offers Apple CarPlay and Android Auto capability.

Outlook and implications



Car manufacturing
IHS Markit

It is an incredibly bold strategy for Great Wall to take with its attempt to enter the mainstream European passenger car market, to create to separate, all-new brands, positioned at different ends of the market. Launching one new brand is a difficult enough task in terms of investing in marketing to create awareness and creating the resources to ensure the new vehicle has a meaningful distribution, sales and servicing. The launch of the Coffee 01 two years after Great Wall said it would begin selling premium cars under the Wey brand showed a model that was technically interesting. Although the Coffee is a PHEV, its battery capacity is the size of that of many full BEV production cars and it rather begs the question why Wey did not simply build a full BEV. A PHEV with such a big battery and a conventional powertrain will surely be seriously compromised in terms of weight and packaging, and it is hard to see the logic that has been applied to this powertrain set-up, especially with Europe



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as its primary target market. That said, the German government is looking at introducing more stringent targets for PHEVs to qualify for the sizeable Environmental Bonus so Wey may have the last laugh when it launches the Coffee 01 in that market, as it is one of the few PHEVs that would currently qualify for the modified PHEV subsidy proposal for 2024. The proposed alteration to subsidy requirement would require a qualifying PHEV to have a minimum electric-only range of 80km.

The Ora Cat could certainly be an attractive entry into the BEV city car market, especially if it undercuts the price of models like the Mini-E, given its attractive retro styling and its impressive claimed range, which will give it useful utility outside city environments as well. However, previous attempts by Chinese OEMs to enter the Western European market with their own brands have shown the difficulty of the task and Great Wall can accept a slow ramp up with its new offerings from Wey and Ora. Shanghai Automotive (SAIC) is the most successful Chinese-owned car brand (if one discounts Geely-owned Volvo) in the European market, with the company taking the brand (which is a heritage brand in Europe, albeit with limited awareness outside the UK) from just over 4,000 unit sales in 2016 to a forecast figure of over 50,000 this year as a result of its investment in new models. This includes the BEV and PHEV variants of the ZS SUV, which have performed relatively well, with the model forecast to sell around half of MG's combined tally in Western Europe in 2021 according to IHS Markit's forecast. In contrast, we expect Great Wall's Wey brand to sell between 3,000 and 4,000 units in Western Europe from 2022 until the middle of the decade.



[Autonomous Highlights] China rolls out autonomous driving standards

China's six-level standards, known as the "Taxonomy of Driving Automation for Vehicles," provide official definitions for self-driving cars ranging from Level 0



Source: Getty image/sefa ozel

According to a press release published on South China Morning Post on 20 September, China has published its first national standards for grading autonomous driving, which will go into effect in March 2022, providing a benchmark for automakers to develop the futuristic technology.

China's six-level standards, known as the "Taxonomy of Driving Automation for Vehicles," provide official definitions for self-driving cars ranging from Level 0, which relies heavily on human drivers, to Level 5, which achieves "full driving automation."

Prior to its introduction, local automakers followed the definition established by the Society of Automotive Engineers (SAE) in the United States. While it is similar to the Chinese version, China's standards place a slightly greater emphasis on technology. China's Level 0, Level 1, and Level 2 levels, for example, require the driver and the autonomous driving system to collaborate on detecting and responding to objects and events, whereas the SAE version only requires drivers to perform these tasks.

Outlook and implications

It was drafted by 11 major carmakers and suppliers, including Ford, BMW, and Volkswagen's China units, as well as some domestic giants like Geely and GAC Group, and its implementation will be overseen by the Ministry of Industry and Information Technology (MIIT). The draft standards were published by the MIIT in 2020, and state broadcaster CCTV reported that they would go into effect in January 2021. Its implementation, however, was deferred without explanation.

The new criteria, on the other hand, provides a solid foundation for the future implementation of relevant laws, regulations, and mandatory classifications, as well as a requirement for autonomous driving technology to commercialize its implementation on a large scale.

[Autonomous Highlights] Autonomous mobility start-up Wayve partners with Asda for autonomous van trial in London



Wayve and Asda partner on autonomous grocery delivery trial



Source: Getty image/ Hendra Su

According to a Business Wire press release dated 21 September, UK-based autonomous mobility start-up Wayve has today announced a partnership with UK 'big four' grocer Asda to trial autonomous delivery vans as part of the retailer's last mile operation.

Alex Kendall, Wayve CEO, said: "Last mile delivery represents an ideal first use case for the Wayve Driver, which can navigate the complexities of urban driving and easily adapt to new routes. We are excited to be working with Asda as our first commercial partner. They have a proven track record of delivering innovations in online grocery shopping that improve customer experiences. This makes them an ideal partner to support the development of autonomous vehicle technology."

Outlook and implications

The autonomous vans will operate under the supervision of a Wayve Safety Driver throughout the 12-month trial, where Wayve and Asda will use their capabilities to help to integrate autonomy into the online grocery space and learn how the technology can shape the future of last mile delivery.

The trial will begin in early 2022 and Asda will be the first to commercially test the solution, using Wayve's expertise in deep learning to help navigate complex urban delivery routes in London.



[Technology Highlights] Genesis rolls out its new 'Face Connect' technology

Hyundai's premium brand Genesis will roll out its new 'Face Connect' technology, which will enable access using faces to open and close doors without using a smart key, according to a company press release. After identification and syncing, the vehicle can automatically adjust the driver's seat and steering wheel based on the driver's stored preferences. The heads-up display (HUD), side mirrors, and infotainment settings will also be adjusted based on customised settings. The Face Connect system features a near infrared (NIR) camera for high functioning at low light situations. If drivers leave their smart key in the car, the vehicle can be locked using the face recognition system. Face Connect can register up to two faces for each vehicle and add profiles using voice assistant. The profiles can be deleted any time at the driver's convenience. In addition, Genesis will also roll out its over-the-air (OTA) software update to wirelessly update software on major electronic devices including the electric vehicle (EV) integrated control device, suspension, brakes, steering wheel, and airbags.



Outlook and implications

Genesis has been applying innovative technologies to its vehicles that strengthen the connection between humans and vehicles. Face Connect is expected to maximise customer convenience as a technology that helps the vehicle communicate with drivers, along with its Fingerprint Authentication System, highlights the report. The Fingerprint Authentication System gives drivers control over the vehicle based on biometric information without a smart phone or a smart key. The drivers can enter the vehicle using face recognition, and start the engine using fingerprint recognition. Genesis plans to apply these new technologies to its upcoming model, the GV60 electric utility vehicle, which is based on Hyundai Motor Group's E-GMP platform. It is scheduled to be launched this year. The GV60 is the second Genesis EV, following the introduction of the electrified G80. Genesis is also expected to launch an electric version of the GV70, the GV70e, in 2022, as well as a new all-electric C-segment sport utility vehicle (SUV) based on the E-GMP platform.

[Technology Highlights] Xin Chi Technology partners with TINNOVE for automotive smart cockpits

The X9 series is a high-performance, high-reliability car-grade chip for advanced intelligent cockpits



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Source: Getty Images Plus/piyaset

Xin Chi Technology has announced an agreement with TINNOVE in the field of automotive smart cockpits, according to a 17 September press release. The companies will leverage X9 series of smart cockpit chips from Xin Chi Technology and TINNOVE's OpenOS for advanced systems and high computing power intelligence to jointly create a solution for intelligent networking.

Based on the TINNOVE OpenOS technology, customers can create a car cockpit interactive system with greater flexibility and use the functions and performances of the X9 smart cockpit chip products of Xin Chi Technology.

Outlook and implications

The X9 series is a high-performance, high-reliability car-grade chip for advanced intelligent cockpits and is compatible with the OpenOS operating system. The chips are equipped with independent intelligent engines, which can realize functions such as perception, voice recognition and deep learning, and improve perception and interaction capabilities of the smart cockpit.

“Wu Tong Auto is the industry's leading provider of intelligent networked vehicle operating system level solutions. The strategic cooperation between Xin Chi Technology and Wutong Auto will help customers in the industry to shorten the adaptation cycle. Reduce research and development costs, and quickly meet the needs of individualization and customization of smart car system software,” said Zhang Qiang, chairman of Xin Chi Technology.



[GSP] Europe Sales and Production Commentary -2021.08

Europe sales

July 2021: -21.6%; 1.352 million units vs. 1.724 million units

YTD 2021: +19.9%; 10.360 million units vs. 8.640 million units

The global spread of the COVID-19 virus and efforts to contain it are shaping the near-term economic outlook. The IHS Markit baseline forecast assumes that an effective vaccine will not be widely available until late 2021 or early 2022 and government restrictions on activities will be progressively eased through the remainder of the second quarter of 2021. The COVID-19 pandemic has emerged as the single-biggest risk factor facing the automotive industry for many years. The COVID-19 crisis piles intense additional pressure on an already stressed automotive industry, and the latest forecast includes downgrades across virtually all regions.

European light vehicle registrations decreased during July after months of significant growth as the base of comparison grew on COVID-19 virus restrictions being lifted a year ago. According to the latest forecast, registrations in the region are down 21.6% year on year (y/y) to 1.352 million units. The substantial loss has reduced the year-to-date (YTD) performance, which for the first seven months of the year now stands at 10.360 million units—up 19.9% y/y.

After four months of substantial gains in many markets because of a low base caused by the COVID-19 pandemic—related lockdowns a year ago, recent performances partly show a reversing trend. Even those markets that did not have the strictest restrictions imposed, which limited movement and closed nonessential retailers, were affected in 2020 as production stoppages in other parts of the region limited the supply of vehicles in the months that followed. Nevertheless, in many instances, volumes during 2021 remain weaker than those recorded during 2019, which has not been helped by more recent COVID-19-related restrictions and the ongoing semiconductor shortage.



The strong loss in volumes during the month has been replicated in individual markets, with the majority recording at least a double-digit percentage decrease as a result of the higher base comparison with 2020, where markets showed pent-up demand after months of tight restrictions.

In July, the Western European markets performed quite equally with strong losses in most countries, which had been expected owing to the low base of comparison caused by the first strict COVID-19-related lockdown that was introduced halfway through May 2020. There were double-digit losses in Belgium (down 35.9%), Denmark (down 26.8%), Finland (down 16.4%), the Netherlands (down 20.7%), Portugal (down 19.7%), and Sweden (down 24.8%). Out of the Big Five markets, France showed the biggest loss, with a decrease of 32.4%, followed by Spain (down 29.5%), Germany (down 24.2%), Italy (down 21.1%), and the United Kingdom (down 13.4%).



Unlike others, three markets grew with Ireland up 21.9%, followed by Greece (up 11.6%) and Norway (up 7.3%). Moreover, the implemented car stimulus programs directly affect the recovery of the different markets. Looking back to 2020, the Western European market was down 24.5% y/y. The market started solidly into first quarter 2020, but with the COVID-19 outbreak, the trend significantly changed and pushed the market into a deep recession, with sales volumes massively falling in the second quarter of 2020. With lower infection numbers and government support, sales volumes improved in the third quarter, until the second wave of COVID-19 infections arrived and again dragged down sales volumes. On the positive side, governments around the world are working toward sustainable ways to manage the COVID-19 pandemic. Recovery cycles will be largely determined by the path of the pandemic, including progress on vaccine programs. All parts of Western Europe face a winter of stubbornly high COVID-19 infection rates and ongoing restrictions, which could further dent automotive demand prospects. The crisis intensifies operational and economic pressures on an already-stressed global automotive industry, especially as OEMs and suppliers finetune strategies toward coping with “new normal” vehicle demand levels.

Purchasing Managers' Index® (PMI®) data, point to a strong rebound starting in the second quarter. The manufacturing sector has led the pickup but pronounced improvements in sentiment are increasingly evident across other sectors. Consistent with easing COVID-19 containment measures, eurozone GDP growth on a quarter-on-quarter (q/q) basis is forecast to peak in the third quarter.

Economic conditions continue to vary across the eurozone's 19 member states, given variations in the containment of the COVID-19 virus, related restrictions, economic structure, and available policy space. The more manufacturing-orientated economies, such as Germany, are forecast to return to their pre-COVID-19 GDP levels earlier than the more highly indebted, services-sensitive economies of southern Europe. The eurozone's double-dip recession will be followed by a growth spurt starting late in the second quarter owing to easing COVID-19 containment measures. Weakness in private consumption, especially of services, has been the main drag on economic activity during the pandemic but will strongly rebound as restrictions on activity are relaxed and the exceptional surge in household savings rates in 2020 continues to unwind.



Investment will also strongly rebound, in tandem with improving business sentiment. As of the first quarter of 2020, gross fixed capital formation was still almost 8% below its pre-pandemic level despite three consecutive q/q increases since the third quarter of 2020. Given the expected broad-based rebound in domestic demand, the forecast for annual GDP growth in 2021 has been revised up to an above-consensus 4.8%.

Manufacturing indicators remain exceptionally elevated, although supply bottlenecks are restraining activity. Business surveys, including the IHS Markit PMI® surveys, show continued buoyant conditions in the sector but with suppliers' delivery times reaching record lengths. Still, industrial production has experienced a V-shaped recovery, rising in April 2021 to within a whisker of its pre-COVID-19 level. Strength in external demand has played a pivotal role, with exports rebounding unusually quickly compared with prior recessions.



The European Central Bank's (ECB's) ongoing expansion of net asset purchases and long-term loan provision to banks has contributed to favorable financial conditions. The EU-wide agreement on the Recovery and Resilience Facility (RRF) is an additional source of support. Still, high public-sector debt burdens, legal constraints on the ECB, and banking-sector vulnerabilities remain sources of risk. The recent higher inflation rates have also leant up on long-term interest rates, although they remain at exceptionally low levels.

Overall, despite the significant increases from March to June, volumes remain low compared with the pre-pandemic levels. IHS Markit analysts also published a comparison with 2019 data, which underlines the weakness of the market with a 27% decline compared with July 2019 and a 24.8% retreat when comparing the two YTD figures. This highlights the intense additional pressure on an already stressed automotive industry from the pandemic. Moreover, IHS Markit analysts expect OEMs will strongly push vehicles with no or low carbon dioxide (CO₂) levels into the market to lower the fleet CO₂ average in 2021 and onward, which will increase their financial burden.

Compared with the development in Western Europe, demand in Central Europe was stronger and recorded a 14.7% loss in July 2021 with 110,636 units, which means a 14.7% loss compared with the same month one year ago. After more than one year of steep falls, the Central European market started a recovery process from March onward, with strong growth rates during the last quarter, which is a bit lower than the performance of the Western European region. Decreases and volume drops in July were seen in most of Central European markets, such as Croatia (down 16.9%), Poland (down 24.5%), Czechia (down 5.8%), Hungary (up 10.8%), and Slovakia (down 17.6%). In addition, Eastern Europe showed a similar result compared with the other two markets in the European region again. Demand in Eastern Europe during the month fell 20.2% compared with the same period last year. The main reason for this weak volume was the strong loss in the Turkish market (down 45.3%), which is related to the strong base level in the Turkish car market that showed a strong recovery one year ago. Moreover, the Russian market showed a double-digit loss (down 11.0%) compared with the same month one year ago.



For full-year 2020, the European light vehicle market posted a significant loss of 20.4%, with sales of 16,417,367 units, mainly related to the outbreak of the COVID-19 pandemic in spring 2020. The results were affected by losses in Western Europe (down 23.7%) and similar losses in Central Europe (down 23.8%). The Eastern European region was dragging up the sales level of the whole European region with a gain of 2.1% for full-year 2020. Despite the good news that effective vaccines will be widely available by the third quarter of 2021, expectations for the third quarter of 2021 lean toward the cautious side. The global spread of the COVID-19 virus will still have a fundamental impact on the near-term economic outlook. Moreover, the semiconductor shortages will affect the short-term development.



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Other than the COVID-19 virus outbreak that will have a massive effect for a longer period, there are further downside risks. Protectionism is a prominent source of concern. The threat of an all-out trade war could be enough to defer some expenditure, especially investment. Emerging-market turbulence is an additional headwind to growth and a source of uncertainty. Political developments in Italy, the potential effect on sovereign yields and spreads, and contagion to other member states also merit attention.



[EV Highlights] GM unveils EV production platform in China

General Motors (GM) has launched its Ultium electric vehicle (EV) platform in China, reports China Daily. The automaker said the cell and other core components to develop the platform have been completely sourced locally. By 2025, GM expects to launch more than 30 EVs based on the Ultium platform worldwide, and more than 20 of them will be introduced to the Chinese market. The Cadillac Lyriq sport utility vehicle (SUV) will be the first Ultium-based model to be unveiled in China in 2022. Mary Barra, chairman and CEO of GM, said, "We believe the inflection point of putting everybody in an EV and transitioning to an all-electric future has arrived, and GM intends to take the lead. China is not only the largest vehicle market. It's also a powerhouse of innovation and the frontier of electric intelligent connected vehicle development and deployment."



Outlook and implications

GM is ramping up a USD35-billion campaign to launch a new generation of electric and automated vehicles powered by its proprietary Ultium battery technology, which it plans to use in key electric models. The state-of-the-art Ultium battery system and third-generation global electric platform will integrate GM's engineering flexibility, technology advances with highly localised manufacturing, and supply chain in China to enhance quality and cost-competitiveness. According to IHS Markit's light-vehicle production forecast, the first model based on the Ultium platform, the Cadillac Lyriq, will go into production in November 2022, with output expected to be around 3,500 units in 2022 and 18,000 units in 2023. The Ultium batteries are scheduled to be made with LG Energy Solution (LGES) at joint-venture factories in Ohio and Tennessee (both US) as part of a USD4.6-billion investment programme.

[EV Highlights] VW plans ID.4 with smaller battery pack for US

Volkswagen (VW) is planning to add a version of the ID.4 electric vehicle (EV) with a smaller battery pack for production in the United States in 2022, reports Automotive News, citing VW Group of America CEO Scott Keough. The new version will have a 64-kWh battery pack, complementing the 82-kWh battery pack in the ID.4 Pro and Pro AWD. Keough reportedly confirmed that the smaller-battery-pack version will have a starting price of less than USD35,000, before tax credits or incentives. Keough also said that he expects US sales of the Pro version to be divided about 50/50 between the rear-wheel-drive and the just-released AWD versions. Keough also said that the first versions of the ID.4 are sold out and that the new model is bringing in customers new to the VW brand, with 89% also purchasing their first EV. Automotive News reports that the US plant has the capability to



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produce as many as eight different EV models, although the company has not confirmed which others it plans to produce at the Chattanooga plant, Tennessee, after the ID.4.



Outlook and implications

VW is in the process of preparing its Chattanooga plant to produce the ID.4 for the US market, including both versions, which will eliminate the need to import the vehicle as it does currently. For VW to add a lower-range, lower-power version of the ID.4 to its line-up in the coming year may help the brand to reach more customers through a more-affordable price. With the new ID.4 version, VW may reach customers who do not need the longer range and, with increased exposure to EVs, may be more willing to buy a lower-mileage version than buyers seem ready to do currently. IHS Markit forecasts VW will begin production of at least three more EV models at the Chattanooga plant in the coming years. However, the plant is forecast to continue to build the ICE-powered Atlas and Atlas Cross. By 2030, we forecast the plant's annual output will be about 240,000 units, compared with about 150,000 units in 2021.

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