

# **Automotive Industry**

**INDUSTRY INSIGHTS** 

**FALL 2024** 

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## **Industry Highlights**

#### Overview

Globally, auto sales in the first half of 2024 slowed down compared to the rapid rebound seen in 2023. Sales volumes in 2024 are now expected to reach 91.4 million units, just a 1.8% increase over the 89.8 million units sold in 2023. Sales have slowed globally due to weaker customer demand, mixed economic conditions and higher interest rates.<sup>1</sup>

Through June, U.S. auto sales grew 2.1% year over year (YoY) as consumer demand slowed. For the full year 2024, sales are forecast to reach 15.9 million units.<sup>2</sup> Electrified vehicles (EVs) continue to gain market share in the U.S., with battery electric vehicles (BEVs) now accounting for over 8% of new car sales and all EVs accounting for over 20% of new car sales.<sup>3</sup>

Chinese auto sales rose to 18.9 million units in the year-to-date (YTD) period through August 2024, up 3.5% from 2023. Chinese production was up nearly 5% YoY, fueled by strong domestic demand and growing exports. The EV market in China continues to accelerate. Helped by the recent growth of plug-in hybrid electric vehicle (PHEV) sales, over half of all new cars sold in China are now electrified.<sup>5</sup>

In Europe, vehicle sales have stagnated due to lower demand, high car prices, high interest rates, and the ending of certain EV subsidies. Most major markets are expecting near-flat results for the full year compared to 2023.7 Although BEVs have lost some market share, an increase in hybrid sales has driven the YTD market share of all EVs over 50%.8

M&A activity in the automotive sector continued its decline in 2024, with fewer than 100 transactions closed in the third quarter of 2024. The total number of closed deals through the third quarter of 2024 was down 55% YoY.8

Public company equity performance in selected automotive indexes was mixed through the first three quarters of 2024, with only the Automotive Mobility index beating the S&P 500. The Automotive Original Equipment Manufacturers (OEMs) and Automotive Suppliers indices ended the period in negative territory.8

Executive Summary

Executive Summary

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Global Light Vehicle Sales Growth Slowed in the First Half of 2024<sup>1</sup>



Global Auto Sales Expected to Grow Modestly in 2024 and 2025<sup>1</sup>



U.S. Electrified Vehicle Market Share Hits 20% in August<sup>3</sup>



Autonomous Vehicle Capabilities Expected to Accelerate in Coming Years<sup>9</sup>



Automotive M&A Activity Remains Weak in 2024<sup>8</sup>

### Global Vehicle Sales

Global vehicle sales are slowing in 2024 after a strong rebound in 2023. Most major markets saw modest growth in the first half of 2024, but sales are expected to slow through the second half of the year due to weaker consumer demand, tougher economic environments, elevated interest rates and political uncertainty.<sup>1</sup>

The shift to EVs in 2024 has not happened as fast as previously expected in the U.S., but EVs continue to gain rapid market share. Higher prices and the ending of certain subsidies for EVs has contributed to the deceleration of adoption in European markets. Meanwhile, Chinese EV market share continues to increase, with EVs accounting for four of every ten new cars sold in 2024.

In the YTD period through August, Toyota remained the global top-selling brand, with an 11.0% market share, up from 10.7% for the full year 2023. Much of the rest of the top five brands remained the same as in 2023. BYD, a Chinese manufacturer, has risen from the 49th ranked brand five years ago to eighth best-selling brand in YTD 2024.<sup>10</sup>

2024 YTD Global Bestselling Brands

Globally, vehicle sales are projected to increase 1.8% in 2024 at 91.4 million units and increase 2.5% in 2025 to 93.7 million units. These estimates are more modest than previously thought, with prior projections forecasting up to 94.2 million units sold in 2025. The sales are projected to increase 1.8% in 2024 at 91.4 million units and increase 2.5% in 2025 to 93.7 million units. These estimates are more modest than previously thought, with prior projections forecasting up to 94.2 million units sold in 2025.



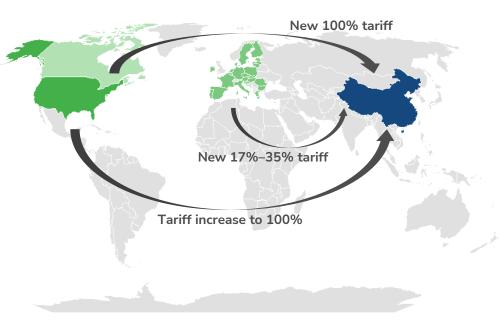
| 2024 T.D Global Designating Station |         |                     |                                 |              |  |  |  |
|-------------------------------------|---------|---------------------|---------------------------------|--------------|--|--|--|
|                                     | Brand   | Bestselling Vehicle | Brand % of 2024<br>Market Share | 2023<br>Rank |  |  |  |
| 1.                                  | TOYOTA  | Toyota Corolla      | 11.0%                           | 1            |  |  |  |
| 2.                                  |         | Volkswagen Tiguan   | 5.9%                            | 2            |  |  |  |
| 3.                                  | HONDA   | Honda CR-V          | 4.5%                            | 3            |  |  |  |
| 4.                                  | Ford    | Ford F-Series       | 4.5%                            | 5            |  |  |  |
| 5.                                  | HYUNDAI | Hyundai Tucson      | 4.4%                            | 4            |  |  |  |

"World Best Selling Car. Top 25 Best Selling Brands in 2024," Focus 2 Move, September 9, 2024. All trademarks, trade names, or logos referenced herein are the property of their respective owners.





### Slowdown of Automotive Globalization



### U.S. Tariffs and Auto Import Bans

The U.S. announced an increase in tariffs on Chinese-made goods in May. The new tariffs would quadruple the tax on Chinese EVs, increasing from 25% to 100%. Tariff rates on lithium batteries, battery minerals, and semiconductors were also increased. A White House statement argues that government subsidization pushes Chinese companies to produce more than needed, then China floods the global market with excess products at "unfairly low prices." <sup>13</sup> Additionally, in late August, the Biden administration proposed a ban on Chinese software and hardware in vehicles, citing national security concerns. The new rule would effectively ban all auto imports from China. The proposed ban would begin, in part, in 2027.<sup>14</sup>

#### **EU Tariffs on Chinese EVs**

In July, the European Union proposed new tariffs on EVs manufactured in China. On top of the existing EU 10% import duty on foreign cars, the new tariffs would range from 17% to 35%, depending on the manufacturer. Similar to the U.S., EU officials argue that China is unfairly subsidizing excess EV production to be sold abroad for much cheaper than non-Chinese competitors. The goal is to ease pressure on local EU car producers and shift investment away from China to the EU. The new tariffs were calculated based on estimates of how much state aid each company receives. Chinese state-owned Shanghai Automotive Industry Corporation received the highest tariff, a huge hit to the manufacturer that receives 15% of global revenue from their European EV sales. <sup>15</sup> On October 4, the EU voted to impose

### Canadian Tariffs on Chinese EVs

Similar to the U.S. and EU, Canada announced in late August that it will increase tariffs on Chinese EVs, adding a new 100% surtax to the existing 6% tariff on Chinese EVs. 17 China is Canada's second largest trade partner, and auto imports to the port of Vancouver increased 460% in 2023. 18 Canada imported over \$1.6 billion of Chinese EVs last year. The tariffs were put in place in October 2024.<sup>19</sup>

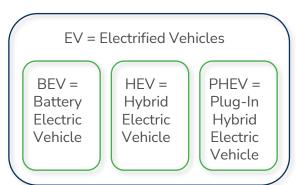
### **Chinese Consumers Increasingly Buying Domestic Cars**

In the world's largest auto market, domestic Chinese manufacturers have grown their market share dramatically in the last few years. Driven by strong EV sales, domestic brands increased their market share to 67% in July 2024, up 20% from the same period two years ago. Foreign manufacturers, struggling to compete in the EV pricing war, have seen diminished market shares as local customers opt to purchase Chinese brands. Volkswagen had been the best-selling car brand for over two decades, until losing the title in 2023 to BYD.<sup>20</sup>

### U.S. Electrified Vehicle Update

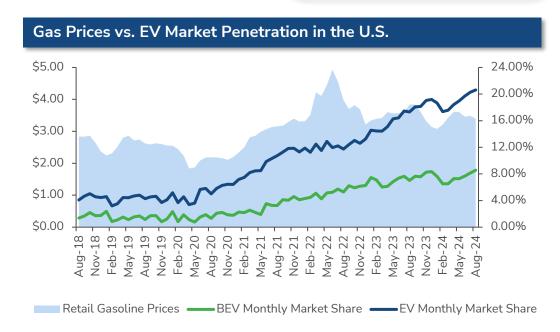
EV sales continue to increase in the U.S., albeit at a slower rate than what was once predicted.<sup>1</sup> As manufacturers cut or slow the production of certain EVs and consumer demand slows, EV sales are still up 23% for the YTD period through August 2024. Much of that increase is driven by growth in HEVs, with YoY growth of 35.7%. BEV sales in the YTD period grew 10.3% to over 782,000 units.<sup>3</sup> As more manufacturers have introduced BEV models to the market at varying price points, Tesla fell below 50% of BEV market share for the first time, in the second guarter of 2024.<sup>21</sup>

BEV and total EV market share dipped to start the year, but both have since rebounded and produced all-time highs, with BEV market share at 8.6% and EV market share at 20.6% for the month of August.<sup>3</sup> J.D. Power expects BEV market share to continue to rise to 9% by the end of the year, lower than their previous forecast of 12%. Slower EV adoption is viewed as a short-term issue, as BEV market share is still expected to hit 36% by 2030 and nearly 60% by 2035.<sup>22</sup>



### **Select EV Market Headlines**

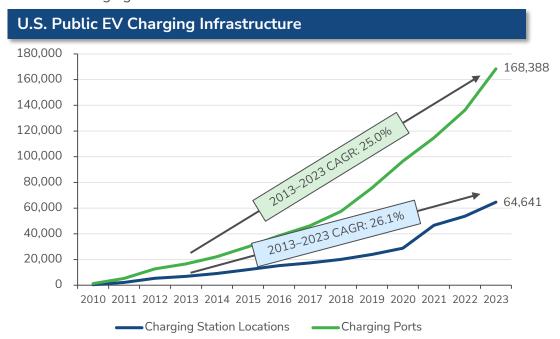
- "Northvolt Subsidiary Files for Bankruptcy After Expansion Plan is Shelved"<sup>23</sup>
- > "EU Car Sales at 3-Year Low in August, EV Sales Plunge 44%"<sup>24</sup>
- "After Layoffs, Tesla's Supercharger Expansion Slows"25
- "Volvo Trucks Delays Start of Construction for Battery Plant in Sweden"
- "GM Delays Indiana EV Battery Plant to 2027"27
- ➤ "Auto Industry's EV Retreat Hastens"<sup>28</sup>
- Ford Shuffles EV Plans; Canceling, Delaying Big Ones"29
- > "GM Delays EV Projects in Latest Industry Pullback" 30
- > "Dealerships Hopeful EVs Will Bring Back That New Car Smell"31
- "Electric SUV Maker Fisker Files for Bankruptcy"32



### U.S. Electrified Vehicle Update: Charging Stations

Despite the slowdown in growth of EV adoption in the U.S., EVs continue to gain market share.<sup>33</sup> As the number of EVs on the road continues to grow, so does the need for charging infrastructure. The number of publicly available EV charging stations in the U.S. has grown rapidly over the last several years, with an increase of 14% or more each year since 2010, and has grown at a compound annual growth rate (CAGR) of 26% over the last 10 years. The number of charging ports has surged similarly, at a 25% CAGR, reaching 168,000 national ports in 2023.<sup>34</sup> As of August 2024, there were an estimated 192,000 charging ports in the U.S., with 1,000 being built every week.<sup>35</sup>

California continues to lead the nation in number of EV charging stations. The Golden State has over 16,000 charging stations and nearly 50,000 charging ports, accounting for 25% and 29% of the nation's totals, respectively. The top five EV charging states (California, New York, Florida, Texas and Massachusetts) account for nearly half of all charging stations in the U.S.<sup>36</sup>



Currently, over 60% of Americans live within two miles of a public EV charging port, although that amount is not evenly split across geographic lines. Over 85% of urban residents live within a two-mile radius of an EV charger, compared to only 30% of rural Americans.<sup>37</sup> While over 90% of EV charging is done at home,<sup>38</sup> addressing charging needs in rural areas and along major highway routes has been a recent focus. The 2022 Inflation Reduction Act (IRA) provides tax credits for the construction of EV charging stations outside of urban areas. Since the tax credits became active, rural areas have seen a faster growth rate of charging stations compared to urban areas.<sup>37</sup>

In addition to the 2022 IRA and other federal grants, the 2021 Bipartisan Infrastructure Law allocated up to \$7.5 billion for the construction of EV charging stations across the nation. However, the deployment of charging stations has been hampered by complex permitting and regulatory requirements.<sup>39</sup> As of June 2024, less than a dozen charging stations funded by the bill have been completed. Despite a slow rollout, 27 states have now submitted requests to build charging stations, and construction is expected to accelerate.<sup>40</sup>

### Autonomous Technology and Cybersecurity Update

Autonomous driving capabilities continue to improve in the U.S. and around the world, especially in the ride-sharing market. While autonomous vehicle (AV) adoption is expected to come slower than previously expected, by 2030 there are expected to be a few million AVs in use for ridesharing globally.9

### **Global AV Adoption:**

- > Globally, up to 10% of new car sales in 2030 could be L3 or higher vehicles, allowing drivers to take their hands off the wheel in certain situations. By 2040, L3 vehicles could be over one-third of new car sales, while L4+ (fully autonomous) could make up 14% of new car sales, down from 17% in prior estimates.<sup>9</sup>
- Example 2 China is the global leader for autonomous vehicle testing, with 16 cities allowing driverless cars on public roads and 19 companies working on AVs. 41
- > By 2040, with nearly half of new car sales expected to be L3 or higher, China is expected to lead the world with 90% of sales at L3+. Europe is expected to achieve 79% penetration, while the U.S. follows at 65%.9

### Waymo and GM Cruise Automation Remain Market Leaders in the U.S.:

- > Waymo operates 800 vehicles across Phoenix, San Francisco and Los Angeles and is currently the only autonomous taxi operator in the U.S. collecting fares.<sup>42</sup>
- > Google, Waymo's parent company, committed \$5 billion to fund Waymo earlier this summer, as Waymo looks to continue testing vehicles and expand its fleet to Austin and Atlanta.<sup>42</sup>
- > GM's Cruise Automation operations were paused in October 2023 when one of their cars was involved as a secondary vehicle in a pedestrian accident in California. Cruise Automation has since resumed operation in Phoenix and Texas but has not yet regained permission to test AVs in California.<sup>42</sup>

### Cybersecurity Is a Top Priority:

- > Cybersecurity was recently ranked as the top external concern for global automotive companies. 43
- > A June cyberattack of automotive industry technology provider CDK impacted thousands of U.S. auto dealerships, highlighting the damage that cyber attacks can cause in the industry.<sup>44</sup>
- > Cyberattacks have caused an estimated \$11.8 billion in damages for the automotive industry in the first half of 2024.43
- > Researchers at the University of California, Irvine and the University at Buffalo in New York have been testing security vulnerabilities of LiDAR and other technology used in autonomous vehicles. 45,46

### **Expected Autonomous Driving Penetration by Level** 100.0% 80.0% 60.0% 40.0% 20.0% 0.0% 2025 2030 2035 2040 ■ L0 ■ L1 ■ L2 ■ L3 ■ L4/L5

L0 = no automation, full manual; L1 = no driver assistance feature; L2 = no driver assistance features; L3 = noautonomous driving in certain circumstances, L4 = high automation when engaged, human may override and drive anytime; L5 = full automation in all situations, no driver needed

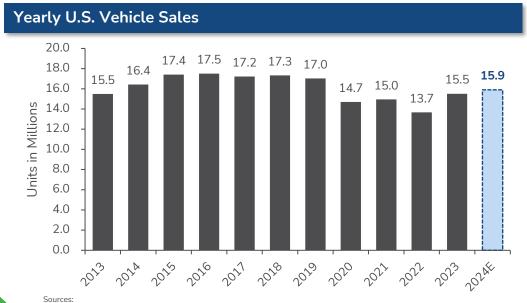
## **Automotive Landscape by Geography**

### North American Auto Sales Trends

For the first half of 2024, U.S. light vehicle sales increased just 2.1% YoY,<sup>1</sup> a large slowdown compared to the 13.1% sales growth experienced in 2023.<sup>47</sup> Sales growth declined due to falling consumer demand after a post-COVID catch up, uncertain economic and political environments, and higher interest rates.<sup>1</sup> Additionally, used vehicle inventory is higher and prices are lower compared to 2023, with used vehicles becoming an increasingly attractive investment for some buyers.<sup>48</sup>

The forecasted sales for 2024 in the U.S. are unchanged from previous estimates of 15.9 million. Sales are expected to pick up slightly through the end of the year as higher vehicle inventory, an interest rate cut, and aggressive automaker discounts are all expected to contribute to more affordable new-vehicle prices.<sup>2</sup> Production levels for 2024 are forecasted at 15.5 million units, a decrease to previous estimates on higher inventory levels and lower EV production.<sup>49</sup> Through 2025 and 2026, U.S. auto sales are expected to grow modestly between 0% and 2%, but total sales volumes are expected to remain below pre-pandemic levels.<sup>50</sup>

Pickup trucks once again made up the top two selling vehicles so far in 2024. The Ram pickup fell out of third place after a nearly 20% decline in sales compared to last year. EVs continue to gain market share in the U.S., despite slower-than-expected sales growth. In July and August 2024, BEV monthly market share was above 8%, and total EV market share crossed the 20% threshold for the first time. BEV sales are expected to reach 9% market share by the end of this year. EVS



| 2024 YTD U.S. Bestselling Vehicles |                        |         |            |                      |  |  |  |
|------------------------------------|------------------------|---------|------------|----------------------|--|--|--|
|                                    | Model                  | Make    | Units Sold | Change from 2023 YTD |  |  |  |
| 1.                                 | Ford F-Series          | Ford    | 619,827    | 8.1%                 |  |  |  |
| 2.                                 | Chevrolet<br>Silverado |         | 412,397    | 0.2%                 |  |  |  |
| 3.                                 | Toyota RAV4            | TOYOTA  | 350,331    | 15.7%                |  |  |  |
| 4.                                 | Honda CRV              | HONDA   | 298,164    | 13.7%                |  |  |  |
| 5.                                 | Ram pickup             | DODGE// | 268,664    | -19.2%               |  |  |  |

Sources

## **Automotive Landscape by Geography**

### Chinese Automotive Landscape

Chinese automotive sales for the YTD 2024 period through August increased to 18.9 million vehicles, up 3.5% from the same period in 2023. After an expected slow start to 2024 due to the Chinese New Year holiday, sales rebounded on higher dealer inventories, strong EV growth, and beneficial vehicle trade-in policies. Through the first half of the year, vehicle production was up 4.9% due to strong domestic demand and expanding exports.<sup>4</sup>

Auto sales are expected to remain strong through the rest of the year, especially in September and October, the traditionally strong selling season filled with auto shows and launches of new car models. China is projecting to experience sales growth of between 2% and 3% for 2025 and 2026, outpacing the other major markets of Europe and the U.S.<sup>50</sup>

EV sales have been extremely strong in 2024, with EV sales up 38% YoY in August alone. EV market share dropped to start the year, but for the last three months, over half of new car sales in China were EVs. BEVs make up more than half of EV sales, but PHEVs have accounted for most of the recent EV growth, with over 70% growth compared to 2023. If strong first half buying trends continue, the full year 2024 EV market share could reach 50%. Additionally, battery prices have recently started to fall as raw material shortages have abated. Lower battery prices are expected to support increased EV adoption through 2025.



## **Automotive Landscape by Geography**

### European Automotive Landscape

For the January through August period, car registrations were up 1.7% in the EU, EFTA and UK combined, compared to the same period in 2023. In the European Union, Spain and Italy had modest YoY growth of 4.5% and 3.8%, respectively. French and German registrations declined modestly at 0.5% and 0.3%, respectively. Registration growth from January through July was hampered by a dismal August, where total EU+EFTA+UK registrations declined 16.5% compared to August 2023.7 Registrations fell in August due to weaker consumer demand, high car prices and interest rates, and the ending of some subsidies for EVs in Germany.6

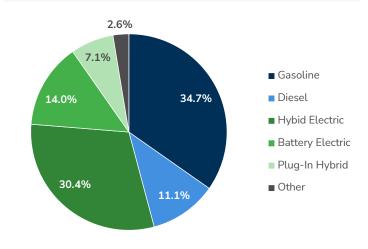
The EV market in the EU has faced some difficulties so far in 2024. For the EU+EFTA+UK, market share of BEVs fell to 14.0% for the January through August period, down from 15.1% for the same period in 2023. PHEVs also saw declining market share in the YTD period, but HEVs saw significant improvement, reaching 30.4% market share from 25.7% in 2023. Including HEVs and PHEVs, more than half of new registrations are now an EV, with 51.5% market share through August.

For the rest of 2024, vehicle sales are projected to continue to slow, with the largest markets expecting flat sales compared to 2023. While other European markets are expected to experience growth, high interest rates, elevated vehicle prices, and fading EV demand are driving the muted 2024 outlook for the largest markets. In 2025, EU manufacturers will have to hit new CO2 emission targets for their cars, forcing producers to try to sell more lower-margin EVs, even as demand is

### **European Monthly Auto Registrations**



### YTD 2024 New Car Fuel Types

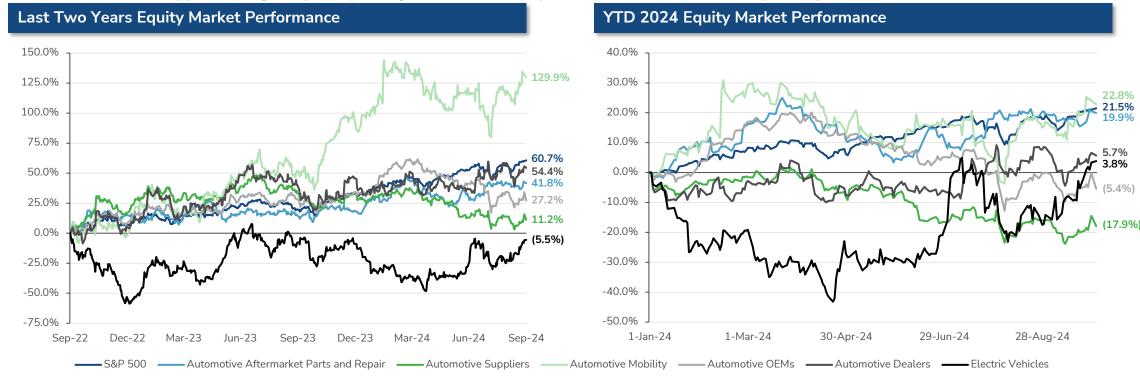


## **Public Company Trading Statistics**

### Public Company Equity Performance

Over the past two years, the automotive indexes varied significantly in performance. Automotive Mobility was the only index to outperform the S&P 500, rising 129.9% due to increases in ride-sharing companies since the third quarter of last year. The Automotive Dealers, Automotive Aftermarket Parts and Repair, Automotive OEMs, and Automotive Supplier indices ended the two-year period lower than the S&P 500 but in positive territory. Those indices increased 54.4%, 41.8%, 27.2%, and 11.2%, respectively. The Electric Vehicles index declined 5.5%, driven largely by flat stock price performance from Tesla over the last two years.<sup>8</sup>

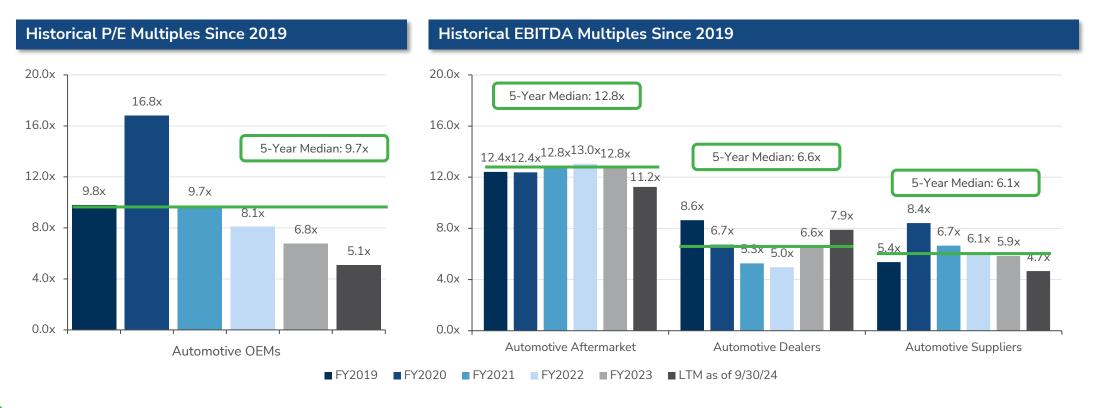
In the YTD period that ended September 30, 2024, the Automotive Mobility index was the largest gainer, up 22.8%. Automotive Aftermarket Parts and Repair was up 19.9%, just underperforming the S&P 500's gain of 21.5%. The Automotive Dealers and Electric Vehicles indices both had single digit increases, while Automotive OEMs and Automotive Suppliers both gave up first quarter gains to end the YTD period down 5.4% and 17.9%, respectively.<sup>8</sup>



## **Public Company Trading Statistics**

### Historical Trading Multiples

The Automotive OEMs are trading at 5.1x LTM earnings per share, down over 4.5x from their five-year median price-to-earnings (P/E) multiple of 9.7. The Automotive Aftermarket Index is currently trading about 1.5x lower than their five-year median EV/EBITDA multiple. Historically, the Aftermarket Index has consistently traded around 12.0x to 13.0x EV/EBITDA. Automotive Dealer multiples have increased in the last year, currently trading at 7.9x, up from 5.0x in 2022 and 6.6x in 2023. Automotive Suppliers are trading below their five-year median multiple of 6.1x.8



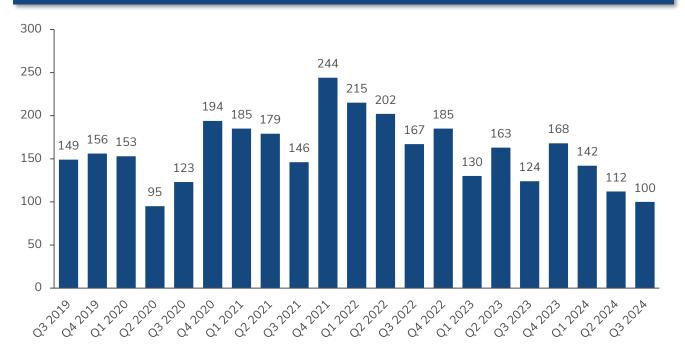
## **M&A Activity**

### Historical M&A Activity by Quarter

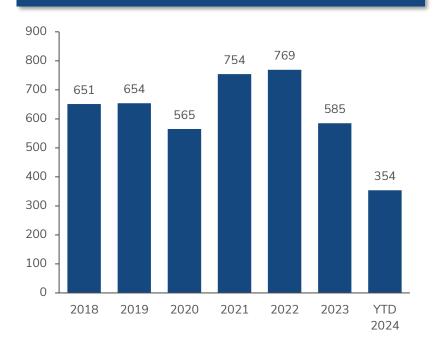
Yearly M&A activity in the automotive sector has declined over the last two years. As interest rates increased throughout 2022 and 2023, volume fell to only 585 deals closed in 2023, rivaling a COVID-19 impacted 2020 for lowest deal volume over the last six years.<sup>8</sup>

On a quarterly basis, activity slowed throughout 2023 and 2024. Through the first three quarters of 2024 there were only 354 transactions completed,<sup>8</sup> as deal activity was suppressed by elevated interest rates, global political uncertainty, and falling consumer demand.<sup>53</sup> In the third quarter of 2024, only 100 deals were closed, the lowest total since the height of the COVID-19 pandemic.<sup>8</sup>

### Automotive Industry Quarterly M&A



### Automotive Industry Yearly M&A



## **M&A Activity**

## Notable Industry M&A Transactions





































## **Select Kroll Automotive Transaction Experience**

### Fairness Opinion

Fenix Parts, Inc. has been acquired by Stellex Capital Management LP.



Financial advisor to the board of directors of Fenix Parts Inc.

### Solvency Opinion

American Trailer World Corp., a portfolio company of Bain Capital, LP, has completed a leveraged dividend recapitalization transaction.



### **Solvency Opinion**

Airxcel, Inc., a portfolio company of L Catterton, has completed a comprehensive reorganization transaction.



### Solvency Opinion

JHT Holdings, Inc. has completed a leveraged dividend recapitalization transaction.



Financial advisor to the board of directors of JHT Holdings, Inc.

### Fairness Opinion

Daimler AG (XTRA:DAI) has settled two arbitration matters with the Federal Republic of Germany related to its JV interest in Toll Collect GmbH.



Financial advisor to the board of management of Daimler AG and Daimler Financial Services AG.

### Fairness Opinion

eHi Car Services Limited was acquired by a consortium of investors including its chairman, MBK Partners Fund IV, L.P., and Baring Private Equity Asia Limited.



Financial advisor to the special committee of independent directors of eHi Car Services Limited.

### Fairness Opinion

SORL Auto Parts. Inc. (NasdagGM:SORL) has been acquired by an insider-led consortium in a going private transaction.



Financial advisor to the special committee of independent directors of the board of directors of SORL Auto Parts. Inc.

### Solvency Opinion

KAR Auction Services. Inc. (NYSE:KAR) has completed the spin-off of IAA, Inc.



Financial advisor to the board of directors of KAR Auction Services. Inc.

## **Select Kroll Automotive Transaction Experience**

### Fairness Opinion

Atlas Crest Investment Corp. entered into a business combination agreement with Archer Aviation.



Financial advisor to the board of directors of Atlas Crest Investment Corp.

### Solvency Opinion

Cap-Con Automotive Technologies Ltd., a portfolio company of The Jordan Company, has completed a leveraged dividend recapitalization transaction.



Financial advisor to the board of directors of Cap-Con Automotive Technologies Ltd.

### Solvency Opinion

Chassis Brakes International B.V., a portfolio company of KPS Capital Partners, LP, has completed a leveraged dividend recapitalization transaction.



Financial advisor to the board of directors of Chassis Brakes International B.V.

### Fairness Opinion

Johnson Controls Inc. has sold its Power Solutions business to Brookfield Business Partners L.P.



Financial advisor to the board of directors of Johnson Controls Inc.

### Solvency Opinion

AxleTech International, LLC, a portfolio company of The Carlyle Group, has completed a leveraged dividend recapitalization transaction.



Financial advisor to the board of directors of AxleTech International, LLC.

### **Solvency Opinion**

Chassix Inc. has completed a leveraged dividend recapitalization transaction.



Financial advisor to the board of directors of Chassix Inc.

### Fairness Opinion

UQM Technologies Inc. has sold newly issued common shares to Hybrid Kinetic Group Ltd.



Financial advisor to the board of directors of UQM Technologies Inc.

### Solvency Opinion

Tekfor Global Holdings Ltd., a portfolio company of Kohlberg Kravis Roberts & Co., has completed an internal restructuring.



Financial advisor to the board of directors of Tekfor Holding Germany GmbH.

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