

Major Automotive Global Trends

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1. <u>Global</u>

Global sales of passenger cars continue to recover, EV sales slowing down

According to LMC Automotive research company, global passenger car sales are expected to rise to 7.7 million units in March, an increase of almost 5% compared with March 2022. The expected yearly rate at this stage is 79.1 million units, compared with 76.7 million units a year in February.

According to LMC's projection, the Chinese market is expected to shrink by 2% compared with March last year. The researchers claim that: "The climate in the auto market remains challenging, and while there are macro warning signs, such as in the banking system, our overall projection for sales by the end of the year grew by 200,000 to 86 million units, an increase of 6% compared with 2022". The researchers estimate that logistics disruption will continue to fade once the recovery rate no longer depends on the supply but on customers' demand.

At the same time, new research published at the beginning of March estimates that the global market for EVs is entering a slowdown phase. Global BEV sales in January were at only 672,000 units, almost half the amount registered in December 2022. The main reason is a stoppage of sales in the Chinese market for EVs, the largest in the world, due to the cancelation of the subsidies for EVs that took effect in January. Also, other governments in the West have substantially lowered EV subsidies, and customers are facing recession and soaring interest rates. A source of hope is the American EV market, which experienced a swift rise in sales and market share thanks to the new incentive policy adopted by the US administration and the price reductions announced by Tesla. The Norwegian market considered the leading EV market in Europe, has also registered a sweeping slowdown during January.

American administration aggravates the "Chip war" with China, which in turn threatens to retaliate

The global chip crisis is gradually fading, but this is yet to be reflected in the industry. Behind the scenes is a "Chip war" between the US and China, which has an indirect yet tangible effect on the industry.



As recalled, the situation commenced in the summer of 2022 when the US administration announced the "Chips law" that forbids American and foreign chip manufacturers receiving federal support to manufacture in the US to export equipment for manufacturing advanced new generation chip manufacturing to China. In March, the restrictions were expanded, and these companies were also forbidden from increasing their activity in China and opening new plants there. Among these companies are large global chip manufacturers operating in China, such as Samsung, TSMC, etc. The US Department of Commerce said that in case of a breach of these regulations, the administration would revoke all federal backing from these companies and may also demand payback of tax incentives already received.

According to estimates, the new regulations, if implemented, may delay China's attempts to develop an independent advanced chip industry by many years and may also increase China's auto industry dependence on Western foreign suppliers and increase production costs.

As expected, the Chinese received the administration's announcement with considerable anger. A representative of the Chinese foreign ministry said in response that: "This is a step similar to imposing a siege and a technological and scientific protectionism, intended to preserve the hegemony of the US in this field... the US is misusing the idea of national security and its' enforcement on export measures, sacrificing the interests of its allies and performing a 'divide and conquer' policy among countries. China strongly objects to this and has often expressed its objection to the US. China will guard its' legitimate rights and interests".



2. <u>USA</u>

The US and EU signed an agreement for the arrangement of raw materials supply for EVs that will enable European manufacturers to keep receiving subsidies for EVs in the US

Parallel to forming regulations for self-supply of raw materials, the EU began to negotiate a mutual supply of vital raw materials for EVs with the US in March. The agreement was reached while the EU president visited the white house.

This is another step in an attempt by both sides to resolve the differences caused by the administration's inflation reduction act (IRA). The act was designed to migrate green technology companies and battery and EV manufacturers, including from Europe, into the US. Recently, the act caused several large European auto manufacturers to announce that they intend to invest billions of dollars in the next few years and build new EV manufacturing plants in the US. The first and immediate subject that will be discussed is obtaining the administration's support for tax incentives for European EVs that will be manufactured in the US using batteries and raw materials from Europe.

US administration releases the first 700 million US\$ for charging station funding across the USA

On March 15th, the US treasury department released the first funding round for the national deployment of charging infrastructure for EVs and hydrogen-powered vehicles. The 700 million US\$ funding, out of the 2.5 billion US\$ allocated for the next five years, is for activities carried out from 2022 until the end of 2023.

The government budget is supplemented by an additional 5 billion US\$ funding from NEVI (the National Electric Vehicle Infrastructure Initiative). Initial government funding will be directed at companies that build "Regular" charging stations and hydrogen charging stations in cities and rural areas. At the same time, the NEVI budget focuses on funding fast charging stations along the inter-state road network in the US. The government extended the time frame for funding requests until May 2023.



American auto market recovered in March, but prices keep rising despite improved inventories

The recovery in new car sales in the US continued in March compared with March 2022, reveals the monthly projection report published by J.D. Power's research division. According to the report, March's data is expected to result in 1.33 million sales, an increase of 6.2% compared with last year's March, with the same number of sale days. However, quarterly sales are expected to increase by a marginal 0.2% only, compared with last year's first quarter figures, with 2.858 million units. Fleet sales amounted to 240,000 units during March, an increase of 31.4% compared with last March, and fleet market share is expected to be 19% compared with 15% last year.

The report states that the demand for new cars by private customers continued the positive trend, but the main reason for that is mostly the purchases that were delayed from last year due to inventory shortage. According to the report, production volumes and inventories have improved substantially this year. The average deal cost kept rising and stabilized at a 45,818\$ record high, an increase of 3.5% compared with March 2022. The researchers explain the contradiction and claim that manufacturers prefer to allocate their inventories to fleets instead of dealers catering to private customers, preserving the private market's high prices and increased profitability.

According to the report, private customers in the US spent 132 billion US\$ on new cars during the first quarter, 4,4% more than in the first quarter of 2022 and a new quarterly record. On the other hand, the sale cycle for private customers was slower. During March, 44% of new cars were sold within ten days of arriving at the dealership, compared with 57% in March 2022. The average inventory time for a new car rose to 30 days from 18 a year ago. This figure is still substantially shorter than the average 70-day inventory time from pre-COVID 2019.

The report reveals that manufacturers' incentives from the recommended price were also substantially higher than a year ago, amounting to almost 1,560\$ on average for each car, an increase of 45% but still close to an all-time low.



The relative part of new cars being leased shows the influence of inflation and interest rates. In March it was 20% while last March it was 31%. The average monthly payment for a leased car was 711\$ in March, 6.8% more than a year ago.

Used car prices in the US are also coming down to an average of 8,800\$ for a trade-in deal, 430\$ less than last March and almost 1,240\$ less than last June's record. However, the capital needed for buying a used car is almost twice what it was before COVID, which helps sellers of used vehicles bridge some of the gaps when purchasing a new car.

New EV sales caught 8.5% of all car sales in the US in March, 2% more than in February. The "Affordability index" for buying new EVs also improved by 6.6% during March, mainly due to increased quotas for EV subsidies and the price drop led by Tesla.

3. <u>China</u>

Chinese car distributors ask the government to postpone new emission standards due this summer, claiming that they are dealing with a weak market and vast inventories of cars that comply with current emission standards

During this summer, an additional and critical phase in CHINA 6 environmental legislation is supposed to take effect. The new phase, China VI B, is supposed to take effect in July 2023 and include stricter emission limitations on all petrol ICE vehicles in China and all heavy vehicles, including those with diesel engines.

The new regulation includes, among other things, mandatory monitoring systems in the engines that prevent unauthorized engine changes and internal diagnostic procedures for emission monitoring that can report data from the vehicle and reduction of emissions in "Close to true conditions". The regulation states that from July 2023 onwards, it is forbidden to sell any vehicles from the relevant categories that don't meet the new regulation.

This situation creates a significant problem for the manufacturers and their Chinese dealers. In an unusual step, they united and appealed to the government, asking to



postpone the effective date of the new regulations. They claim that the manufacturers and the importers have hundreds of thousands of cars in inventory that don't meet the new rules, among other things, due to the COVID-19 epidemic. These inventories can not be sold by the governmental "Deadline" date, resulting in a severe loss.

The manufacturers also claim that due to the current slowdown in the Chinese auto market (a drop of 15% compared with 1st quarter of 2022) and the swift shift to EVs, demand for petrol vehicles is low, making selling current inventories hard. Also, the manufacturers state that many customers are in a "Wait and see" mood due to recent price wars and are delaying purchases until future prices and specs are clear. The manufacturers and dealers request an extension of at least six months to "Clean out" their inventories. At the end of March, the Chinese press reported that the government would likely grant the request and extend the deadline.

The Chinese auto market entered an unprecedented price war in March. Analysts: The situation may significantly harm some of the brands

During March, the "Price war" in the Chinese auto market that began with Tesla's sharp price slash at the end of 2022 reached a new peak. At first, mostly premium EV manufacturers joined the move and announced thousands of dollars in "Limited time" discounts. However, since the beginning of March, there has been a significant escalation when manufacturers of petrol cars joined in, in some cases encouraged by local districts to lower prices. The discounts on petrol models stem from the need to clear inventories (See previous item) and are at 15% of the official fee, although they reach as much as 40% in extreme cases.

Marketing managers of large auto brands interviewed in China said, "In the current situation if you don't slash prices, it's the same as sitting and waiting for death". The price war also comes in the background of a market recession. According to the China Private Car Association (CPCA), the country's private car market shrunk by 19.8% in the first two months of 2023. Despite price slashes, sales dropped by in the first three weeks of March by 8% compared with last year. Analysts from global investment firms that cover the Chinese market estimated in March that if this process continues, it will "Certainly lead to a stoppage in the activity of some brands, especially young ones, and will also accelerate mergers in the market".



4. <u>South-Korea</u>

The south-Korean government announced the allocation of hundreds of billions of US\$ to expand chip production in the country and lower the industry's dependence on chips from foreign sources

The South-Korean auto Industry suffered and is still suffering severely from the chip supply disruptions, but instead of complaining, the South-Korean government decided to act. At the beginning of March, the Trade, industry, and energy ministry of South Korea announced that it would allocate a considerable sum of 300 bills to establish the world's largest industrial hub for computer chip production in the metro area of Seoul to achieve independence and world leadership in this area.

According to the announcement, this move is part of the South-Korean government's strategy to revitalize the six core industries of the country, including the computer chip, screens, batteries, biotechnology, robotics, and auto industries. This future industrial hub will funnel over 150 raw materials, components, and assembly lines for computer chips. The government also intends to establish enormous industrial parks to develop and produce future car technologies such as hydrogen propulsion. This course is expected to improve the supply chain for South-Korean auto manufacturers significantly.

5. Japan

The Japanese government signed a vital minerals trade agreement with the US administration that will enable the Japanese to receive government subsidies in the US for BEVs with Japanese-made batteries

The American administration is gradually retreating from the initiative to revoke tax benefits from EV manufacturers that their cars and/or batteries are not made in the US. After the regulations were "Softened" in favor of European and Korean manufacturers, the administration also reached an understanding with Japan in March.



On March 29th, the two states announced a new vital mineral trade agreement for EVs, allowing Japanese auto manufacturers much broader access to the 7,500\$ tax benefit. The agreement forbids the two countries from imposing export restrictions on vital minerals, including Lithium, Nickel, Cobalt, Graphite, and Magnesium.

The agreement also reduces the dependence of the two countries on Chinese export via an understanding to "Collaborate against un-competitive policy" of other countries and a re-examination of "Exterior investments in their mineral critical supply chain". In other words. To prevent hostile Chinese takeovers of American and Japanese mineral mining and production companies. This agreement will also allow US-made Japanese EVs whose batteries are made in Japan to keep receiving the subsidy.

6. <u>Europe</u>

Following "Mutiny" from key countries: the EU changes direction in the prohibition of selling petrol ICE cars from 2035 onwards policy

At the beginning of March, "Mutiny" broke out in the EU against the decision of the European Parliament to completely ban the production and selling of ICE cars from 2035. Among the countries opposing this decision are those with auto production activity, such as Germany, Czechoslovakia, Italy, Poland, and Bulgaria. In an announcement, these countries said they would refuse the decision the European parliament took last month with a majority vote since it will significantly harm employment in these countries.

The discussion on this topic caused a stir in the EU leaders' convention held on March 3rd in Brussels. The subject, which many saw as a "Done deal" was not included in the original agenda but became its focus following a unilateral announcement by the German chancellor that said that Germany does not consider the decision to be final. According to the German chancellor, the EU Commission and the German administration are discussing the topic, and the discussions' direction is positive. The EU president, Ursula von der Leyen, also said during the convention that the two sides are willing to resolve the situation.



However, the German minister of transportation rejected the calls for a "Swift compromise" with the EU concerning the stoppage of ICE cars production and said that Germany needs assurances before signing an agreement with the EU.

One of these compromise suggestions, raised by Italy, was to allow auto manufacturers to continue selling ICE cars in the EU after 2035, provided that they use synthetic fuels (fuels that their production process leaves a low environmental footprint because they are produced using sustainable energy sources such as wind turbines). Such engines should have very low "Well to wheel" emissions (which weigh all the emissions from the production process), close to that of an EV or a hydrogen-powered vehicle. However, the Germans still don't agree with this, claiming that there is no particular category for vehicles running on synthetic fuels in European regulations, and there is a need to define one.

The Austrian chancellor also embraced this position, claiming that continuing to produce and sell ICE cars adapted to synthetic fuels would decrease the EU's dependence on batteries and EVs made in China. The Italians expressed their opinion more sharply and said that accepting the proposal as-is would be "Economic suicide" on the side of the EU and that the decision stems from "Ideological fundamentalism".

On the other hand, the position taken by the opposing countries was met with fierce criticism from several other countries in the EU, including France, which announced that it would insist on passing the original legislation without compromises. The French finance minister said it took the EU two years to formulate the legislation, and now it needs only a final sign of approval. He said it would be "An environmental and economic mistake to postpone the signing". The final voting of the European market council was due to be held on March 7th but was postponed because of these differences in opinion.

Following accelerated discussions on the subject, on March 28^{th,} the EU announced that it had reached an agreement with Germany, and ICE vehicles using "E-FUEL" will be excluded from the prohibition. This is a significant withdrawal from the previous EU decision and excellent news, especially for manufacturers of high-end sports cars and for niche manufacturers, for which the complete shift to EVs would have caused a loss of market shares and profitability.



The production process of synthetic fuels evolved significantly in the past two years and includes, among other measures, a chemical "Trapping" of CO2 in the production process and the use of hydrogen or electricity produced using "Green" elements such as wind turbines. Burning fuel inside the engine creates CO2, but the green production process compensates and reduces the overall amount. However, the cost of synthetic fuels is still considerably high today.

European manufacturers are expanding their objection to nearing EU7 regulations

The approaching EURO 7 regulations keep agitating the European auto industry, which is taking higher tones to prevent it. At the end of March, Audi chairman Markus Duesmann joined the voices in the industry, calling for a postponement of the regulations to give the manufacturers enough time to be ready for them. As recalled, the regulation demands lower and stricter emissions standards for additional pollutants to CO2, such as NOX and fine particles, that will take effect in 2025. Additionally, for the first time, the regulations demand emission standards for particles that pollute due to wear in tires and brakes.

Audi's chairman says, "We believe there is a need for modifications and adjustments in the new regulations. We need at least four years to make the shift. If EURO 7 regulations are imposed on the auto industry without consent, they will diverge vital investments from E, meaning higher prices for the customers t will make things worse".

A position paper presented by the ACEA said that "The investment in EURO 7 will yield few environmental benefits and at the same time will force manufacturers to refer engineering resources from EV development projects to ICE cars development, which in turn will delay the achievement of the EU's emission neutrality targets".

The EU Commission is formalizing a new strategy to decrease the dependence on the exterior supply of raw materials for producing EVs and batteries

On March 16th, the EU's commission suggested a new strategy to ensure the self-supply of critical raw materials, including those used for producing EVs and batteries. The final goal is to decrease the dependence on exterior sources, mainly China. The goal is for



65% of the raw materials to be supplied independently: at least 10% will be produced from mines located within the EU, 40% will come from raw material processing inside Europe, and 15% from recycling done in European plants.

The strategy is part of the "Vital raw material act" that the EU wants to pass this year. Approving the new act is critical for the preservation of the European EV manufacturers, who, in recent years, moved a large part of their EV assembly lines to China to be closer to the world's largest sources of raw materials and components, especially batteries.

The act wishes to neutralize the dependence on single supply sources and determines that by 2030 the EU will not purchase more than 65% of the yearly supply of certain raw materials from a third-party state. It is mainly for Lithium, and today 90% of its' supply to auto manufacturers comes from China.

To achieve this goal, the initiators of the act are formulating a line of new regulations. For instance, opening new mines defined as "Strategically important" will be discussed and approved within the EU in 24 months instead of 10-15 years today. Processing and recycling projects will also receive the green light within 12 months. The initiators also strive to create an efficient supply chain of raw materials inside the EU and coordinate the conveyance and accumulation of raw materials between the EU member states.

The EU intends to allocate substantial investments for research, development, and standardization of raw materials that will also consider the negative influences on the industry's workforce within the EU and outside of it. Namely, they are calling to reduce purchasing from third-world mines where the workforce is abused. The next legislative phase will be talks between the European Parliament and the EU Commission.

The British SMMT calls on the government to announce its support of the EV and battery industries urgently

In the middle of March, the Society of Motor Manufacturers and Traders (SMMT) approached the British government with an urgent request to take supporting measures on the local auto industry, similar to the American administration's and the EU. According to the SMMT, Britain will lose its ability to compete with the growing international competition without such steps. The SMMT states that the US government



allocated 369 billion US \$ last year to support the US EV industry and that the EU is currently promoting a "Green business plan" to support the EV and battery industries in Europe.

In a report presented to the government, the SMMT specifies the number of vital steps to support the industry, including government support for building a battery manufacturing plant in Britain. So far, only one British manufacturer r announced its intention to create such a plant, contrary to dozens of such announcements made in the EU.

The Spanish government wants to turn the country into a "Global center for the production of EVs"

Late this March, senior government officials in Spain announced that the country intends to publish two tenders for establishing EV and battery production activities in its territory. Winners will receive up to 7 billion EUROS from a budget allocated to Spain by the EU.

Before publishing the tenders, the government intends to perform a hearing in which the auto industry can express its; reservations. This initiative is part of the Spanish government's attempt to rebuild the Spanish auto industry, which has been severely hurt recently. The government intends to turn the country into an "All-European center for the production of EVs", with a tight supply chain of cars, components, and batteries on Spanish soil, similar to the Chinese format.

The Spanish tenders are already arousing great interest in the industry. The decision on the winners is expected to be taken no later than November. However, the conditions for winning are pretty harsh, including a time limit of 50-60 months from receiving finance until the plants are operational.

Belgium's government shifts to EVs

On March 21st, the Belgium government announced that from July 2024, all seniorranking government officials in the federal government, including ministers, will have to buy or lease EVs only. The decision is compulsory for all 15 federal government



ministers in a joint statement, "If we want to achieve the government's climate goals, the government needs to become 'Greener'... By 2030, most governmental vehicles need to be sustainable".

The government fleet in Belgium includes 920 vehicles, each serving an average of 8 years. Therefore, in the coming years, each car that completes its' role will be replaced by an EV, including vehicles not allocated to one specific employee.

7. <u>Israel</u>

New Knesset research: almost 900,000 new driving licenses were issued between 2019-2022. Lower age groups are dominant among new license receptors, but their contribution to mileage is low

Between 2019 and 2022, 895,000 new driving licenses were issued in Israel, 248,000 of them in 2022, so reveals new research made by the Knesset's research center published on March 16th. The rate of those attending the driving test in 2022 leaped by 17% compared with 2021 to a new record high of 639,000. In that year, an increase of 12% in new driving license receivers was also registered. However, the percentage of those passing the driving test successfully dropped to 39% compared with 41% in 2021.

The data from the research suggests that the most prominent age group for those receiving new driving licenses is the 17-18 group, representing 36%. The 24-34 age group also has a strong presence, with 20% of the receivers in the last three years. According to the report, every third citizen in the 16-18 age group holds a driving license. The figures show that only 19% passed the first driving test, and from those that passed the test, 46% succeeded in the first trial.

According to recent data from the Ministry of Transportation, a driving student's average number of lessons is 40, and the minimal cost for driving lessons alone is 4,200-5,040 NIS. Before the external exam, students must pass an internal one at an additional unsupervised cost estimated at 250 NIS. Also, an additional 229 NIS is paid for the instructor's car for the test. In some cases, students must pay a one-time payment of 150-250 NIS for registering with a driving school.



Despite the large proportion of the lower age group among those who attend the tests and receive licenses, the milage among them could be much higher. Most young drivers that complete the "escort period" in which an experienced driver escorts them drive at least once a week, half of the drives on weekends. Compared with other drivers, new and young drivers drive very little. According to reports from parents and young drivers, the reasons are financial, especially the cost of fuel and insurance for young drivers. Additional reasons are lack of time and the absence of cars in the family.

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