



# **Major Automotive Global Trends of October 2023**

**On the background of  
“Iron Swords” war  
in Israel**

**November 2023 Edition**



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## 1. Global

### **American administration intensifies chip export limitations to China, and the auto industry may suffer “Collateral damage”**

During October, a major escalation in the US-China “Chip war” was registered following the publication of the American “Chip Act” that was made at the beginning of summer. As recalled, in June, the American administration announced that it intends to limit the export of advanced technology chips made or developed by American companies to China. The aim is to prevent or at least delay China from obtaining economic and technological supremacy.

At the announcement, the act seemed to focus on a narrow field of elite technology, such as chips for accelerating AI applications and hardware/software components for data centers and advanced encryption. Therefore, senior position holders in the auto industry and its derivatives estimated that the impact on the industry would be negligible initially.

However, on October 7<sup>th</sup>, the Biden administration published broad and encompassing supplementary regulations on exporting chip technology to China. Now, the prohibition includes chips that are widely used in the auto industry, especially in new EV models and the systems that support autonomous driving, including logic chips in under 16 nm technology, DRAM chips in under 18 nm technology, and larger 28 nm chips, except for those approved for export. American companies hurried to line up with the regulations, but during October. The embargo spread quickly to major non-US suppliers that wanted to align with US policy.

The immediate result was a crash in chip manufacturers' stock prices. Still, the industry believes that the situation may cause the opposite effect precisely: a second and prolonged wave of chip shortage in the industry because of the Chinese government trying to accumulate large chip reservoirs before the “Gates close”. Also, it is assessed that the embargo may damage the production scales of Chinese auto manufacturers and the development of future models. The Chinese government reacted to the announcement of



the American administration sharply, as expected, and a spokesperson for the Chinese foreign ministry said the following day: “In order to maintain technological hegemony, the US misuses export restrictions to maliciously block Chinese companies. This move contradicts the principle of fair competition in international trade and breaches the rules of international trade and economy”.

The announcement also included a warning that this decision will harm not only Chinese companies but also the interests of American ones and will have devastating effects on the international supply chain and the recovery of the economy – a hint to the fact that many American companies, particularly in the auto industry, that still rely on Chinese components.

### **Wall Street analysts: the recession will bring a reverse in the trend of excess demand for cars worldwide**

The auto market is still enjoying strong demand that exceeds the supply, but during October, known and reputed Wall Street analysts claimed the situation may turn next year. UBS investment bank claims that the profitability of US and European auto manufacturers is expected to “Slash” by up to 50% next year due to a decrease in demand, the result of inflation pressures, energy prices increase, and interest rates.

According to the bank’s analysts, “The decline in demand is no longer a theoretical threat but is becoming a reality... three years of price drops and unprecedented profitability in the auto industry will come to a clear-cut halt and we may see oversupply already inside this quarter”. The analysts believe that manufacturers will deal, among other things, with a decline in the available income of customers and a rise in inventory that will prevent them from rolling the rising expenditures to the customers. This opinion is shared by a senior analyst from RBS Capital, who estimates a significant drop in demand in the sector next year.



## **LMC Automotive: estimation for 2023 global sales 81M units, uncertainty as to 2024**

LMC automotive research company estimates that the global auto market is beginning to recover, with 81M passenger cars to be sold by year-end. India leads global growth with an increase of 81% in sales so far, followed by Asia-Pacific with 30% and China with an increase of 28%.

On the other hand, North American sales grew by only 9%, and Europe registered an increase of 6%. According to the firm's estimates, global sales grew by 12% in October.

The researchers estimate that supply chain disruptions will ease during 2023, but financial recovery is still far. They claim that the industry lost production of 30M units since the beginning of COVID-19, some of which are lost. They expect an increase of 4% in global sales next year but don't rule out the possibility that the amount will be around 81M units "Given the instability in the global markets".

## **2. USA**

### **US sales are recovering thanks to enhanced production, and a slowing down in growth rate is felt**

The American auto market continues to catch up with sales gaps due to improved production availability and inventories. In October, 1.08M new passenger cars were delivered, an increase of 12.1% compared with last October, which reveals the early projection of J.D. Power and LMC Automotive research firms. Total sales, including fleets, came to 1.158M units in October, an increase of 15.1% compared with last year. The researchers note that October data shows that dealership inventory availability is gradually improving, and inventory at the end of the month is more than one million vehicles for the first time since May 2021. The result is a significant growth in sales, although the sales rate is still significantly lower than before the crisis.



The researchers estimate that the “Cooling off” of the American economy also contributes to the improvement in inventories, but the overall economic picture of the auto market is still positive. Dealer’s profitability per sale is in a mild decline but still, double what it was in 2019.

The average deal price for a new car started to stabilize in October around the peak of the last months, and in October, it reached 45,600, an increase of 2.7% compared with last October. Average discounts from the MRRP are still minimal, and in October were around 880\$, a decrease of 44.7% compared with last October and an average discount of only 1.9%.

According to the data, the relative part of the leasing sector from the purchases keeps dropping. In October, it was only 16% from the private sector purchases compared with 30% in October 2019. At the same time, growing interest rates keep making car financing more expensive, and in October, the average monthly payment was 711\$, almost 50\$ more than last year. As said, profit per unit for the dealers is dropping but is still quite adequate – 4,522\$ per unit, 10.4% less than last October.

As for EV sales, the researchers say that during October, the number of those intending to buy an EV in a “High probability” kept growing and is relevant to 27.4% of customers in the US. One of the reasons is a sharp rise in the number of EV models on the market in the US – 51 compared with only 27 two years ago. However, it is still a tiny part of overall sales, 5.6% only, because of the accelerated price increases in this segment and high interest rates. The “Accessibility index” of EV prices (the ability of customers to afford a new EV) dropped 15 points in the last year, mainly due to Tesla’s aggressive price increases.



### 3. China

#### **September deliveries: The Chinese market keeps leaping, led by alternative drive sales**

The moves taken by the Chinese government at the beginning of the summer to stabilize the local market keep bearing fruit, revealing the concluding delivery figures for September published by the Chinese Association of Automobile Manufacturers during October. The data shows that in September, sales amounted to 2.67M units, an increase of 11.5% compared with August, and production came to 2.61M units, an increase of 9.5%. Cumulatively, Jan-Sep sales grew by 28.1% compared with last year, and production rose by almost 26%. To put things in perspective, sales in the American market grew by 10% only in the past nine months, and in Europe, only one-digit growth was registered.

In September, alternative drive sales in China came to 775,000 units, an increase of 9.3% compared with August and 104% in cumulative deliveries since the beginning of the year. The market share of these vehicles, primarily EVs and PHEVs, was almost 30% of sales in China compared with 17% only at the beginning of 2022. The CAAM expects that in the yearly summary, six million "Alternative drive" vehicles will be sold in China, almost half a million more than in early assessments.

#### **Global consulting firm: the Chinese auto industry to return to pre-COVID record production scales within two years, will expand operations outside of China**

According to the chairman of the Auto Forecast Solutions consulting firm, the next phase in the proliferation of the Chinese auto industry will be establishing production factories worldwide. In his assessment, China will recover from the COVID and chip shortage crisis earlier than expected and will return to the record scale production of 2017 with around 27.7M vehicles in 2024. Production and sales will grow persistently to 30M units annually between 2028 and 2029. According to him, the reason is that the Chinese aspire



to establish production factories worldwide, similar to the model used by South Korean manufacturers that became global players with factories in Europe, Asia, and the US.

One of the reasons is that by the end of the decade, no less than 113 competing auto manufacturers and 105 brands are expected to operate in China, and the Chinese market itself “Can not support such several manufacturers”. The consulting firm estimates that in 2029, 9.9M BEVs will be produced in China – 32,7% of all production. In that year, 71.5M EVs will be driven on Chinese roads, more than in all other markets combined. As a comparison, in Europe it is expected that 41.6M cars will be driven and in North America 28M. The consulting firm estimates that at least five Chinese companies plan to start operations in the American market, including GAC, BYD, Chery, Dongfeng, and FAW.

#### 4. Europe

##### **S&P research report: European auto industry to take a hard hit this winter due to the energy crisis**

The European auto industry thought at the beginning of the summer that the auto market would recover this year after the crises of the last years, the last of which was the chip crisis. However, now it seems the market is facing an even bigger energy crisis.

Recently, S&P Global Mobility published a report in which it estimated that the European auto industry may lose production of a million units each quarter from the beginning of winter to the end of the year. The reasons are the expected shortage in energy and the high increase that has already happened in gas and oil prices. Production disruptions are also likely because of irregular supply of components from suppliers produced in Europe, and these may start in November and last until spring 2024.

The company’s principal analyst, Edwin Pope, said in the preface to the report that: “The pressure on the supply chain will be intensive...





especially in the upper sections of it... factories may halt productions due to shortage in individual parts”. According to the company’s estimate, European production factories may produce only 2.8M units in that time instead of the originally planned 4-4.5M units. The company estimates that automakers outside of Europe and, especially in the US, may also be affected by the disruptions caused by the lack of energy supply in Europe since they depend on components and parts made in Europe. The analysts point to the metal sector – aluminum processing, steel parts, etc. – as particularly vulnerable due to the high production energy required.

The analysts also point out that before the energy crisis, the gas and electricity prices were relatively negligible as part of the total cost of production, usually no more than 50 euros per unit. However, steep price increases brought the energy costs per car to 770 euros, including the indirect influence on parts and raw materials.

In countries such as Italy, Germany, France, and Britain, gas prices rose by 220% compared with Q1 2020, and electricity prices increased by 13 times. Meanwhile, European media reported that some auto manufacturers are looking into “Emergency plans” to move complete production lines from Europe to other countries, such as China, because of the gas shortage.

### **Lithium prices keep breaking new records in October, and the auto industry is getting ready to absorb the damages**

The global auto market is readying for another wave of price increases in EVs due to soaring Lithium prices. In October, the price of Lithium Carbonate, the primary raw material for EV batteries, kept climbing and, by the end of the month, reached a peak of almost 77,000\$ per ton. The reasons for the ongoing price surge are accelerated storage and reserving of Lithium by many players and, simultaneously, the energy crisis that hurt the activity of large Lithium processing factories in China due to extended power shutdowns.

At the same time, the fierce demand for batteries in the auto industry continues. In a conference held by the Financial Times on October



21<sup>st</sup>, analysts estimated that a significant “Correction” in Lithium prices is expected until the end of the year due to inflation pressures and a decline in the demand for new EVs in the US.

However, even after the correction, the prices are supposed to stabilize around a very high level of 50,000\$ per ton. According to an expert analyst, “Lithium supply was in a significant deficit for two years, but it will move into a positive supply situation by 2025, and up to that year there will be significant correction of prices”. Additional experts in the conference estimated that the lack in supply will balance in years to come due to the accelerated development of mines and processing plants, mainly in Africa, that are supposed to add between 500-600,000 tons of Lithium a year to the global supply and in effect double the supply in the market.

### **Europe is trying to stop the flooding of the European market by Chinese cars**

The presence of Chinese cars in Europe has been negligible so far, but this year, it is on the rise, with more and more Chinese brands aiming for the European market, particularly in the EV segment. This situation in which Chinese brands hold a 5% market share in Europe is starting to attract the attention of senior officials in the European auto industry and local politicians who are trying to block or at least slow down the Chinese invasion.

One of the most prominent voices on the subject is that of Stellantis CEO, who called in October to raise the tax on cars imported from China to Europe, or at least equal it with the tax imposed on European cars exported to China. Today, Chinese cars imported to Europe pay a customs tax of 10%, while the customs tax on European cars exported to China is 15-25%. According to Stellantis CEO: “Clear cut, we should ask the EU to impose on Chinese car manufacturers the same regulations that are relevant to European-made cars in China”.

The political system in Europe is also tending in the same direction, and the French president called in October to take steps that will defend the European auto industry. This call came as a response to



the discriminatory subsidy policy for US-made EVs, which the American administration adopted lately and is aimed mainly against Tesla. Still, it is evident that China is also a target because of the fear that Chinese manufacturers will sell in Europe using flood prices, backed by the Chinese government.

According to the French president: “The EU must build a wider front, and although we allow Chinese manufacturers to enter Europe, they must compete under the same terms”. On October 26<sup>th</sup>, he even called to establish in Europe a “Law to encourage the purchasing of European-made goods” to protect the local auto industry from the flooding of Chinese cars. In an interview with French TV, he said that the EU’s import policy is “Too open”, especially when it comes to giving state subsidies to imported EVs.

### **The EU is promoting a “Mandatory minimum” for EV charging stations in Europe**

During October, the European Parliament continued the initiative to significantly accelerate the deployment of EV charging stations and Hydrogen tanks across Europe. According to the parliament’s decision, there will be mandatory minimum targets for infrastructure deployment for alternative fuels (including electricity) across Europe. By 2024, all countries will have to explain in detail how they will meet those targets.

### **The goal is that by 2026, there will be an EV charging station every 60 Km on average on all the main roads across the EU**

Another requirement will mandate particular infrastructure for buses and trucks, but only along the TEN-T (Trans-European transport network) on which most of the heavy transport is driven and not along roads with sparse traffic. The parliament also decided to promote the date for deployment to 2028 instead of the original target of 2031.

**As for Hydrogen filling stations for fuel-cell vehicles, the parliament proposes stations every 100 Km on average.**



This proposal is also to be implemented by 2028, and additionally, there will be penalties for not meeting the target.

The European Parliament also calls for forming an “Alternative fuel database” to provide the public with open information regarding availability, typical waiting times, and prices in the various charging and filling stations across Europe so customers can compare the costs per kW. As part of the reform, the EU calls for implementing a uniform charging system, a “Universal refueling device” for EVs that will be compatible with all EVs via credit cards instead of different Chips and Apps.

It should be noted that some countries in the EU are already using such charging systems independently. In Germany, for instance, a new regulation will take effect during 2023, according to which all charging stations will have to accept payment by credit card. Germany is also independently establishing a digital database for locations and prices of charging stations.

**According to the EU data, currently, there are 377,000 public charging stations in the EU, but according to estimates, this number is not even close to the amount needed for Europe to meet the goal it set for shifting to EVs by 2035.**

**The European Parliament is signing the first contracts to implement the shift to EVs from 2035 and is formalizing methods to track emissions over the entire lifecycle of a car**

Late in October, the European Parliament reached the first agreement with EU countries to adopt and implement emission targets from passenger cars and LCVs, which it set for 2021 under the headline “Fit for 55”. The final target is to reach a 100% decrease in emissions from new cars by 2035, or in other words, stopping the sale of ICE cars entirely by the middle of the next decade. The “Deal,” as it was named by parliament, was signed as a homage to the global climate conference COP27 of the UN held in Egypt at the beginning of November.



At the same time, the EU is formalizing a new methodology for tracking emissions, not only while driving but along the whole life cycle of the car – from the extraction of raw materials, their processing, emissions from the production process, and all the way to emissions created by the recycling process at the end of the car's life. The EU Commission will present the methodology by 2025 alongside proposals for supplementary legislation.

The EU Commission will also publish 2025 a tracking report on the progress of shifting to electric propulsion and additional reports every two years afterward. The reports will evaluate, among other things, the side effects on the customers, employment, price accessibility of ZE vehicles, and more.

In accordance with the agreements with the member countries, funding will be streamed from the EU's budget to shift to nonpolluting vehicles and supplementary technologies. Among others, the EU will formalize a new system for subsidizing and incentivizing ZE vehicles with higher thresholds than today for receiving them. The union is also considering exempting small manufacturers producing between 1,000-10,000 cars (or up to 20,000 LCVs) annually from meeting intermediate goals until 2035. In addition, the "Deal" states that existing EU laws for marking and classifying CO<sub>2</sub> emissions and fuel consumption in passenger cars will be revised by 2024.

### **The EU is showing flexibility in drafting the new EU7 regulations and adopting a more moderate formula**

While the master plan of the EU for decreasing emissions by 2035 is bearing fruit, at least on a declarative level, it seems that it will have to withdraw in one of the most critical fronts, which is the formulating the new EU7 regulations that are supposed to take effect already in 2025.

At the center of the new regulation is setting new and stringent thresholds for emissions that are "Complementary" to CO<sub>2</sub>, which has received most of the attention so far. Among other things, earlier drafts determined strict regulations that limit NO<sub>x</sub> and PM emissions



in gasoline and diesel cars. These regulations were supposed to save nearly 136 billion euros in health costs and environmental damages. However, these regulations faced strong opposition from the auto industry lobby and the EU countries that depend on auto factories for taxes and employment.

According to the opposing parties, headed by the ACEA, the proposed regulation is “Too expensive and will force auto manufacturers to divert critical resources from developing and advancing EVs, which is the environmental goal of the EU, to developing clean diesel and petrol engines for the intermediate period”. Also, it was said that “The move will cause a further rise on car prices that already non-accessible to the masses due to the sharp rise in energy and raw materials, and the recession”.

Carlos Tavares, CEO of the Stellantis Group, even said in October at the Paris auto show, "From the industry's standpoint, we do not need EU7, and this regulation should be canceled”.

On October 21<sup>st</sup>, the British Guardian published an updated and not official version of the regulations that suggest that the EU “Folded” and significantly lowered the EU7 goals. The draft indicates that the primary demand now is to decrease the emission threshold for diesel to that of gasoline engine cars under the current EU6 regulation. As expected, “Green” organizations in Europe reacted sharply to what they are calling “The EU Dieselgate”, claiming that it is a green light to harming public health.

## 5. Japan

### **The Japanese auto industry fails to recover from supply chain logistic disruptions**

On October 22nd, the Japanese press reported that the car production goals in Japan were significantly lowered due to a prolonged shortage of chips. At the same time, the Japanese press is also reporting that auto manufacturers in the country have started



to align to the possibility that the tension between China and the US will significantly disrupt their supply of parts and components. Japan imports 9.4 BN\$ of goods a year, and supply disruptions may cost the auto industry in the country almost 180 M\$ a month. According to reports, manufacturers are preparing alternative plans for shifting to “Zero supply from China” if the situation worsens.

## 6. South-Korea

### **The US is considering relieving measures for Korean-made EVs and batteries even after canceling subsidies**

The law passed by the American administration in the summer, according to which EVs produced outside the US will not receive subsidies, was aimed against the Chinese auto industry and significantly damaged the trade relations between the US and South Korea. Korean EBs are among the sales leaders in the American market alongside Tesla. Hyundai corporation is also in an advanced stage of establishing production plants in the US, with billions of dollars in investments expected to create tens of thousands of jobs. Therefore, during October, the administration became more flexible in resolving the situation and finding a compromise.

On October 18<sup>th</sup>, US Ambassador to Korea Philip Goldberg said that the two sides are seeking a solution to the problems that may have been caused by the Inflation Reduction Act that canceled the subsidies for Korean-made EVs.

The compromise is meant to serve not only diplomatic goals but also the interests of the American auto industry. According to the ambassador, the US depends on Korean companies to produce and supply batteries for EVs. It should be noted that the act that passed in the US will include in the future also cancelation of subsidies to EVs that their batteries are not manufactured in the US. Therefore, an absurd situation is possible where new EVs manufactured from 2025 in Hyundai's new plant in Georgia will not receive subsidies



because of their “Korean” batteries. The ambassador explained that the legislation's goal is “To reach a green economy and to reserve a supply chain of vital minerals for the production of batteries” and that Korean companies will also benefit from the change.

### **South Korean government has published a masterplan for autonomous vehicles**

On September 29<sup>th</sup>, the South Korean government revealed its' strategic masterplan for the local auto industry until the decade's end. The government intends to invest in the coming years 66 BN\$ in the local auto industry to achieve a production scale of 3.3 million EVs by 2030, attain a 12% global market share, and place Korean auto companies third on the list of the largest EV manufacturers in the world.

The government intends to train more than 30,000 new professionals in the coming years. At the same time, the government intends to strive for independence regarding the supply chain of chips for the auto industry, software including OTA updates, and more. In collaboration with the private sector, the government will also form a greenhouse that will nurture over 300 software companies by the decade's end. In addition to all these, the master plan also includes far-reaching goals for adopting autonomous driving in the country.

According to the published plan, already this year, level 3 autonomous vehicles will drive on Korean roads, that is, cars that can drive for long distances without driver interference but with driver presence at the wheel. By 2025, driverless buses and taxis will get on the road, and from 2027, autonomous private cars will be allowed on Korean roads. **The final goal is that by 2035, half of the cars produced in Korea will be totally autonomous.** The Korean government intends to draft supplementary legislation in the upcoming months.





## **Deloitte: demand for cars in Korea showing signs of a slowdown**

The Korean auto market is starting to feel the impact of the economic slowdown. According to data published by the Deloitte consulting firm in the middle of October, customers' intentions to buy a new car are among the lowest in recent years. The reasons are high-interest rates for car financing, the financial deterioration caused by the downturn in the stock market, and the rise in car prices. Surveys done by the company at the end of August revealed that six out of ten customers expressed concern about inflation rates.

The report calls the manufacturers to prepare for the change in trend by lowering prices. That is currently at a peak. It should be noted that Q3 figures of the large players in the Korean auto market point to record sales with an increase of 30% compared with last year. However, a significant erosion in the operating profit is evident. The only exception is the EV segment, which still enjoys record demand and long waiting times in Korea.

## **7. Israel**

### **A new addition to traffic regulations enables autonomous parking of a vehicle without a driver at the wheel**

The Ministry of Transportation is advancing another aspect on the way to autonomous driving of passenger cars. According to a draft for an amendment of traffic regulations that was presented to public scrutiny, the ministry is acting to add an amendment that will enable the legal activation of automatic parking systems even with no driver behind the wheel. It should be noted that such systems are included for at least a year in modern models imported to Israel, especially premium models. However, their activation has been neutralized or operated illegally, mostly in cars that were imported indirectly (not by a formal importer).



According to the drafters of the traffic regulations, “Following the technological advancement of cars, new models that have the technical ability to drive without the driver needing to perform steering, accelerating or braking, for parking maneuvers, and doing so according to European standardization, are already imported to Israel. The proposed amendment is meant to allow the use of such systems installed by the manufacturer during the production process while meeting the requirements that were determined as part of the European standardization requirements of these systems”.

According to the standardization, car owners will be able to park it without sitting at the wheel, as long as while remotely activating the system, the driver is no more than six meters from the car, and the vehicle's speed does not exceed 10 Km/h. In addition, the vehicle's movement may not exceed 20 meters from the vantage point, and there are no passengers in the car. It should be noted that some of the systems that are already being used in the market, especially in advanced EV models, allow for parking a vehicle in much longer ranges than the regulations allow, including “Learning” and remembering routes in parking lots and autonomously navigating to vacant parking spots.

Hezi Shayb, Ph.D.  
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A handwritten signature in black ink, appearing to be 'H. Shayb', written in a cursive style.