

# READING THE METER

*A look inside a cleaner, safer,  
smarter auto industry.*



ALLIANCE FOR AUTOMOTIVE INNOVATION

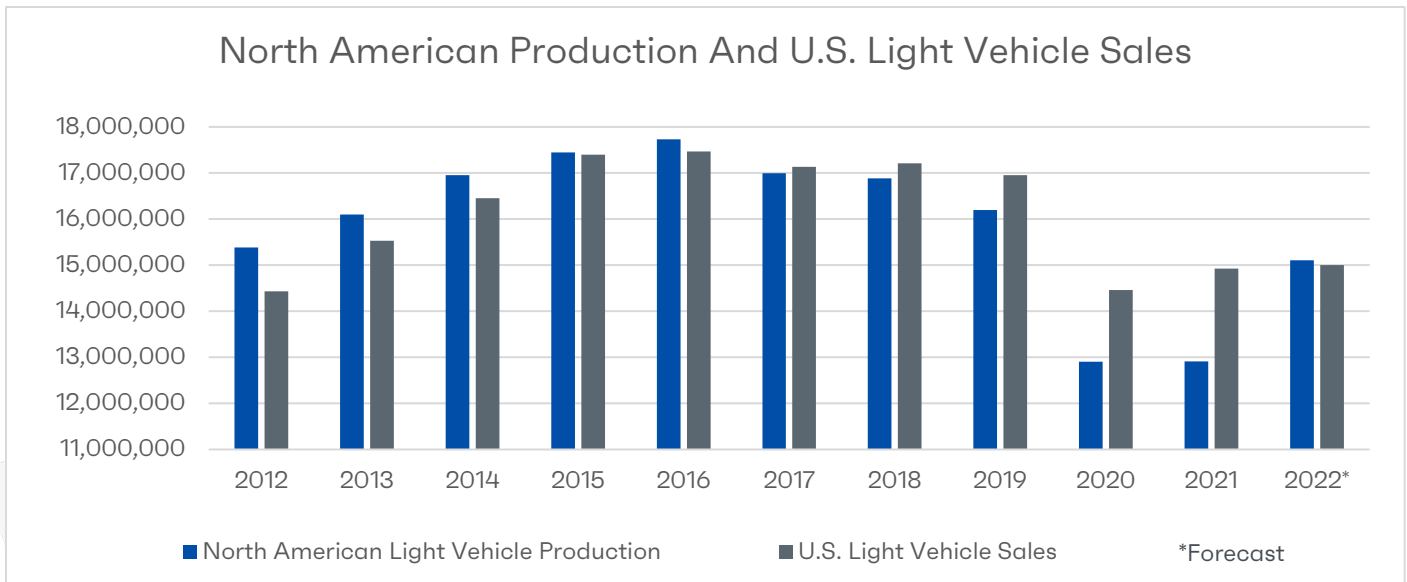
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## Forecast Meter

### Sales & Production Summary and Forecast (Updated 7/6)

<b>2021-2022 Sales, <sup>1</sup> Extended Sales Forecast <sup>2</sup> and Production Forecasts <sup>3</sup></b>		
	<b>U.S. Sales &amp; Forecasts</b>	<b>North American Production</b>
<b>January '21</b>	1,094,689 (-3.6% YoY)	1,175,940 (-14.0% YoY)
<b>February '21</b>	1,180,506 (-5.3% YoY)	1,120,200 (-22.9% YoY)
<b>March '21</b>	1,581,067 (+59.7% YoY)	1,376,904 (31% YoY)
<b>April '21</b>	1,512,186 (+111.4 YoY)	1,094,891 (-21% YoY)
<b>May '21</b>	1,577,941 (+41% YoY)	729,879 (+271% YoY)
<b>June '21</b>	1,296,517 (+17% YoY)	1,107,958 (-1.9% YoY)
<b>July '21</b>	1,288,494 (-7.9% YoY)	926,035 (3% YoY)
<b>August '21</b>	1,090,446 (-11% YoY)	1,113,327 (-19% YoY)
<b>September '21</b>	1,006,875 (-25% YoY)	907,470 (-33.4% YoY)
<b>October '21</b>	1,046,282 (-20% YoY)	1,140,383 (-22.1% YoY)
<b>November '21</b>	1,001,351, (-20% YoY)	1,168,245 (-9% YoY)
<b>December '21</b>	1,194,313 (-22.9% YoY)	1,029,501 (-13.8% YoY)
<b>January '22</b>	991,156 (-10% YoY)	1,111,390 (-4% YoY)
<b>February '22</b>	1,052,524 (-11.8% YoY)	1,112,429 (-1% YoY)
<b>March '22</b>	1,246,336 (-22% YoY)	1,350,102 (-.1% YoY)
<b>April '22</b>	1,226,950 (-22% YoY)	1,177,851 (+8% YoY)
<b>May '22</b>	1,104,993 (-23.8% YoY)	1,215,000 (+20.4% YoY)
<b>June '22</b>	1,126,724 (-16.8% YoY)	
<b>1<sup>st</sup> Quarter '22</b>	14.01 million-unit SAAR	3,458,480 (-1.4% YoY)
<b>2<sup>nd</sup> Quarter '22</b>	13.4 million-unit SAAR	
<b>2021 Full Year</b>	14,926,933 (+3.1% YoY)	8,899,632 (+4% YoY)
<b>2022 Full Year Estimate</b>	15 million units	15,107,419 (+17% YoY)



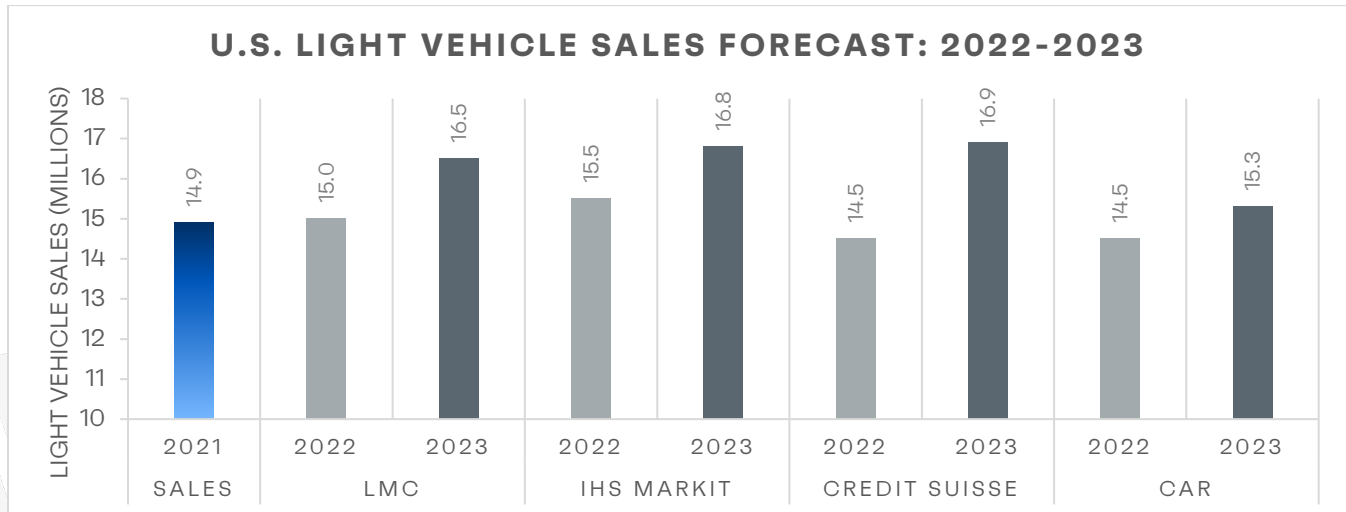
## U.S. Light Vehicle Sales Outlook (Updated 7/6)

**Wards Intelligence Outlook (7/6)**<sup>4</sup>: “Good news finally for the U.S. market as light-vehicle inventory at the end of June rose 7.9% from the prior month after recording month-to-month declines in April and May. The rise in inventory increases the likelihood sales in Q3 will rebound from Q2’s downward slide which put a big damper on prospects for the entire year, including putting into question whether deliveries will improve on 2021’s dismal results – which they still might not do. . . . If sales continue to match inventory at a one-to-one ratio as they generally have each month beginning with last August, July’s sales should rise well above a 14-million-unit seasonally adjusted annual rate, with a likelihood of remaining above that level throughout Q3. After rebounding from Q4-2021’s 12.8-million-unit trough to a 14.1 million SAAR in Q1, sales slid to 13.4 million in Q2 mostly because manufacturers could not overcome supply-chain disruptions enough to significantly raise inventory from the historically low volumes they have been mired in since last summer.”

**Credit Suisse Outlook For 2022 (7/6)**<sup>5</sup>: “We reduce our 2022 US auto sales forecast to 14.5mn from 15.1mn prior. The central theme of the US auto sales market YTD (and for that matter over the past year) has been historic inventory constraints limiting sales volume. Indeed, 1H22 SAAR ended at 13.8mn, and to meet our prior forecast would have required an overly-challenging 2H ramp. Given inventory constraints are likely to linger in 2H, even if easing, we reduce our forecast; our revised forecast implies 2H SAAR of ~15.0mn, which is still below the normalized SAAR we would expect of 16-17mn.”

**Wards Intelligence Outlook for 2022 (7/6)**<sup>6</sup>: “[T]he lack of speed in the rise of inventory – not to mention potential headwinds such as rising interest rates, high fuel prices and the increased risk of recession which could negatively impact consumers’ willingness to make big-ticket purchases – largely will mute sales growth over the rest of 2022 and entire-year deliveries could fall short of 2021’s 14.95

million units, and even further below the 17-million-plus they averaged in the five years prior to pandemic-year 2020 when volume totaled 14.47 million.”



## North American Production & Inventory Outlook (Updated 7/6)

**Wards Intelligence Inventory Outlook (7/6):** “[I]nventory remains stuck at low volumes and a seasonal nuance is that they likely will decline in July from June as some manufacturers still are scheduling typical summer shutdowns at their North America assembly plants. A reversal in June’s inventory gain will hurt sales volumes in August but not necessarily on a SAAR basis. Moreover, despite a possible decline from June, July 31 inventory still could mark the first year-over-year gain for any month since July 2019, and the outlook calls for month-to-month growth to resume in August.”

**Wards Intelligence Production Outlook (6/22) <sup>8</sup>:** “With North America vehicle production in May finishing slightly below expectations, and June tracking below month-ago’s outlook, the second-quarter projection was cut 61,000 units. However, Q2 still is tracking to a year-over-year gain – the first for a quarter since Q2-2021 - while the first look at Q3 shows even stronger growth.

“Production of light vehicles and medium-/heavy-duty trucks in May totaled 1.262 million units, 11,400 below month-ago’s expectations, but a 20.2% increase over same-month 2021. Breaking it down, light-vehicle production totaled 1.215 million units, 20.4% above May 2021. As the industry struggles to emerge from the global supply-chain crisis that began in early 2021, and has since greatly hindered output, May marked the fourth consecutive month of year-over-year increases.

“Despite the cuts to May and June, Q2 output is tracking to 3.79 million units, well above same-period 2021’s 3.29 million. Light-vehicle production is tracking to 3.65 million units in April-June, 15.3% above year-ago. Although it started impacting production in Q1 of last year, Q2-2021 was the first quarter that the semiconductor shortage firmly slowed output in North America. Production in Q3 is pegged at

3.93 million units, 29.8% above like-2021's 3.03 million. Nearly all automakers are expected to post year-over-year gains in Q3. Light-vehicle production is expected to increase by the same 29.8% year-over-year in Q3 to 3.79 million units.

**S&P Global Mobility Production Outlook (6/22) <sup>9</sup>:** “The outlook for North America light vehicle production was reduced by 57,000 units and by 7,000 units for 2022 and 2023, respectively (and reduced by 287,000 units for 2024). Amid the backdrop of the ongoing Russia/Ukraine conflict, the lagging impact of COVID lockdowns in China and continued supply chain challenges, the outlook for North American light vehicle production in 2022 was revised down 0.4% to total 14.68 million units. While production in Q1-2022 was better than expected at 3.56 million units, the results represent a decline of 51,000 units from a year earlier. Production in Q2-2022 was revised down by 77,000 units to total 3.56 million units based on further weakness among several manufacturers in the region most notably among the Japanese transplants. Production in the extreme near-term is vulnerable to component supply disruption emanating from the COVID lockdowns in China, even as those lockdowns are now starting to ease. Production for 2023 was revised down only marginally and totals 16.39 million units. With the growing threat of demand destruction, the outlook for 2024 was more adversely affected with production revised down by 1.7% to total 16.81 million units. While demand destruction concerns remain heightened, historically low inventories provide support as US demand and North American production levels have effectively been constrained at recessionary levels over the past 12+ months.”

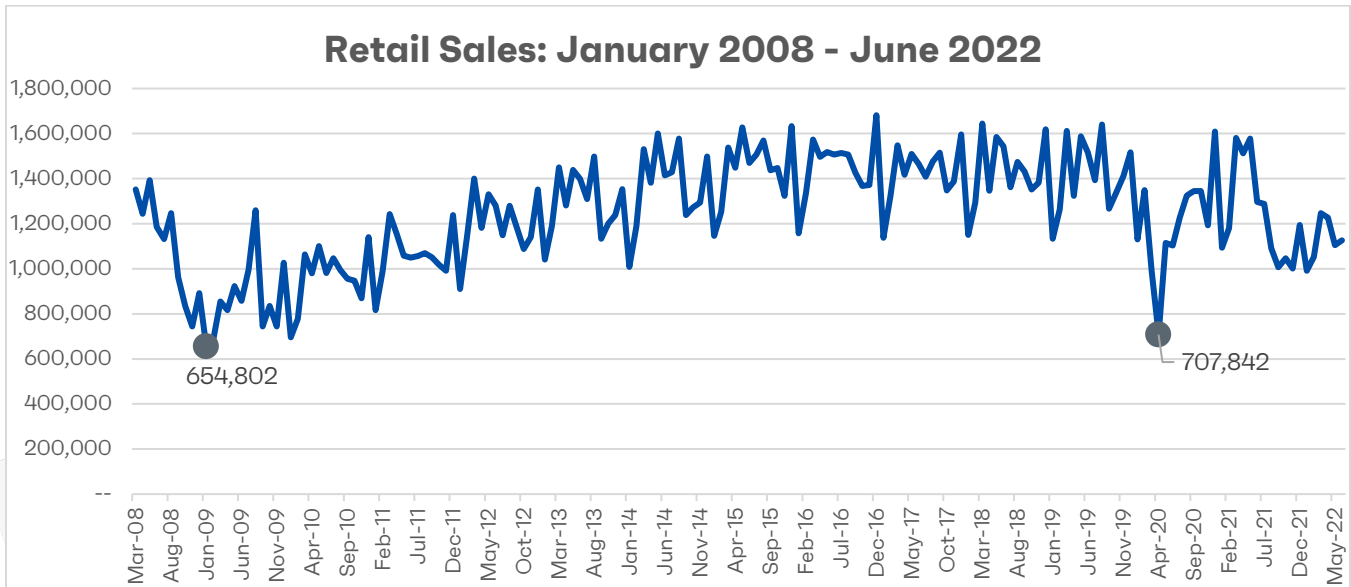
## Market Meter

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### U.S. Light Vehicle Sales (Updated 7/6)

#### **Monthly Sales (Updated 7/6)**

This chart helps to put into context the monthly retail sales due to the COVID pandemic and showing the relative drop in sales compared to the 2008 financial crisis.



### **June Sales (Updated 7/6)**

**WardsIntelligence** <sup>10</sup>: “June U.S. light-vehicle sales fell short of expectations but did slightly improve on the prior month, based on seasonally adjusted annual rates. After showing signs of stronger growth in 2022 prior to May, June’s results marked the second straight month of weakness compared to the year-to-date period through April.

“June sales totaled a 13.0 million-unit SAAR, up from May’s 5-month low 12.7 million but still well below the 14.2 million annualized rate sales posted over the first four months of the year. June 2021’s SAAR was 15.5 million units.

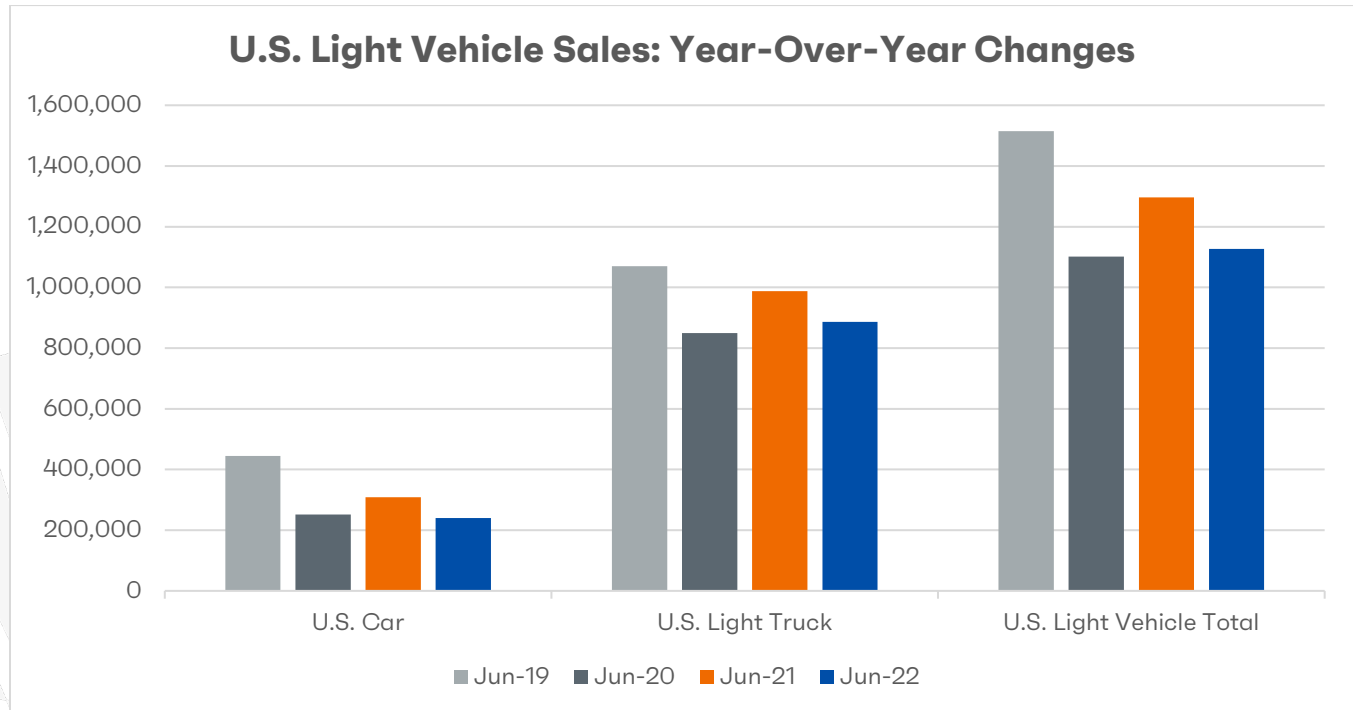
“June’s raw volume totaled 1.13 million units for a daily selling rate over the month’s 26 selling days of 43,336, 16.8% below year-ago’s 52,089 – 25 selling days. The DSR was 6.1% below the prior month’s results - 24 selling days - and lowest since January’s 41,316.

The second quarter totaled a 13.4 million-unit SAAR, a drop from Q1’s 14.1 million, which was the highest quarterly total since April-June 2021’s 16.9 million.

Raw volume in the April-June period increased 5.6% from Q1 to 3.48 million units. However, Q2 volume was 20.8% below like-2021’s 4.39 million units. First-half 2022’s SAAR was 13.7 million units, an increase from second-half 2021’s 13.1 million, but well below January-June 2021’s 16.9 million.

Rising prices, falling incentives and increased interest rates, combined with a heavy mix in inventory of higher-priced vehicles, could be having some negative impact on demand. But the main reason for the low sales volume continues to be the lack of inventory, which entered the month 25% below the same

year-ago level and is less than one-third what was considered normal for the period prior to the onset of the pandemic in 2020.”



### **Fleet Sales (Updated 7/6)**

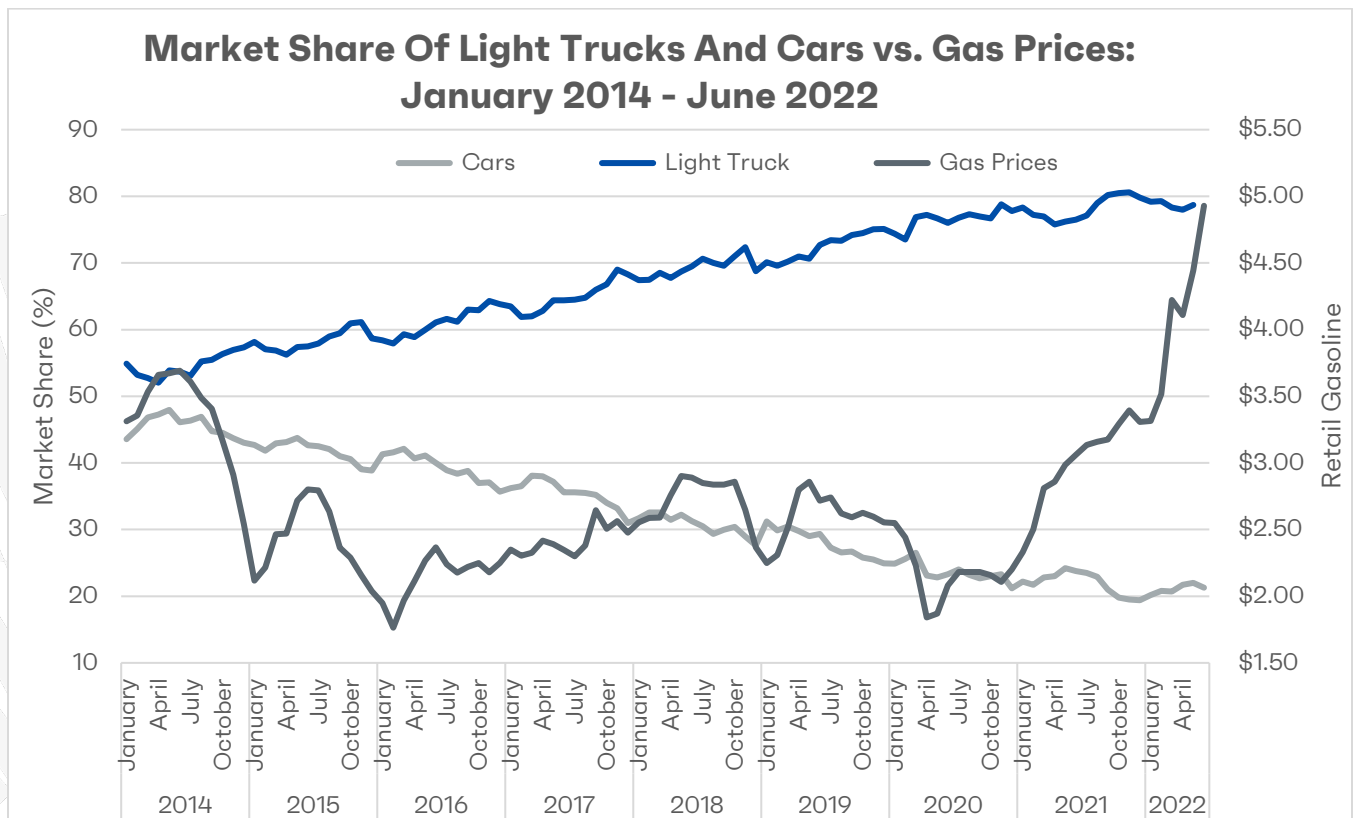
**TrueCar**<sup>11</sup>: “Fleet sales for June 2022 are expected to be down 8% from a year ago and up 14% from May 2022 when adjusted for the same number of selling days.”

**J.D. Power**<sup>12</sup>: “Fleet sales are expected to total 167,700 units in June, up 1.9% from June 2021 on a selling day adjusted basis. Fleet volume is expected to account for 15% of total light-vehicle sales, up from 12% a year ago.”

### **Segments vs. Gas Prices (Updated 7/6)**

**Monthly Sales For June:** Light trucks accounted for 78.7% of sales in June, a 2.5 pp increase in market share from a year ago. Compared to the same period in 2021, sales of cars are down more than 68,495, and down more than 204,000 from June 2019, when cars comprised 29% of the market as opposed to the 21% of the market passenger cars have now.

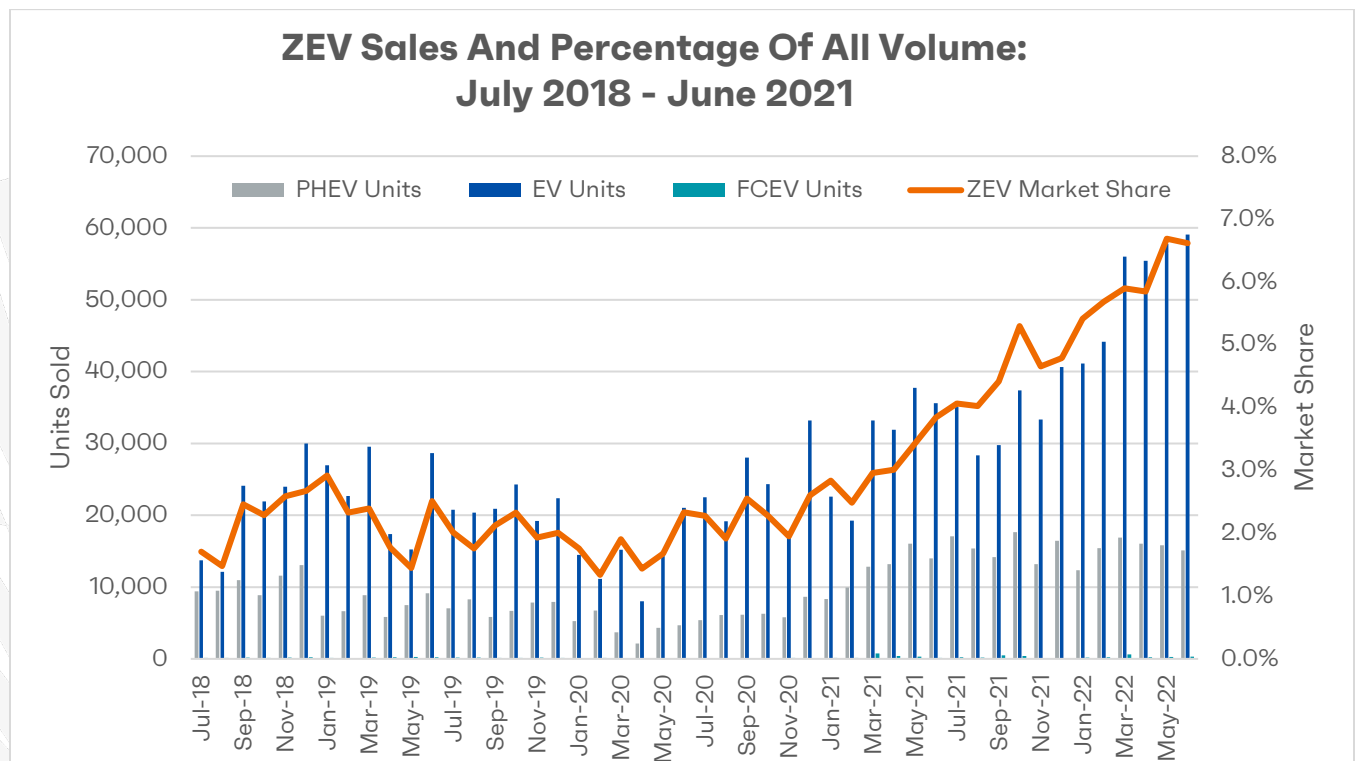
**Historic Perspective:** The upward trend in the popularity of light trucks over cars has been steady since 2013, when only 2% of annual market share separated the two segments<sup>13</sup> and gas was over \$3.00<sup>14</sup> a gallon. As fuel prices dropped below the \$3.00 mark in mid-September 2014, light truck sales began to take off. Gas prices since have averaged only \$2.61 a gallon (through January 2022) and when combined with increased fuel economy for light trucks, an increase of 4 mpg since 2013, the perfect conditions existed to continue fueling light truck market growth.<sup>15</sup>





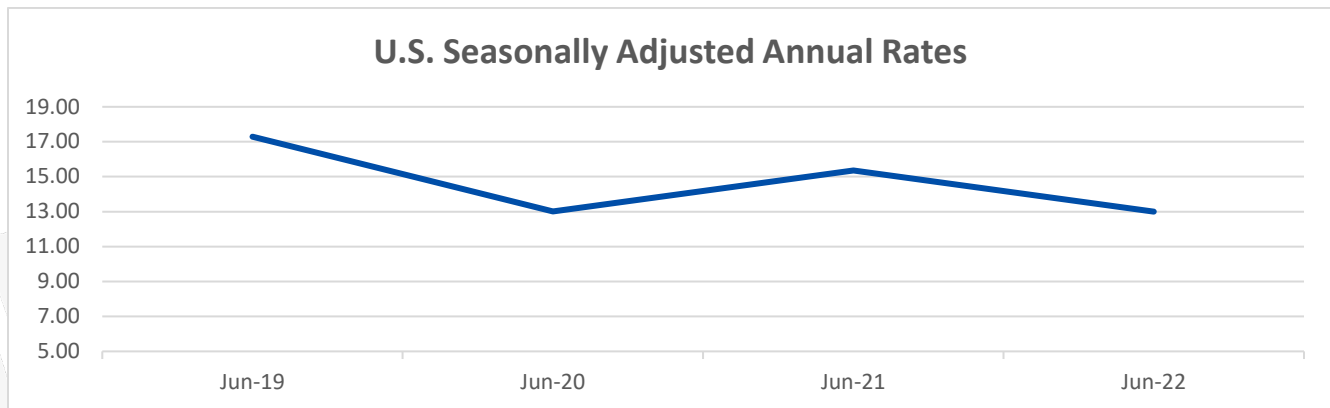
## ZEV Powertrain Sales (Updated 7/6)

Sales of zero emission vehicles (BEV, PHEV, & Fuel Cell) accounted for 6.6% of total vehicle sales in June 2022 (74,515 units – highest monthly volume to date), up 2.8 pp from a year ago and down 0.1 pp from May 2022. Sales of battery electric vehicles led the way for ZEVs, accounting for 5.2% of total sales, up 2.5 pp from June 2021. Plug-in hybrids accounted for 1.34%, 0.26 pp higher than the same time last year.<sup>16</sup>



## Seasonally Adjusted Annual Rates (Updated 7/6)

**WardsIntelligence:** “June sales totaled a 13.0 million-unit SAAR, up from May’s 5-month low 12.7 million but still well below the 14.2 million annualized rate sales posted over the first four months of the year. June 2021’s SAAR was 15.5 million units.”<sup>17</sup>



## Average Transaction Price (Updated 7/6)

**J.D. Power (Updated 7/6)**<sup>18</sup>: “For June, new-vehicle prices continue to set records, with the average transaction price expected to reach \$45,844—a 14.5% increase from a year ago and the highest level on record. Consequently, even though the sales pace is down 18.2% year over year, consumers will spend \$44.3 billion on new vehicles this month, the second-highest level ever for the month of June but slightly down 2.7% from June 2021 due to reduced volume.”

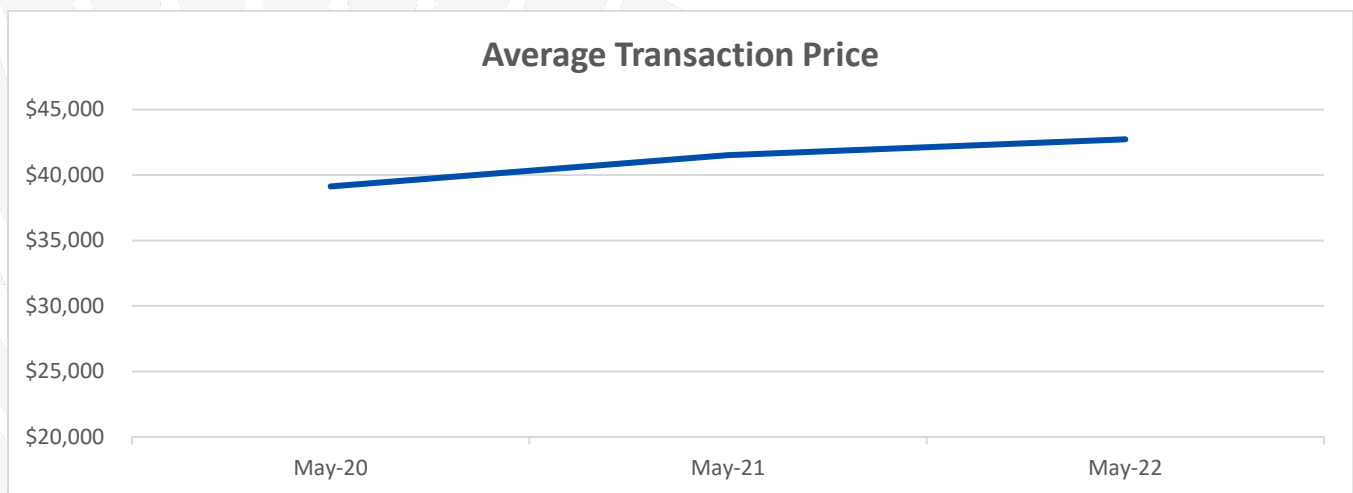
“The average transaction price for the first six months of 2022 is expected to reach a record of \$44,907—a 17.5% increase from 2021. This is partially due to incentive spending per unit, expressed as a percentage of average vehicle MSRP, trending towards 2.4% for the first six months, down from 7.1% for the same time period in 2021.

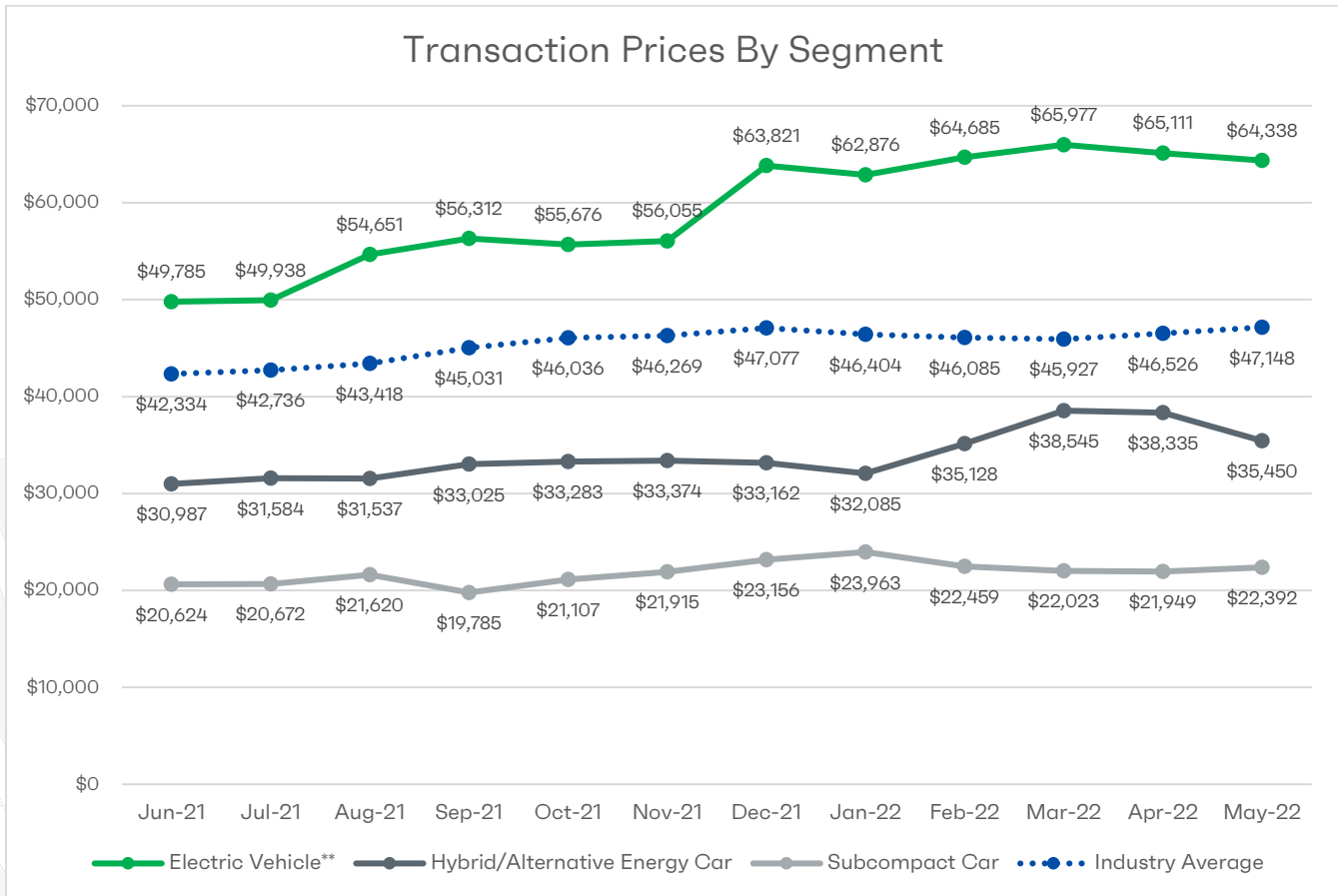
**Kelley Blue Book (May):** “New-vehicle average transaction prices (ATPs) increased to \$47,148 in May 2022, according to new data released by Kelley Blue Book, a Cox Automotive company. Prices rose 1% (\$472) month over month and remain elevated compared to one year ago, up 13.5% (\$5,613) from May 2021. The average price paid for a new vehicle in the U.S. last month was the second-highest on record, behind only December 2021, when ATPs reached \$47,202.

“The average price paid for a new non-luxury vehicle last month was \$43,338, up \$709 from April. Car shoppers in the non-luxury segment paid on average \$1,030 above sticker price. Consumers have paid more than MSRP in each month of 2022, whereas one year ago, non-luxury vehicles were selling for more than \$400 under MSRP.

“In May 2022, the average luxury buyer paid \$65,379 for a new vehicle, down \$511 month over month but still \$1,071 above sticker price. For comparison, luxury vehicles were selling for nearly \$1,300 under MSRP one year ago. Luxury vehicle share remains historically high, but decreased to 17.3% of total sales in May, down slightly from 17.4% in April. For comparison, luxury share in May 2021 was 15.9% and, pre-pandemic, luxury share in May 2019 was 13.1% of the total market.

“The average price paid for a new electric vehicle (EV) dropped again in May compared to April, as more lower-priced models enter the market and offset the many luxury EVs already available. The Chevrolet Bolt, with average transaction prices below \$40,000, is available on dealer lots after an extensive recall, and the new Kia EV6 is selling well. Even Tesla had slightly lower ATPs month over month in May. Still, the average price for a new electric vehicle – over \$64,000 according to Kelley Blue Book estimates – is well above the industry average and more aligned with luxury prices than mainstream prices.<sup>19</sup>



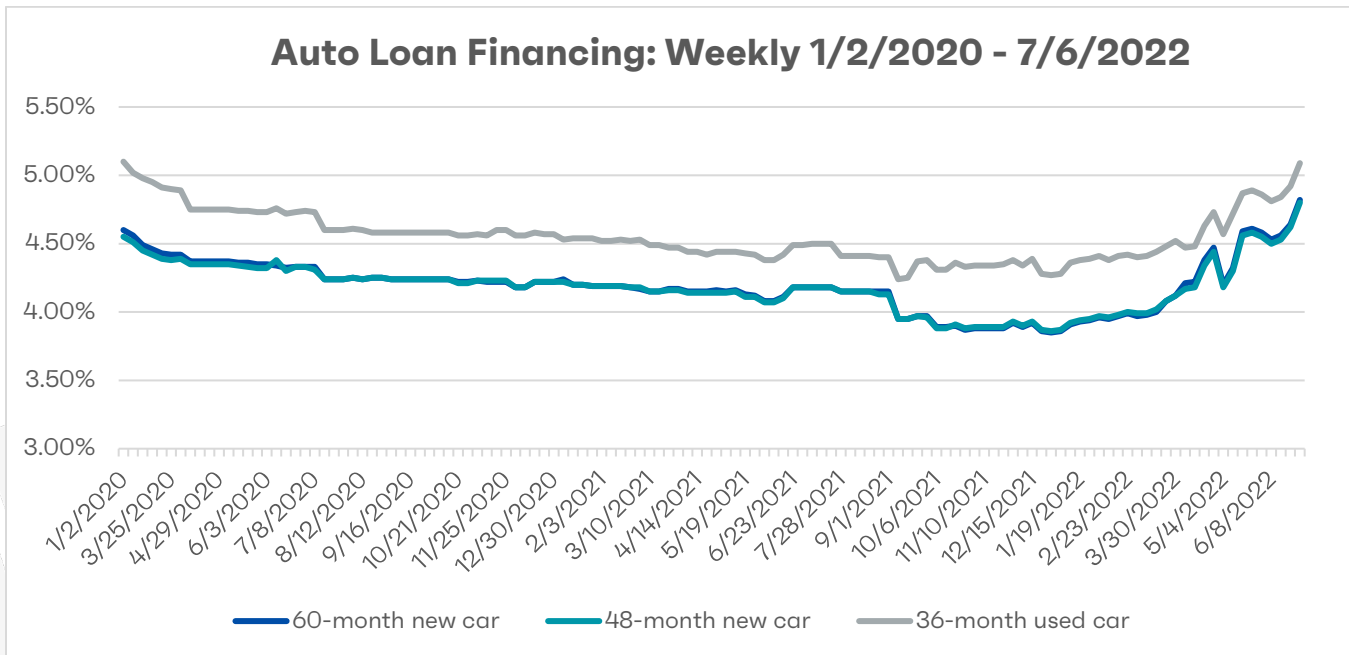


\*\*Due to reporting errors with Tesla Motors, the Electric Vehicle ATP is likely higher than Kelley Blue Book estimates.

## Auto Loan Financing (Updated 7/6)

**Interest Rates Rise:** Interest rates for new cars rose 0.18 pp and now stand at 4.82%. Rates rose 0.17 pp on the 36-month used car loan. Since the beginning of 2020, 60-month rates are up 0.22 pp, and are up 0.64 pp since the same time a year ago.<sup>20</sup>

Dates	60-month new car	48-month new car	36-month used car
1/2/2020	4.60%	4.55%	5.10%
7/7/2021	4.18%	4.18%	4.50%
6/22/2022	4.64%	4.62%	4.92%
6/29/2022	4.82%	4.80%	5.09%
One Week Change	0.18%	0.18%	0.17%
Two Week Change	0.26%	0.27%	0.25%
Change since 1/3/20	0.22%	0.25%	-0.01%
One Year Change	0.64%	0.62%	0.59%

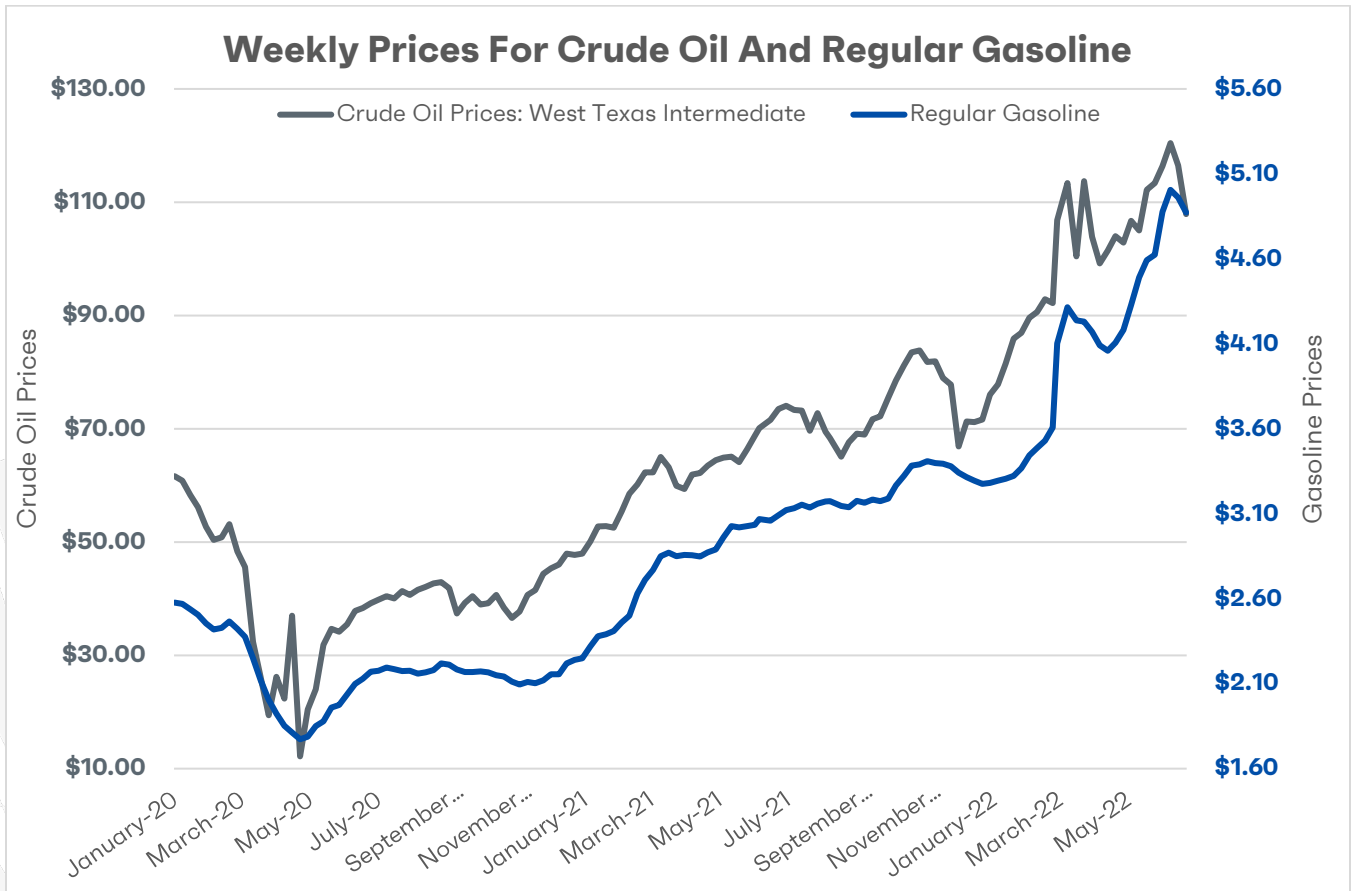


## Crude Oil and Gas Prices (Updated 7/6)

**EIA Outlook For Gasoline (6/22)**<sup>21</sup>: “The U.S. average retail price for regular grade gasoline averaged \$4.44 per gallon (gal) in May, and the average retail diesel price was \$5.57/gal. Rising prices for gasoline and diesel reflect refining margins for those products that are at or near record highs amid low inventory levels. We expect the gasoline wholesale margins (the difference between the wholesale gasoline price and Brent crude oil price) to fall from \$1.17/gal in May to average 81 cents/gal in 3Q22, and we expect retail gasoline prices to average \$4.27/gal in 3Q22. Diesel wholesale margins in the forecast fall from \$1.53/gal in May to \$1.07/gal in 3Q22, and retail diesel averages \$4.78/gal in 3Q22.”

**EIA Outlook For Oil (6/22)**<sup>22</sup>: “The Brent crude oil spot price averaged \$113 per barrel (b) in May. We expect the Brent price will average \$108/b in the second half of 2022 (2H22) and then fall to \$97/b in 2023. Current oil inventory levels are low, which amplifies the potential for oil price volatility. Actual price outcomes will largely depend on the degree to which existing sanctions imposed on Russia, any potential future sanctions, and independent corporate actions affect Russia’s oil production or the sale of Russia’s oil in the global market.”

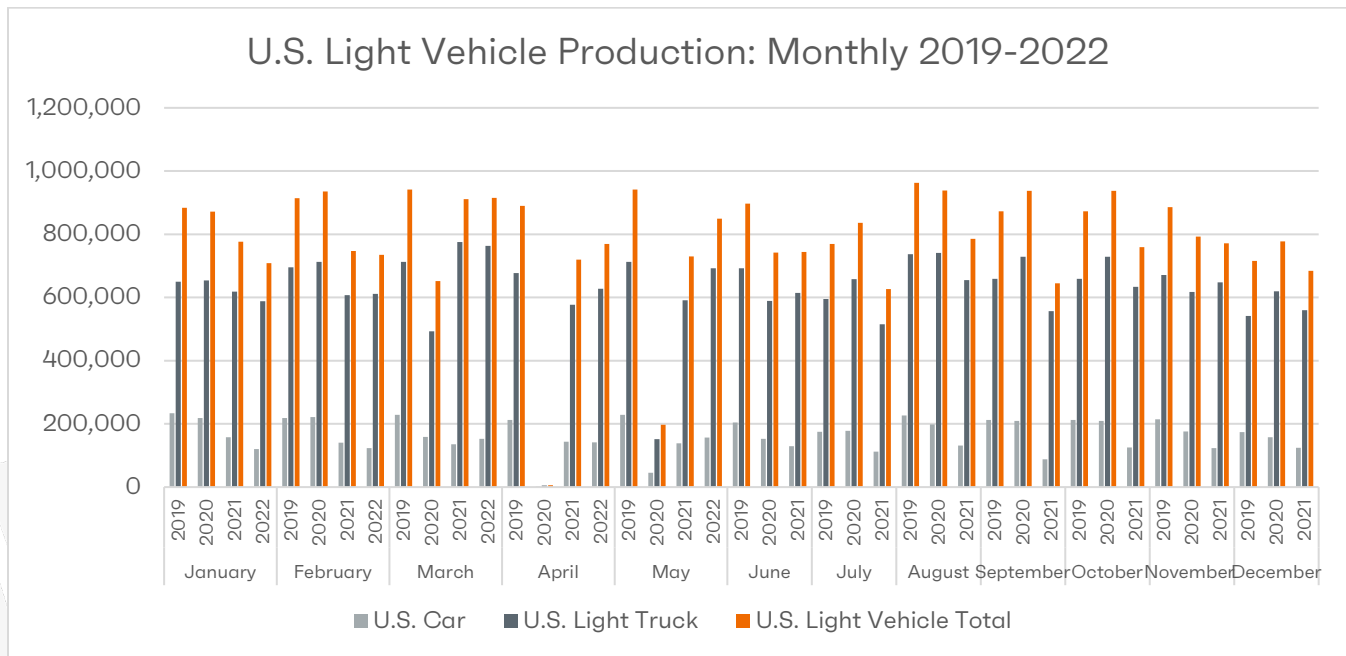
**Gas And Oil Remain High:** Oil prices, as benchmarked at West Texas Intermediate, fell \$8.50 to \$107.88 a barrel for the week of June 27. Since election day 2020, oil prices have climbed \$71 a barrel. Gas prices fell \$0.10 to \$4.77. Gas is 94% higher than the beginning of 2020.<sup>23</sup>



## Production Meter

### U.S. Light Vehicle Production (Updated 6/22)

U.S. Light vehicle production for May 2022 increased month-over-month by 8.9 percent, totaling 849,147 vehicles (157,187 cars, 691,960 light trucks), year-over-year, production is up 21.9 percent from 2021. <sup>24</sup>



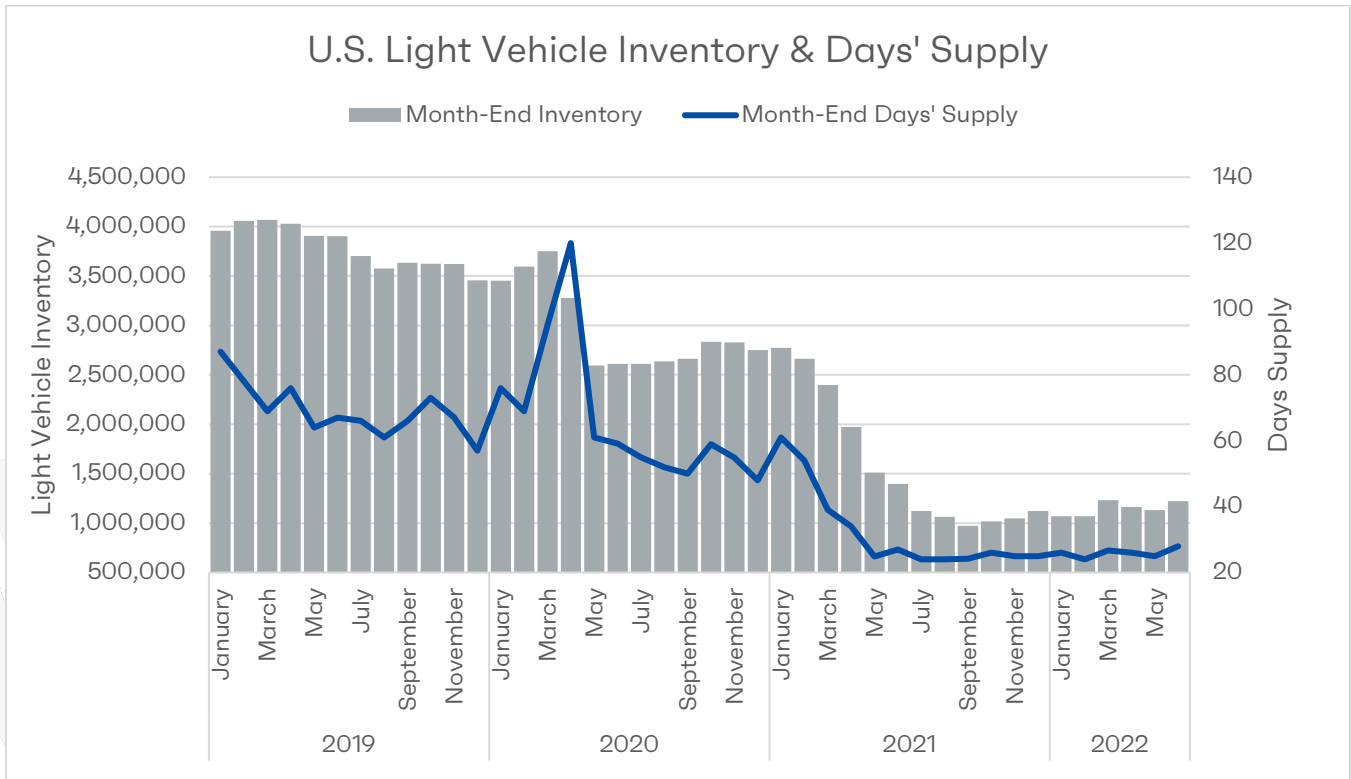
**Wards Intelligence North America Production** <sup>25</sup>: “Production of light vehicles and medium-/heavy-duty trucks in May totaled 1.262 million units, 11,400 below month-ago’s expectations, but a 20.2% increase over same-month 2021. Breaking it down, light-vehicle production totaled 1.215 million units, 20.4% above May 2021.”

## U.S. Light Vehicle Inventory and Days’ Supply (Updated 7/3)

**WardsIntelligence Inventory Update (7/6)** <sup>26</sup>: “Good news finally for the U.S. market as light-vehicle inventory at the end of June rose 7.9% from the prior month after recording month-to-month declines in April and May. The rise in inventory increases the likelihood sales in Q3 will rebound from Q2’s downward slide which put a big damper on prospects for the entire year, including putting into question whether deliveries will improve on 2021’s dismal results – which they still might not do.

Inventory ended June at 1.22 million units, up from May’s 1.13 million and April’s 1.16 million. The total was 12.3% below June 2021’s 1.39 million units, but that gap represented a major improvement since the beginning of the year when January and February were down 61.5% and 60.0%, respectively, year over year.

“June 30 days’ supply finished at 28, up from the prior month’s 25 and like-2021’s 27 and was the highest for any month since April 2021’s 34.



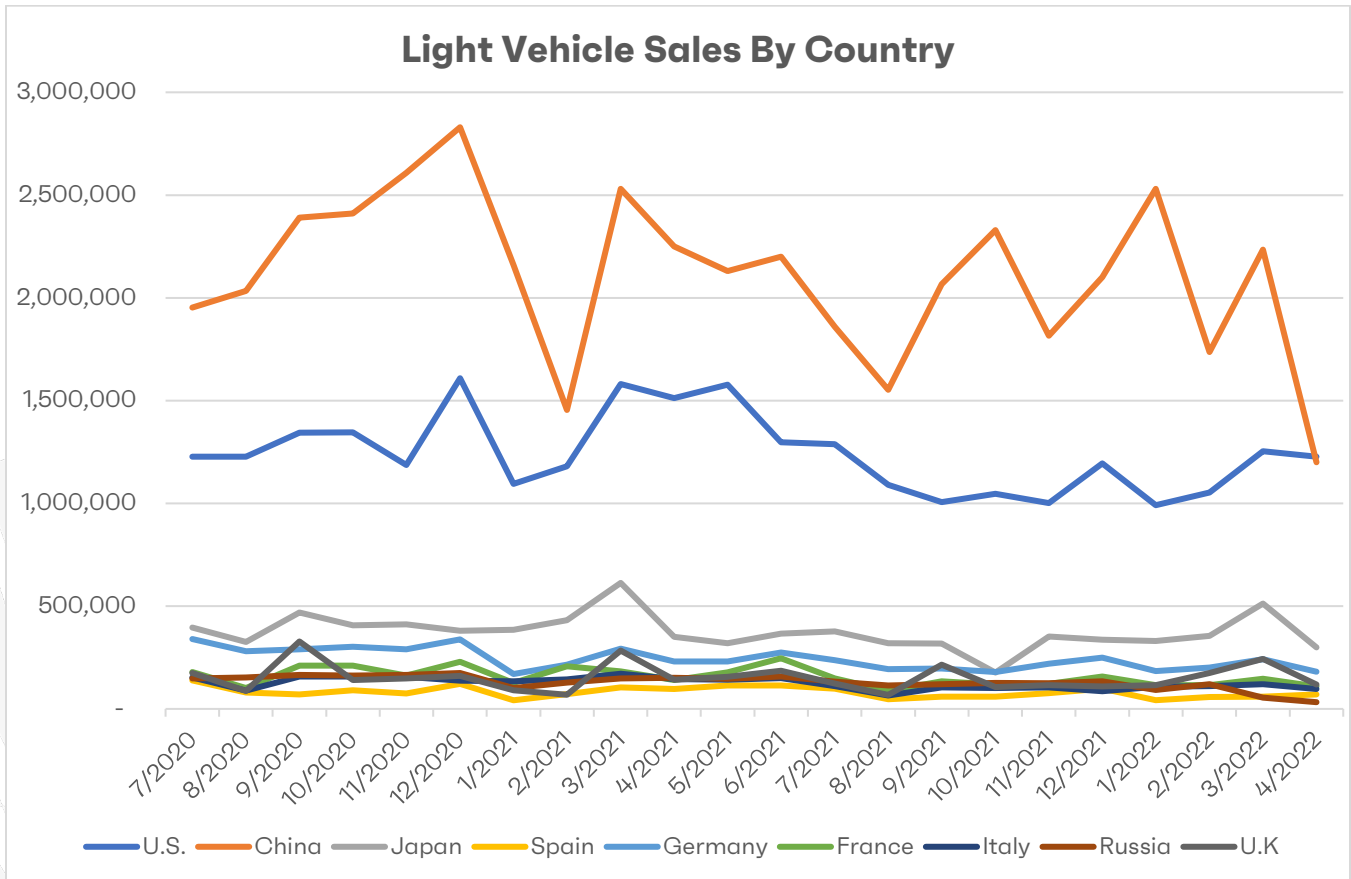
## Global Meter

### Global Light Vehicle Sales (Updated 6/22)

**Wards Intelligence** <sup>27</sup>: “Covid-related lockdowns in China, the world’s biggest market, were the biggest factor that undercut global sales in April, as volume for all vehicles declined 25.3% from like-2021.

Volume for light vehicles and medium-/heavy-duty trucks totaled 5.604 million units in April, down from like-2021’s 7.127 million units. Light vehicles totaled 5.42 million units in April, down 24.0% year-over-year. Besides lockdowns in China, economic headwinds and supply-chain disruptions negatively impacted deliveries in April. Including some country estimates, sales in all regions fell in April from the same year-ago month. With China volume down 48% year-over-year, total-vehicle sales in the Asia-Pacific fell 32.4%, the biggest decline of any region. Europe, which is facing tough economic hurdles, declined 27.9% year-over-year to 1.07 million units. April sales in North America were down 15.6%, while South America dropped 6.3%. Total year-to-date global sales through April of 26.12 million units was down 11.4% from four-month 2021’s 29.45 million. Calendar year-to-date deliveries of light vehicles totaled 25.15 million units, down 10.2% from like-2021.”





## Global Light Vehicle Production (Updated 6/22)

**S&P Global Mobility Forecast (6/22)<sup>28</sup>:** “Production revisions continue to reflect the dynamic environment impacting the auto industry. Since the March 2022 update resulting in a rather significant production realignment due largely to the Russia/Ukraine conflict, we have seen a degree of “fine tuning” with some adjustments more meaningful than others as COVID lockdowns in China impact the domestic market as well as some surrounding markets and ongoing semiconductor supply conditions remain challenging for most market participants. As COVID lockdowns in China are lifting and the government looks to stimulate auto demand, the profile for that market shifts to one of nascent recovery while other surrounding markets still cope with lingering supply chain dislocations due to the lockdowns in the near-term. On the semiconductor front, mixed signals are apparent with some automakers reporting an improved supply of chips while other players still struggle with consistent supply of critical components. We remain watchful for potential demand destruction caused by slower economic growth forecasts for 2024 and beyond. The June 2022 forecast update reflects a near-term increase for Greater China due to COVID lockdowns expiring and demand stimulus taking effect. Conversely, lingering supply chain impacts from the lockdowns in China result in downward revisions

for Japan/Korea and South Asia and supply chain pressures continue to impact the near-term outlook for Europe and North America. The more noteworthy regional adjustments with the latest forecast update are detailed below:

**“Europe:** The outlook for Europe light vehicle production was reduced by 77,000 units and by 272,000 units for 2022 and 2023, respectively (and reduced by 312,000 units for 2024). The European market continues to contend with supply chain pressures contributing to near-term production volatility. While we have incorporated some improvement in the flow of semiconductors and wire harnesses, additional risks are emerging in the areas of energy and raw materials. In the extreme near-term, weakness is particularly focused on Russia as domestic manufacturers find it difficult to secure critical components and fully restart production amid an extremely challenged demand environment. Looking beyond 2022, European production adjustments are aligned with downward revisions to the demand outlook for both West Europe as well as Russia as the market adjusts to the broader longer-term influences of the Russia/Ukraine conflict (including the impact of the recent EU embargo on Russian oil) and a weakened macroeconomic outlook.

**“Greater China:** The outlook for Greater China light vehicle production was increased by 289,000 units and reduced by 267,000 units for 2022 and 2023, respectively (and reduced by 315,000 units for 2024). COVID lockdowns have been lifted in the critical Shanghai market and manufacturing is recovering in spite of challenging logistics and ongoing supply chain pressures. Other COVID containment measures in north and east China have been eased as well. As markets re-open, the Chinese government is seeking to stimulate demand by reducing purchase taxes in the country and by raising vehicle registration quotas in areas with historical registration restrictions. Both strategies have proven very effective in stimulating demand in the past, although they do create the potential for a payback effect in future years. The outlook for 2023 and 2024 was reduced based on the expectation of some level of payback from the stimulus supporting demand in the near-term and reflects the potential for increasing macro headwinds. Nevertheless, Greater China light vehicle production is still expected to post gains of 9.3% in 2023 and 6.7% in 2024.

**“Japan/Korea:** Full-year 2022 Japan production volume was reduced by 59,000 units relative to the May forecast. Domestic operations continue to be affected by supply chain disruptions associated with supplier plant shutdowns in China due to the zero COVID-19 policy. As a result, Q2-2022 production was downgraded by 10% or 190,000 units from the prior forecast. Mazda, Nissan and Toyota were particularly impacted relative to earlier expectations. Alternatively, we upgraded the latter periods of 2022 as automakers attempt to recover some level of lost volume from earlier in the year. The longer-term forecast was reduced by 15,000 units per year due to stagnant export demand related to macro pressures. One positive change is related to the addition of three dedicated BEV models at the Subaru-Oizumi plant. We expect Subaru will develop and manufacture BEVs in-house starting in 2026. Full-year 2022 South Korea production was downgraded by 10,000 units relative to the previous forecast. Although component constraints caused by lockdowns in mainland China have improved somewhat, a recent trucker strike (now settled) has destabilized production in the immediate near-term. Full-year 2023 South Korea production was only modestly revised yet the outlook for 2024 was reduced by

16,000 units as expected lingering global inflation pressures are expected to challenge exports, particularly to advanced markets such as the US. In the long-term, production was reduced by an average of 45,000 units per year primarily due to the cancellation of the next-generation Hyundai Sonata and the longer-term impact of demand destruction.

**“North America:** The outlook for North America light vehicle production was reduced by 57,000 units and by 7,000 units for 2022 and 2023, respectively (and reduced by 287,000 units for 2024). Amid the backdrop of the ongoing Russia/Ukraine conflict, the lagging impact of COVID lockdowns in China and continued supply chain challenges, the outlook for North American light vehicle production in 2022 was revised down 0.4% to total 14.68 million units. While production in Q1-2022 was better than expected at 3.56 million units, the results represent a decline of 51,000 units from a year earlier. Production in Q2-2022 was revised down by 77,000 units to total 3.56 million units based on further weakness among several manufacturers in the region most notably among the Japanese transplants. Production in the extreme near-term is vulnerable to component supply disruption emanating from the COVID lockdowns in China, even as those lockdowns are now starting to ease. Production for 2023 was revised down only marginally and totals 16.39 million units. With the growing threat of demand destruction, the outlook for 2024 was more adversely affected with production revised down by 1.7% to total 16.81 million units. While demand destruction concerns remain heightened, historically low inventories provide support as US demand and North American production levels have effectively been constrained at recessionary levels over the past 12+ months.

**“South America:** The outlook for South America light vehicle production was increased by 8,000 units and reduced by 8,000 units for 2022 and 2023, respectively (and reduced by 60,000 units for 2024). The modest upgrade in production for 2022 was driven primarily by stronger actual production results, yet we are refraining from extending production gains through the balance of the year given continued supply chain challenges, macroeconomic pressures and deteriorating access to financing, among other factors. The reduced outlook for 2023 and 2024 was focused primarily on Brazil and reflects an extended recovery trajectory and is also aligned with an overall less optimistic demand profile.

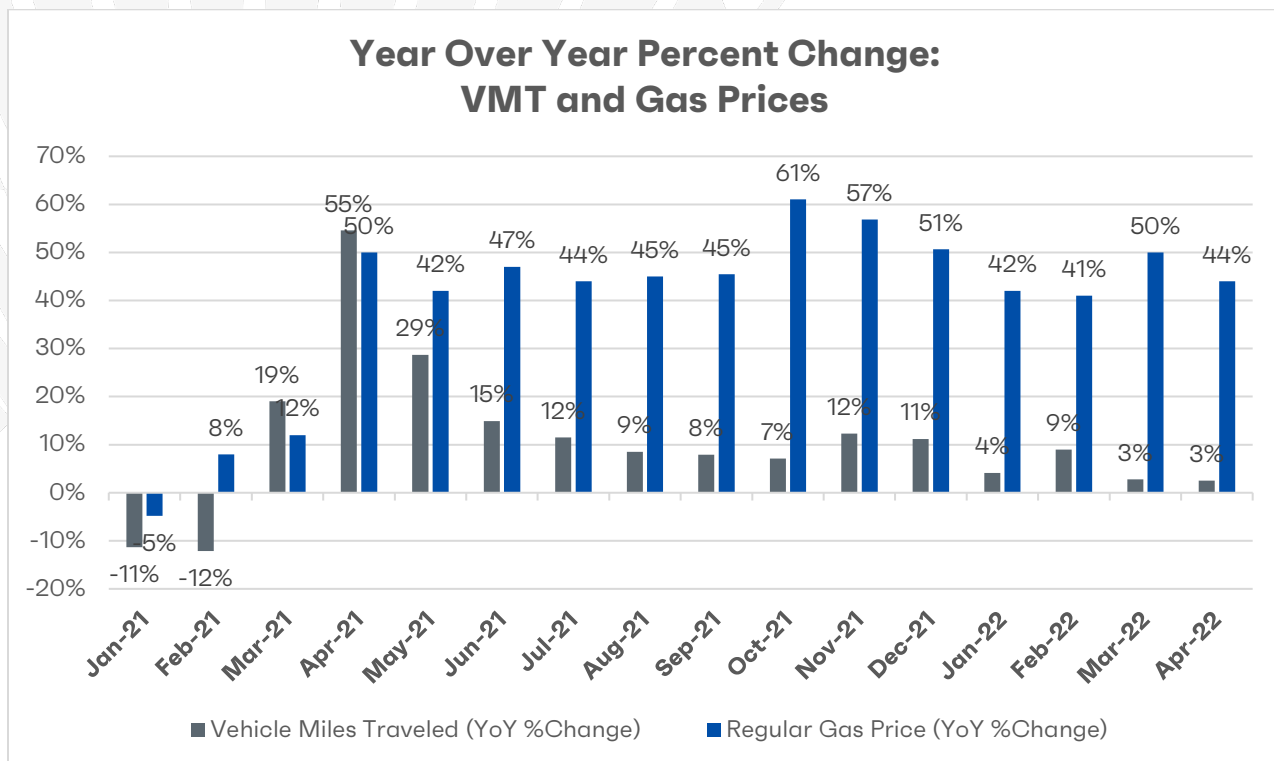
**“South Asia:** The outlook for South Asia light vehicle production was reduced by 13,000 units and increased by 26,000 units for 2022 and 2023, respectively (and increased by 24,000 units for 2024). The reduction in outlook for 2022 was primarily focused on production weakness in the ASEAN market due to lingering supply chain impacts related to COVID lockdowns in China. Conversely, India has demonstrated a measure of production resiliency as evidenced by forecast upgrades in the near-to-intermediate term. Reduced COVID cases and an improved semiconductor position given de-contenting efforts by automakers in the market provide much-needed support amid what is still a dynamic environment. Regarding the ASEAN market, beyond the near-term supply chain pressures related to China lockdowns, the outlook for 2023 remains largely unchanged with broader upgrades for the South Asia region driven by an improved outlook for India and Pakistan. However, looking to 2024, the production outlook for the ASEAN market was reduced by 19,000 units to better align with the anticipated market outlook and the impact of post-pandemic demand destruction based on challenging macro conditions.”

## Recovery Meter

### Roadway Travel (Updated 6/22)

According to the U.S. Department of Transportation, seasonally-adjusted vehicle miles traveled in April rose 2.5% from the same time a year ago. The cumulative travel estimate for 2022 is 1,016.7 billion vehicle miles.<sup>29</sup>

- Travel on all roads and streets changed by +1.5% (+3.9 billion vehicle miles) for April 2022 as compared with April 2021. Travel for the month is estimated to be 263.1 billion vehicle miles.
- The seasonally adjusted vehicle miles traveled for April 2022 is 270.7 billion miles, a 2.50% ( 6.6 billion vehicle miles) change over April 2021. It also represents a -0.9% change (-2.4 billion vehicle miles) compared with March 2022.
- Cumulative Travel for 2022 changed by +4.5% (+44.0 billion vehicle miles). The cumulative estimate for the year is 1,016.7 billion vehicle miles of travel.



### Economic News (Updated 6/3)

**Manufacturing Gained 18,000 Jobs In April; Motor Vehicles And Parts Manufacturing Lost 3,500.**

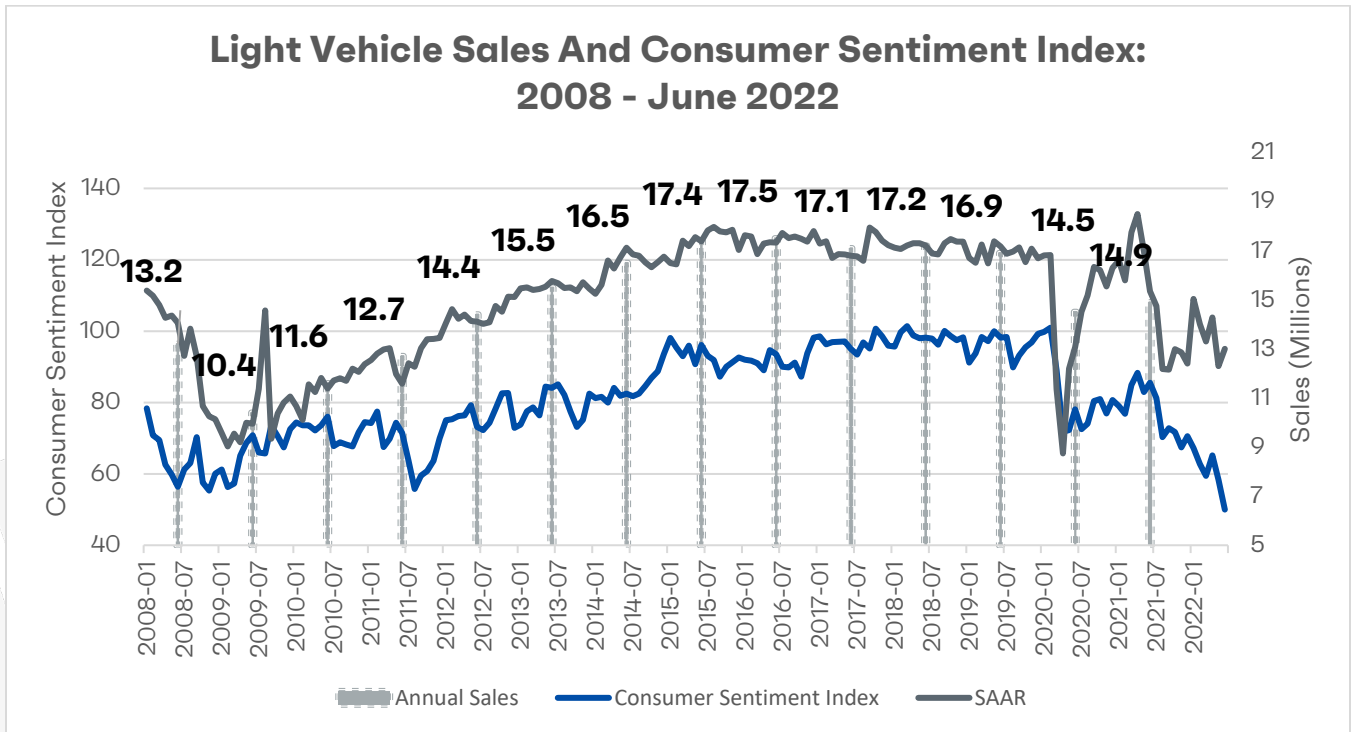
“Manufacturing employment rose by 18,000 jobs in May, the U.S. Bureau of Labor Statistics said today. Most of the gain, 11,000 jobs, was in durable goods, according to a breakdown by industry issued by the bureau. The increase was paced by fabricated metal products, up 7,100 jobs. Other job gainers included wood products, up 3,800 jobs, non-metallic mineral products up 1,900, primary metals, up 1,700, and miscellaneous manufacturing, up 1,100. The major drag on durable goods was transportation equipment with a decline of 7,900 jobs. That included a decrease of 3,500 jobs in motor vehicles and parts.<sup>30</sup>

**The ISM Index Fell To 55.4 In April.** “The manufacturing economy slowed in April as supply chain issues such as transportation of goods complicated operations, the Institute for Supply Management said today. The Tempe, Ariz.-based group’s manufacturing index, known as the PMI, fell to 55.4 percent last month, down from 57.1 percent in March.<sup>31</sup>

**The Consumer Price Index Increased 8.3%, Closest To Highest Level Since 1982.** “Inflation rose again in April, continuing a climb that has pushed consumers to the brink and is threatening the economic expansion, the Bureau of Labor Statistics reported Wednesday. The consumer price index, a broad-based measure of prices for goods and services, increased 8.3% from a year ago, higher than the Dow Jones estimate for an 8.1% gain. That represented a slight ease from March’s peak but was still close to the highest level since the summer of 1982.<sup>32</sup>

## Consumer Confidence and Sales (Updated 7/6)

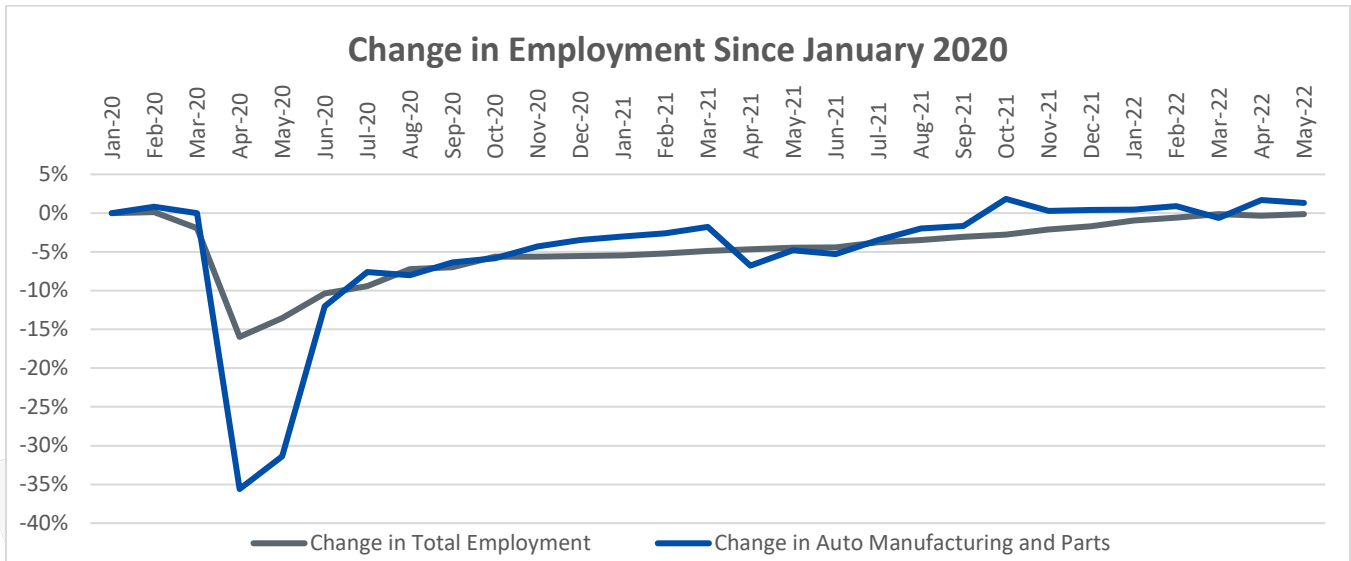
**Surveys of Consumers Director Joanne Hsu<sup>33</sup>:** “The final June reading confirmed the early-June decline in consumer sentiment, settling 0.2 Index points below the preliminary reading and 14.4% below May for the lowest reading on record. Consumers across income, age, education, geographic region, political affiliation, stockholding and homeownership status all posted large declines. About 79% of consumers expected bad times in the year ahead for business conditions, the highest since 2009. Inflation continued to be of paramount concern to consumers; 47% of consumers blamed inflation for eroding their living standards, just one point shy of the all-time high last reached during the Great Recession. Since the preliminary reading, the Federal Reserve raised interest rates by 75 basis points, exceeding the 50 basis point hike that had been previously telegraphed. The final June reading of the median expected year-ahead inflation rate was 5.3%, little changed from mid-month or the preceding four months. In contrast, long run expectations receded from its mid-month reading of 3.3% and settled at 3.1%, back within the 2.9-3.1% range seen in the past 10 months. Consumers also expressed the highest level of uncertainty over long-run inflation since 1991, continuing a sharp increase that began in 2021.”



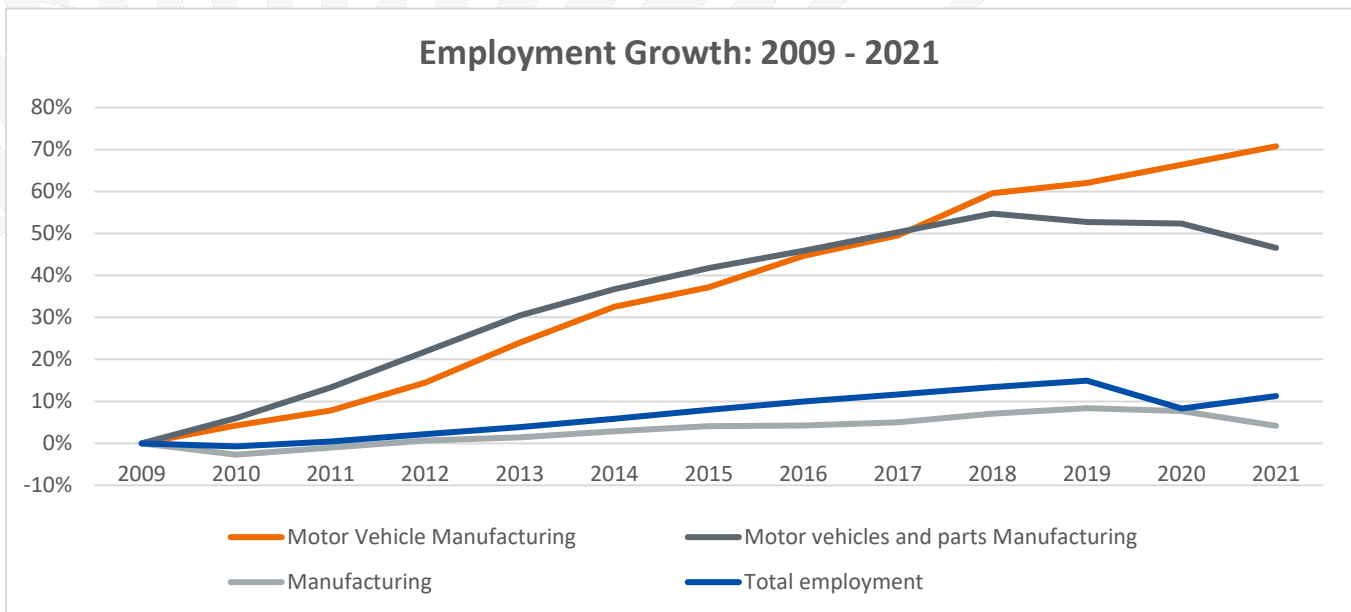
## Employment (Updated 6/3)

### Motor Vehicle And Parts Manufacturing Gained lost 3,500 Jobs In May. <sup>34</sup>

After a loss of nearly 350,000 employees (about 35% of the workforce) in the height of the pandemic, employment in the Automobile Manufacturing and Parts sectors raced back but is now fighting losses due to supply chain disruptions with semiconductors. <sup>35</sup>



After the recession in 2009, the auto industry was credited with being on the leading edge of the recovery, which began a ripple effect through other parts of the country.<sup>36</sup> Additionally, the chart below shows how the recovery of jobs in motor vehicle manufacturing alone and motor vehicle and parts manufacturing far outpaced the recovery of manufacturing and total jobs.



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