



IHS Markit®

Automotive Industry Weekly Digest

18 October – 22 October 2021





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[Sales Highlights] EV startups NIO and XPeng each record more than 10,000 units in monthly sales during September

Chinese electric vehicle (EV) startups XPeng and NIO have reported substantial increases in vehicle sales during September. NIO said that its vehicle deliveries in September increased by 125.7% year on year (y/y) to 10,628 vehicles. The deliveries consisted of 1,978 units of the ES8 sport utility vehicle (SUV), 5,260 units of the ES6 SUV, and 3,390 units of the EC6, a coupé-style variant of the ES6. In the third quarter ended 30 September, the company recorded total sales of 24,439 units, up by 100.2% y/y. XPeng delivered 10,412 vehicles in September, a 199% y/y increase, including 7,512 P7s, the sports smart sedan, 2,656 G3s and G3i SUVs, and 244 P5 smart sedans. In the year to date (YTD), the company sold 56,404 vehicles, up by 301% y/y.



Outlook and implications

EV startups in China have been riding the new energy vehicle (NEV) wave in the country. The NEV segment has been experiencing substantial growth in sales despite the impact of the coronavirus disease 2019 (COVID-19) virus pandemic, supply-chain constraints, and recent floods. According to a recent statement by the China Association of Automobile Manufacturers' (CAAM)'s executive vice-chairman, Fu Bingfeng, Chinese NEV sales are expected to increase by more than 40% each year for the next five years. According to the estimate, NEV sales in the country will reach 1.9 million units in 2021 and 2.7 million units in 2022. For NIO, its mid-size electric SUVs, the ES6 and EC6, have become the company's backbone models, while the ES8 still appeals to consumers looking for a large six-seater SUV. For XPeng, its newly introduced P5 electric sedan, featuring the in-house developed autonomous operation system XPILOT 3.5 and Xmart OS 3.0, Xpeng's latest in-car operation system, is expected to further push sales for the company. IHS Markit forecasts that XPeng and NIO's sales will be around 64,000 units and 91,000 units, respectively, during 2021.

[Sales Highlights] Chinese new vehicle sales decline 19.6% y/y in September, NEV sales up 148.4% y/y – CAAM

IHS Markit perspective

Implications New vehicle sales in China declined year on year (y/y) for a fifth consecutive month in September, mainly due to the semiconductor shortage affecting global automakers this year.



Outlook

Despite the slowdown in sales of internal combustion engine (ICE) vehicles, sales of new-energy vehicles (NEVs) have been following a steady growth path. According to an earlier statement from the China Association of Automobile Manufacturers' (CAAM) executive vice-chairman, Fu Bingfeng, Chinese NEV sales are anticipated to increase by more than 40% each year for the next five years. According to IHS Markit's light-vehicle market forecasts, light-vehicle sales in mainland China are expected to remain flat at 23.705 million units in 2021, compared with 23.666 million units in 2020.

New vehicle sales in mainland China fell y/y for a fourth consecutive month during September, due to softer demand for passenger vehicles and commercial vehicles (CVs). According to data released by the CAAM, new vehicle sales on a wholesale basis decreased 19.6% y/y to 2.067 million units last month, while production was down by 17.9% y/y to 2.077 million units. In the year to date (YTD), new vehicle sales are up 8.7% y/y at 18.623 million units, while production volumes are up 7.5% y/y at 18.243 million units.

Of the total new vehicle sales and production in China last month, passenger vehicle sales decreased 16.5% y/y to 1.751 million units, while passenger vehicle production was down 13.9% y/y to 1.767 million units. The CAAM definition of passenger vehicles includes sedans, sport utility vehicles (SUVs), multi-purpose vehicles (MPVs), and minivans. During September, China's sedan sales decreased 18.9% y/y to 780,000 units, MPV sales declined 13.8% y/y to 96,000 units, SUV sales dropped 13.5% y/y to 850,000 units, while minivan sales declined 37.7% y/y to 24,000 units. In the YTD, Chinese sales of passenger vehicles are up 11.0% y/y at 14.862 million units, while production of passenger vehicles has increased 10.7% y/y to 14.658 million units.



China's CV sales, including medium and heavy vehicles, also remained weak in September. During the month, sales of CVs dipped 33.6% y/y to 317,000 units, while CV production declined 35.2% y/y to 310,000 units. In the YTD, sales of CVs are up 0.5% y/y at 3.76 million units, while production of CVs has decreased 4.0% y/y to 3.585 million units.

Sales of NEVs, which include battery electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs), and fuel-cell vehicles (FCVs), increased 148.4% y/y to 357,000 units in September. Sales of passenger NEVs grew 159.9% y/y to 341,000 units in September, while sales of commercial NEVs increased 28.6% y/y to around 16,000 units. Within the NEV passenger car category, sales of BEVs were up 165.1% y/y in September to 281,000 units, while sales of passenger PHEVs stood at 61,000 units, up 138.5% y/y. In the YTD, NEV sales in China are up 185.3% y/y at 2.157 million units.

China's new vehicle exports jumped by 74% y/y to 173,000 units in September. By vehicle type, passenger vehicle export volumes increased 78.4% y/y to 135,000 units, while CV export volumes grew 60.2% y/y to 38,000 units.



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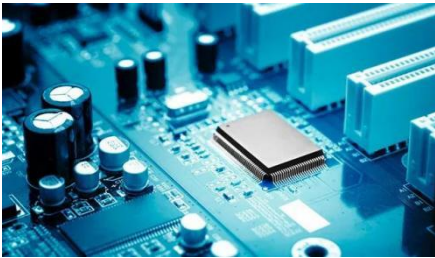


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Outlook and implications

New vehicle sales in China declined y/y for a fifth consecutive month in September, mainly due to the semiconductor shortage affecting global automakers this year. According to IHS Markit's latest forecasts, production losses in mainland China as a result of this issue stood at 364,000, 420,000, and 685,000 units, respectively, during the first, second, and third quarters of this year. The running total for the fourth quarter was kept at 60,000 units last week. Just before the end of September and in the run-up to the national holiday, it was reported that power outages had been experienced in several regions as energy production was cut back to align with quarterly targets. These outages affected the vehicle operations of FAW-Toyota and FAW-Volkswagen (both in Changchun) and SAIC-General Motors (GM) in Shenyang. Initial estimates put the direct impact of this at a combined 5,000 units in the final week of September, while a further direct impact on OEMs and an indirect impact via supplier stoppages are expected to be visible this week and next.

Overall, the market has been less widely disrupted than initially expected and this can be attributed to the market being the first and most obvious to recover from the coronavirus disease 2019 (COVID-19)-related lockdowns of early 2020. This may have helped China secure supplies from semiconductor producers, who could identify an earlier and more sustainable recovery in China than was expected in much of the rest of the world.



China's State Administration for Market Regulation has said that it is investigating automotive chip dealers over suspected illegal practices such as hoarding, price gouging, and collusion, resulting in prices of semiconductor chips being driven up during the global shortage.

Despite the slowdown in sales of ICE vehicles, sales of NEVs have been following a steady growth path. According to an earlier statement from CAAM's executive vice-chairman, Fu Bingfeng, Chinese NEV sales are anticipated to increase by more than 40% each year for the next five years. According to this estimate, NEV sales in China will reach 1.9 million units in 2021 and 2.7 million units in 2022. According to IHS Markit's light-vehicle market forecasts, light-vehicle sales in mainland China are expected to remain flat at 23.705 million units in 2021, compared with 23.666 million units in 2020.



[OEM Highlights] GAC, NIO-backed Hycan brand to launch Z03 this month

The Hycan brand backed by GAC and NIO plans to introduce its second mass-produced model, the Z03, in China on 18 October, reports Gasgoo. The vehicle will be available in three trim levels, with the two five-seater variants priced between CNY130,000 (USD20,201) and CNY150,000. The Z03 is 4,602 mm long, 1,900 mm wide, and 1,645 mm tall, with a wheelbase of 2,750 mm. The Chaowan and Chaozhi variants have maximum output power of 135 kW and 225 N.m of torque, while the Z Chao variant gets 160 kW and 225 N.m of torque. The vehicle's New European Driving Cycle (NEDC) range is between 500 km and 600 km based on battery capabilities (64.6 kWh and 76.8 kWh).



Outlook and implications

The Z03 is a C-segment car based on the GEP platform, which it shares with the 007 sport utility vehicle. IHS Markit expects sales of the Z03 to be around 2,200 units this year and 6,100 units in 2022.

[OEM Highlights] MG launches Marvel-R EV, updated ZS EV

MG Motors has revealed the Marvel-R battery electric vehicle (BEV) that it plans to launch in Europe. According to the brand's European website, the five-door compact crossover features a powertrain that uses three motors and sends power to all four wheels. Combined power is said to be 288PS, while torque is said to measure 665Nm. As a result, it is said to be capable of accelerating to 100km/h in only 4.9 seconds. The battery pack is also said to have a 34% improvement in density, which alongside a two-speed transmission, is said to give a range of 402km under the WLTP cycle. Charging can take place via the onboard, three-phase 11kW on-board charger, although on a fast charger, an 80% charge is said to be possible in 40 minutes. Other features offered on this model include its MG Pilot Level 2 advanced driver assistance system (ADAS) and 19.4-inch centre console touchscreen. Separately, MG has also revealed its updated ZS EV. Exterior changes include a new front end designed to enhance aerodynamics. However, the vehicle now benefits from a new 72kWh long range battery pack that offers a range of 273 miles under WLTP, versus 163 miles for the current model. MG has also said a smaller 51kWh battery with 198 miles of range will join the line-up from 2022. The long-range battery can be fully charged in around 42 minutes on a fast charger, depending upon climatic conditions. In addition, the ZS EV gains an upgraded iSMART connectivity system via a 10.1-inch tablet touchscreen, which is combined with a new instrument cluster.



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Outlook and implications

SAIC-owned MG is growing its presence positively in the European market. Having been leveraging the brand recognition of the brand in the UK, it has been the brand's electrification strategy that has been a springboard into mainland Europe. Indeed, so far in 2021 it has registered a respectable 2,566 units in Norway, the key market for BEVs in the region, which is a 20.4% y/y uplift and represents 2% of the market. The changes that have been made to the ZS EV should broaden its appeal to customers that want a longer-range vehicle. However, the Marvel R, which will not be sold in the UK for now due to it being left-hand drive only, could help its presence with a more upmarket and stylish product. However, with pricing set at EUR39,990 for the entry-level Comfort trim and EUR47,990 for the top of the range Performance variant, it will be competing with a broadening range of VW Group BEV crossover offerings.



[Technology Highlights] Hyundai Mobis develops foldable steering system

Hyundai Mobis has developed the world's first foldable steering system following a two-year development process, according to a company statement. The system features a steering wheel that can move forwards and backward by up to 25cm, fully retracting into the dashboard when not in use in order to free up more space in front of the driver's seat. The company is currently filing patents for the device globally and also plans to promote the foldable steering system as a major export item.



Outlook and implications

Hyundai Mobis intends to actively respond to the autonomous vehicle and future mobility markets, which include purpose-built vehicles, by enhancing its competitiveness with future technologies such as the foldable steering system. "Hyundai Mobis goes beyond simply reinterpreting existing technologies and instead develops parts technologies that apply to future cars in totally new ways," said Jang-don Choi, managing director of chassis and safety at Hyundai Mobis, adding, "We will continue to develop future-oriented innovations based on our know-how of core technologies". To develop the foldable steering system, the company said that it designed new core parts of a steering system, including a column and a reaction force control device, and applied a sliding rail mechanism, securing system durability and reliability. The foldable steering system is also compatible with steer-by-wire (SBW) systems, in which electrical impulses replace the physical connection between the steering wheel and the tyres. The company claims that the SBW system delivers the optimal steering performance in various road conditions and minimises the vibrations that reach the driver. It has applied a dual safety system that can independently control key electronic components such as sensors and electronic control units to maintain normal steering in an emergency.

[Technology Highlights] Toyota along with AIST, Toyota CRDL to jointly develop solar charging system for vehicles

Toyota announced today (12 October) in a company statement that it will aim to equip its vehicles with highly efficient solar power generation systems as it ramps up its efforts to achieve carbon neutrality. Toyota has started discussions on joint research with the National Institute of Advanced Industrial Science and Technology (AIST) and Toyota Central R&D Labs Inc. (Toyota CRDL). "The three parties will seek to popularize vehicles equipped with solar power generation systems, which convert light energy into electrical energy. To this end, they will



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pursue improvements in conversion efficiency and reductions in cost for both solar batteries and solar power generation systems," Toyota said in a press release, without giving details about the in-vehicle systems.



Outlook and implications

AIST is one of the largest national research institutions in Japan and carries out advanced research into solar power and other forms of renewable energy, and into the production and use of hydrogen; and Toyota CRDL is focused on achieving technological advances. Using the joint research, Toyota will seek to improve the conversion efficiency of solar power generation systems and batteries and bring down costs to allow for wider adoption by using data collected by AIST. Last month, Toyota shared its carbon neutrality targets in the context of battery development and expectations for electrified vehicles and stated that it would invest JPY1.5 trillion into battery development and production through to 2030. The automaker is considering development of capacity for 200 GWh by 2030 globally and developing three battery types to support battery electric vehicles (BEVs), fuel-cell electric vehicles (FCEVs), plug-in hybrid electric vehicles (PHEVs), and hybrid electric vehicles (HEVs).



[GSP] Greater China Sales and Production Commentary -2021.09

Greater China sales

August 2021: -17.6%; 1.73 million units vs. 2.1 million units

YTD 2021: +15.8%; 15.24 million units vs. 13.82 million units

In August 2021, a total of 1.73 million light vehicles were sold in Greater China, marking a decrease of 17.6% compared with the same period in 2020. Specifically, light vehicle sales in mainland China dropped 17.7% from 2.06 million units in August 2020 to 1.7 million units. Passenger vehicles recorded sales of 1.45 million units for a decrease of 15.8% year on year (y/y), while light commercial vehicle sales decreased 27.8% y/y to 0.24 million units. In August 2021, passenger vehicle sales of local brands increased 3.5% y/y to 0.57 million units. Their market share jumped from 31.9% to 39.3%.

On a year-to-date (YTD) basis, light vehicle sales in mainland China increased 10.4% from 13.53 million units to 14.94 million units. Precisely, passenger vehicle sales increased 12.2% y/y to 12.5 million units, while light commercial vehicle sales increased 2.2% y/y to 2.44 million units. Segment-wise, YTD sedan sales rose 14.5% y/y from 5.39 million units to 6.17 million units, and the SUV segment increased 9.4% y/y from 5.35 million units to 5.85 million units. For MPVs, YTD sales increased 17.5% y/y to 0.49 million units.



The Caixin China General Manufacturing Purchasing Managers Index™ (PMI™) fell 1.1 points to 49.2 in August, indicating a slight deterioration in business conditions. The decrease in output was the first since February 2020 with survey respondents observing that the upturn in COVID-19 cases and subsequent restrictions had slowed production and dampened demand. The services PMI plunged 8.2 points to 46.7 in August, shifting into contraction for the first time since April 2020 with business activity, new orders, employment, and output prices all declining. Real GDP is projected to rise 8.4% in 2021, 5.8% in 2022, and 5.5% in 2023. The 2021 growth rate is marked down 0.1 percentage point, reflecting economic disruptions caused by the latest COVID-19 virus Delta variant outbreak.

The semiconductor supply has seen greater exposure to the ramifications of the situation in Malaysia, which performs many “back-end” operations including the packaging and testing of chips. As this is more labor-intensive than the wafer fabrication processes, activity is more easily affected by public health measures that impact workforce participation. The Malaysian government on 26 July relaxed some of the lockdown measures that were implemented in early June and that allowed the automotive sector and sectors of importance to global supply chains to return to 80% operational capacity. While this may be a positive development, there will have been a backlog created owing to earlier disruption and the situation will remain fragile while large parts of the workforce remain exposed to contracting the virus.



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In view of these developments, IHS Markit analysts expect the fourth quarter will be exposed to ongoing disruption and this disruption is now expected to spill over into 2022 and even 2023. Production loss is expected to amount to 2 million units in 2021 with a loss in the fourth quarter reaching 700,000 units. Consequentially, the light vehicles sales outlook in 2021 will be downgraded by 1.3 million units to 23.7 million with growth of 0.2% y/y.

Greater China production

August 2021: -11.9%; 1.76 million units vs. 2.00 million units

YTD 2021: +13.6%; 15.2 million units vs. 13.38 million units

Greater China's light vehicle production in August recorded 1.76 million units, down 11.9% year on year (y/y). In mainland China, light vehicle production declined 12.3% y/y, to 1.74 million units. Light vehicle production was expected to usher in a fourth month of decline. Since June, owing to the outbreak of the pandemic in Southeast Asia, many chip factories have been completely shut down, which has directly further deteriorated the already fragile chip supply chain. The negative impact on joint-venture brands is more obvious.



[Supplier Trends and Highlights] AUTOCRYPT to present V2X security solution at ITS World Congress 2021

AUTOCRYPT present a variety of mobility security solutions dedicated to creating a holistic mobility security services platform with a focus on V2X security



Source: Getty image/ metamorworks

According to a press release published on PR Newswire on 8 October, AUTOCRYPT, a leading mobility security solutions provider, has announced its participation in the ITS World Congress 2021 event, which will be held from 11 to 15 October 2021. The ITS World Congress is one of the largest events focusing on future mobility and transportation digitalization, and it provides exceptional access to the global community by inviting all sectors in the mobility field to participate in the ongoing development of intelligent transportation systems (ITS) and services.

"As Europe sets itself apart as an essential market for the development of mobility and security solutions, our expansion into Europe with our newest Munich office and ITS World Congress 2021 gives us confidence for a post-pandemic era," said Daniel ES Kim, AUTOCRYPT's CEO and cofounder. "We are thrilled to provide more of our solutions worldwide by offering a greater commitment to providing integrated mobility security technologies for OEMs and suppliers in the industry."

Outlook and implications

AUTOCRYPT presents a variety of mobility security solutions dedicated to creating a holistic mobility security services platform with a focus on vehicle-to-everything (V2X) security, supporting regional standards of the European Union, North America, China, and APAC at this year's offline event.

AUTOCRYPT's V2X security product AutoCrypt V2X not only includes an endpoint security library and a backend PKI authentication system, but it also includes a customizable user interface based on a centralized management service. AUTOCRYPT plans to showcase its oversight of South Korea's smart road V2X capabilities at booth B5.014 at the ITS event, as one of the top five V2X security providers in the world, according to Markets and Markets.

Additionally, with its newest Vehicle Security Operations Center (vSOC) for its in-vehicle security solution, AutoCrypt IVS, OEMs can enjoy convenient management and access to oversee monitoring and detection of any vehicular cybersecurity threats.



[Supplier Trends and Highlights] BlackBerry partners with Google and Qualcomm to develop next-gen automotive cockpits

VIRTIO is an open standard that defines the interface between Android Automotive OS and the underlying hypervisor



Source: Getty image/metamorworks

BlackBerry has made available its QNX Hypervisor and VIRTIO-based reference design to virtualize Android Automotive operating system (OS) on the third Generation Snapdragon Automotive Cockpit Platform, it said in a press release on 12 October.

VIRTIO is an open standard that defines the interface between Android Automotive OS and the underlying hypervisor and allows systems to easily upgrade to newer versions of Android Automotive OS as they are released.

Outlook and implications

The BlackBerry QNX reference supports graphics sharing between Android Automotive OS applications and the digital instrument cluster. The QNX hypervisor-based reference design incorporates an infotainment system powered by Android Automotive OS and a digital instrument cluster virtualized by the QNX Hypervisor and running on a single Snapdragon Automotive Cockpit Platform, allowing OEMs and designers achieve safety certifications while delivering the full Android Automotive OS experience.

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