

READING THE METER

A Look Inside A Cleaner, Safer, Smarter Auto Industry.

August 18, 2021

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Forecast Meter

Forecast Summary (Updated 8/18)

2020-2021 Sales,¹ Extended Sales Forecast² and Production Forecasts³		
	U.S. Sales & Forecasts	North American Production
June '20	1,103,791 (-24% YoY)	1,135,807 (-19.7% YoY)
July '20	1,227,091 (-12.1% YoY)	1,261,884 (+2.2% YoY)
August '20	1,325,144 (-19.1% YoY)	951,983 (-1.1% YoY)
September '20	1,344,310 (6.4% YoY)	1,395,830 (+2.1% YoY)
October '20	1,345,401 (0.9% YoY)	1,413,207 (+3.7% YoY)
November '20	1,193,180 (-15.4% YoY)	1,260,763 (-6.4% YoY)
December '20	1,608,875 (5.9% YoY)	1,115,542 (+2.8% YoY)
January '21	1,094,689 (-3.6% YoY)	1,175,940 (-14.0% YoY)
February '21	1,180,506 (-5.3% YoY)	1,120,200 (-22.9% YoY)
March '21	1,581,067 (+59.7% YoY)	1,376,904 (31% YoY)
April '21	1,512,186 (+111.4 YoY)	1,094,891 (-21% YoY)
May '21	1,577,941 (+41% YoY)	729,879 (+271% YoY)
June '21	1,296,517 (+17% YoY)	1,107,958 (-1.9% YoY)
July '21	1,288,494 (-7.9% YoY)	1,300,000 (forecast)
1st Quarter '20	3,476,512 (-12.7% YoY)	3,754,533 (-11.7% YoY)
2nd Quarter '20	2,948,410 (-33.3% YoY)	1,371,420 (-67.6% YoY)
3rd Quarter '20	3,904,539 (-9.2% YoY)	3,989,982 (-.5% YoY)
4th Quarter '20	4,159,622 (-2.1% YoY)	3,789,512 (-2.5% YoY)
1st Quarter '21	3,869,872 (+11.3 YoY)	3,688,512 (-4.7% YoY)
2nd Quarter '21	4,153,855 (+20.2% YoY)	3,309,000 (132% YoY)
3rd Quarter '21		3,807,644 (forecast)
2020 Calendar Year	14,463,935 (-14.7% YoY)	12,905,447 (-23.1%)
2021 Full Year Estimate	16.6 million units (15% YoY)	14,611,185 (13% YoY)

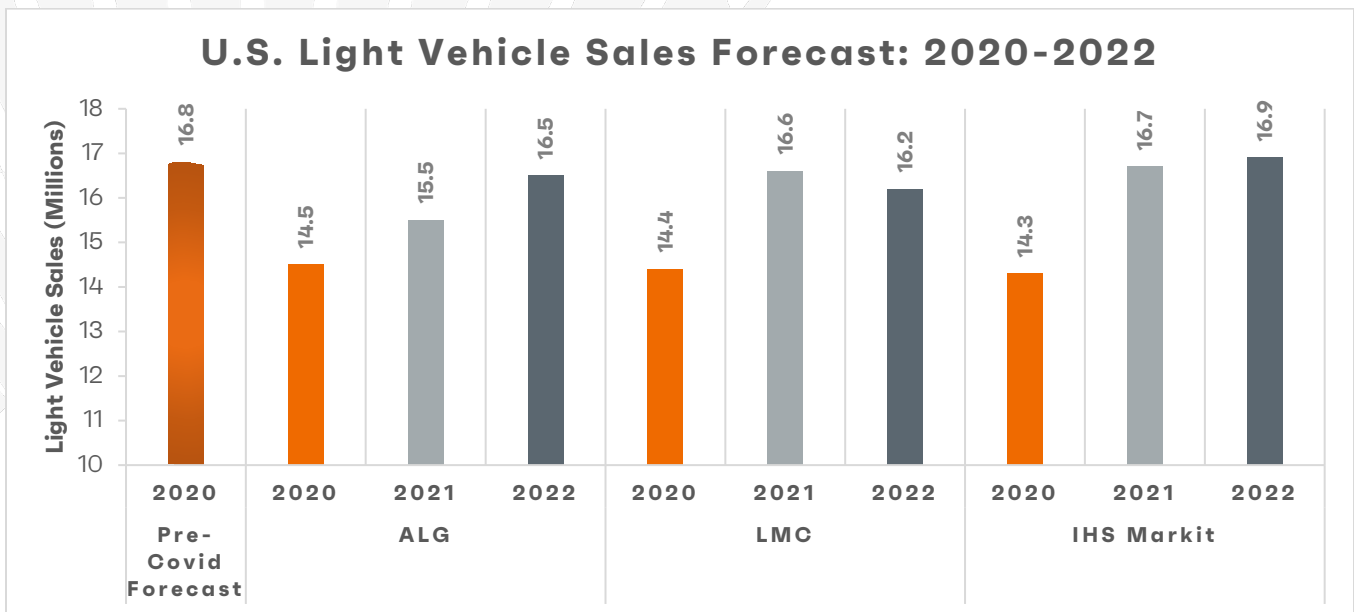
U.S. Light Vehicle Sales Outlook (Updated 8/4)

Wards Intelligence Outlook⁴: “If not for the dearth of inventory, sales in 2021 would be tracking above 17 million units for the entire year. Instead, the year-to-date seasonally adjusted annual rate through July is at 16.5 million units. Sales are expected to rebound before the end of the year but Wards Intelligence partner LMC Automotive has lowered its outlook for 2021 to 16.6 million units from 16.9 million. To get to the forecast, sales over the final five months will have to total a 16.7 million-unit SAAR.

“But sales are not likely to improve much, if at all, in August from July, and possibly could be worse.

“Since the inventory drain began, a higher percentage of a current month’s output is making its way through the pipeline to count as final sales within the same month to meet surging demand. That factor, combined with beginning-month inventory, could mean sales turn up in August on a seasonally adjusted basis, but WI’s initial outlook calls for a decline from July’s 14.8 million-unit SAAR.

“If sales don’t start to rebound in August, month-to-month growth should begin in September, and Q4 could be one of the strongest 3-month periods on record.”



North American Production & Inventory Outlook (Updated 8/18)

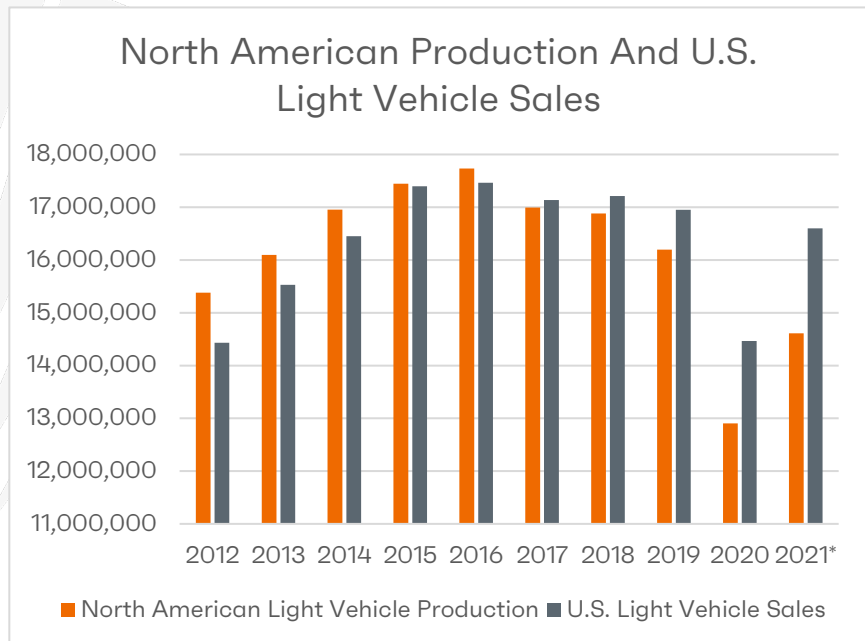
Wards Production Tracker (8/18): This month, Wards Intelligence’s “Production Plant Forecast” was revised down 380,000 units for the third quarter and 1.18 million units for 2021.⁵ Total North American units for 2021 is now 14,611,185.

Wards Intelligence Global Production Outlook (8/18)⁶: “Global light-vehicle production is forecast to end 2021 about 3.75 million units lower because of the shortage of microchips to the automotive industry, which has caused major cutbacks in vehicle output in all regions. Wards Intelligence partner LMC Automotive expects production to end 2021 at 83.2 million units but output could have totaled close to 87 million if not for the chip shortage. The estimated cuts exclude losses due to other unusual disruptions to the supply chain, meaning production ultimately could have topped 87 million in 2021. Forecast 2021 output still represents a big gain of 11.6% from 2020’s pandemic-slammed total of 74.6 million units, which was 15.9% below 2019’s 88.7 million and 21.5% below the record year of 2017 when production totaled 95.1 million.

“By region, North America is forecast to lose the most output – 1.46 million units – from the chip shortage, followed by 938,000 in Europe. Combined, the two regions account for 64% of the estimated global losses. China, geographically the biggest volume manufacturer of light vehicles, is expected to account for 16% - 615,000 units - of the 2021 chip-related losses.”

IHS Markit Outlook (8/18)⁷: “The outlook for North America light vehicle production was sharply reduced by 775,000 units for 2021 and increased by 192,000 units for 2022 (and increased by 406,000 units for 2023). The production outlook for 2021 was meaningfully reduced in the near-term as the semiconductor supply chain is not improving at the pace that was expected with renewed COVID-19 restrictions adding further weight to an already hamstrung global supply chain. Production in Q3-2021 was revised down 11.8% or 433,000 units on continuing and expected incremental downtime. Production in the third quarter

was expected to begin a marked improvement in the supply of semiconductors with the August 2021 forecast release essentially erasing any increases compared to the benchmark December 2020 forecast. Production in the Q4-2021 was revised down 8.3% or 333,000 units amid expectations for disruptions to continue for a more protracted period that extends through Q2-2022. Production in 2022 was revised higher by 192,000 units with production more heavily weighted in the second half amid expectations that the semiconductor industry will be able to support levels that allow automakers to finally begin recovering lost volume. Significant production recovery is limited due to expectations of a tougher first half along with many high-volume plants unable to produce beyond their already strong work patterns with this phenomenon decidedly weighting on full-size pickup production.”



Wards Intelligence Inventory Outlook: “Despite the current gloom, irrespective of whether sales strengthen or weaken in August from July, inventory should rise month-to-month for the first time since January, setting the stage for robust results in Q4.”⁸

Wards Intelligence August Production Outlook: “Currently, production is forecast to pick up significantly in August from July – in fact, despite a swath of known plant downtime caused by the chip issue, LMC expects August to be the strongest production month to-date this year.

“However, as has been the trend through the first seven months of this year, supply-chain disruptions could continue to push future production totals below expectations, mainly from the microchip shortage - and there already is planned factory downtime as far ahead as October due to the chip shortage - but existing bottlenecks in shipments via water, rail and truck also loom large.

“Furthermore, the rise in Covid-19 cases in North America and abroad could cause an increase in safety measures that further limit vehicle production for the U.S.”⁹

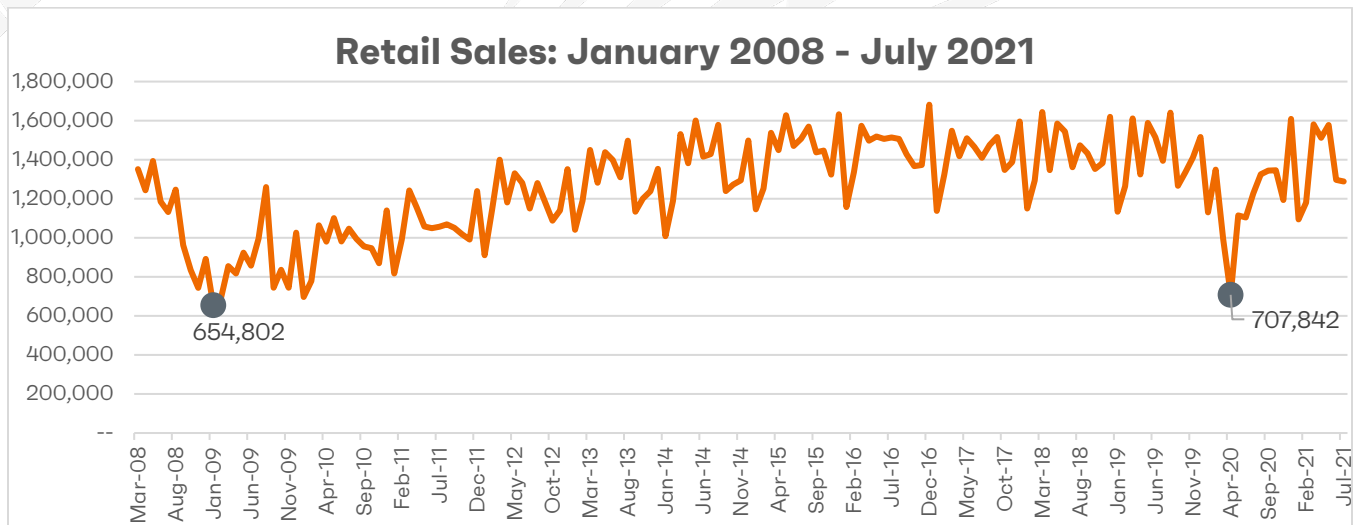
“Wards Intelligence partner LMC Automotive slashed over 200,000 units from its July North America production estimate – nearly all due to the microchip shortage.”¹⁰

Market Meter

U.S. Light Vehicle Sales (Updated 8/4)

Monthly Sales (Updated 8/4)

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.



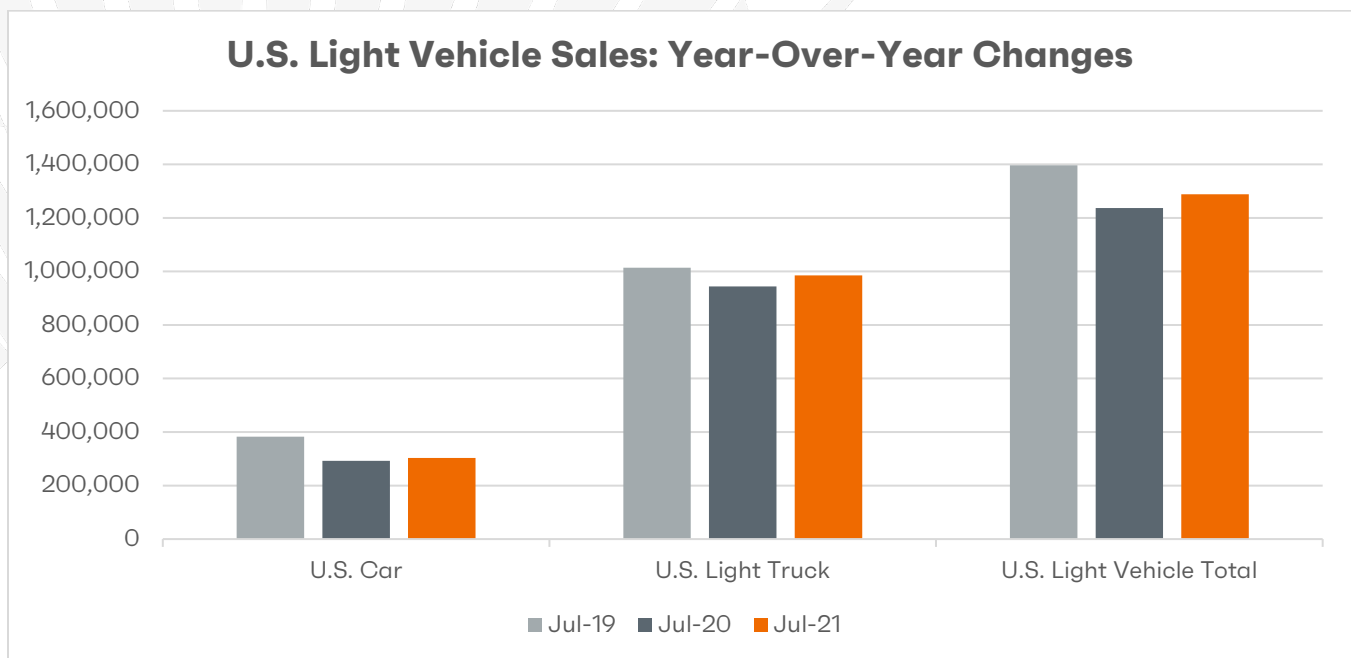
July Sales (Updated 8/4)

WardsIntelligence: “Ever-worsening product availability further capped U.S. light-vehicle sales in July, as deliveries on an annualized basis fell sequentially a third straight month to the lowest level outside of pandemic-ridden 2020 in over eight years.

“July sales totaled a seasonally adjusted annual rate of 14.8 million units, nearly the same as like-2020’s 14.7 million, but the third in a string of declines that began in May when sales fell to 17.0 million from April’s 18.3 million, followed by another huge drop to 15.4 million in June. Prior to 2020, the last time a monthly SAAR was lower than July’s total was 14.5 million units in October 2012.

“July’s raw volume totaled 1.289 million units, 4.2% above like-2020’s 1.237 million units, which was an 8-year low for the period due to lockdown measures taken last year to battle the Covid-19 pandemic. The daily selling rate over the month’s 27 selling days was 47,722, 0.3% above July 2020’s 47,563 – 26 selling days.

Calendar year-to-date volume through July totals 9.57 million units, 25.1% above 7-month 2020’s 7.65 million. The year-to-date SAAR totals 16.5 million units vs. January-July 2020’s 13.2 million.”¹¹



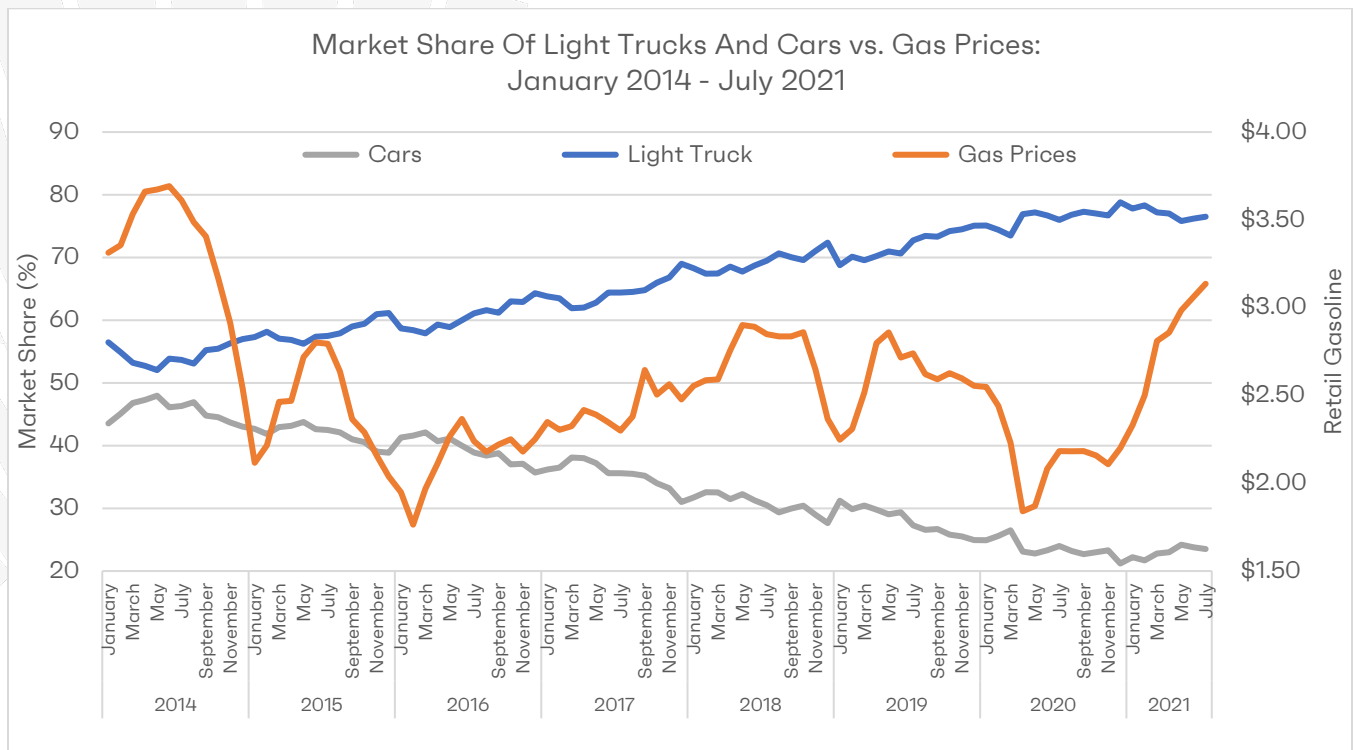
Fleet Sales (Updated 6/3)

Wards Intelligence: “Estimated fleet volume in May, although up 95% from year-ago’s pandemic downward-skewed total, accounted for just 10% of the month’s volume after averaging 16% in the first four months of 2021 and well below its pre-pandemic mark of close to 20%.”¹²

Segments vs. Gas Prices (Updated 8/4)

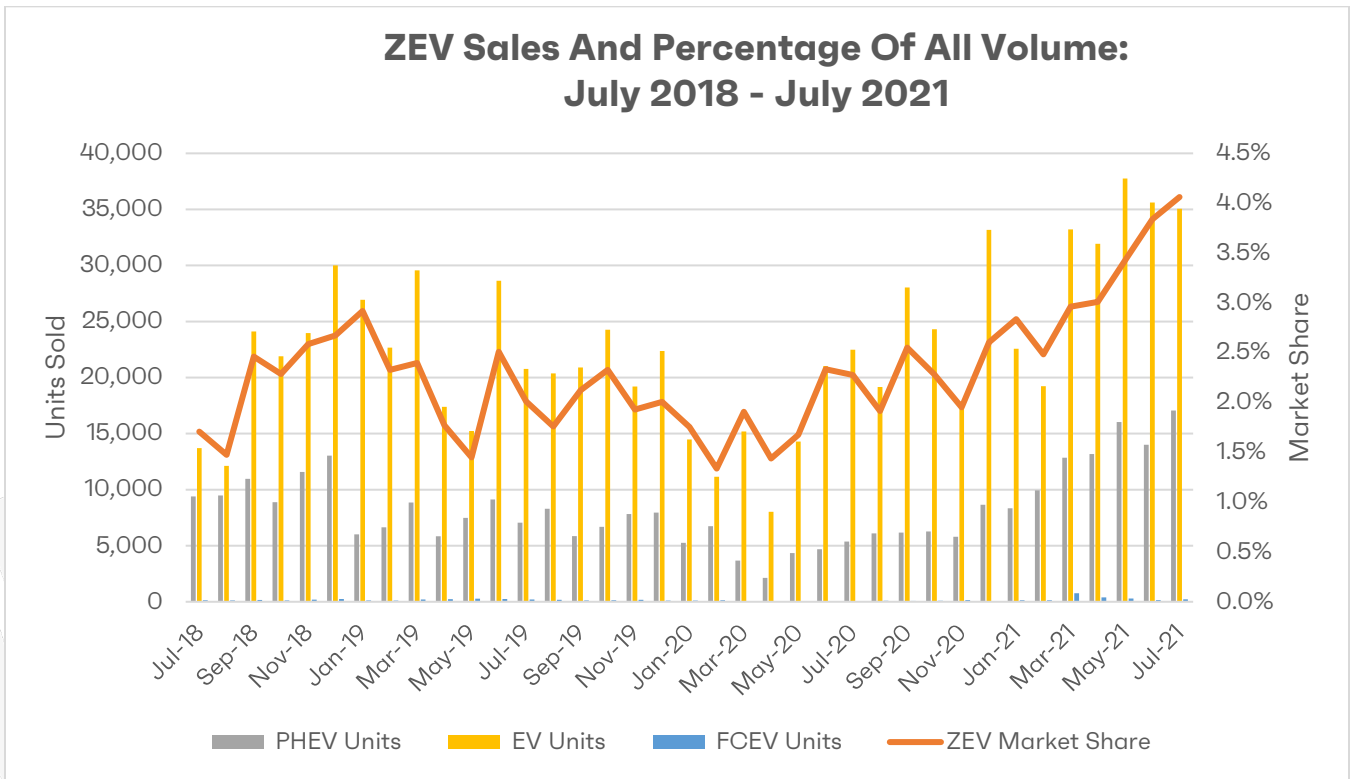
Monthly Sales For June: Light trucks accounted for 76.5% of sales in June, a .2% increase in market share from a year ago. Compared to 2020, sales of cars are up more than 10,000, but down nearly 80,000 from June 2019.

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 segments¹³ and gas was over \$3.00¹⁴ 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 \$2.67 a gallon (through June 2021) 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.¹⁵



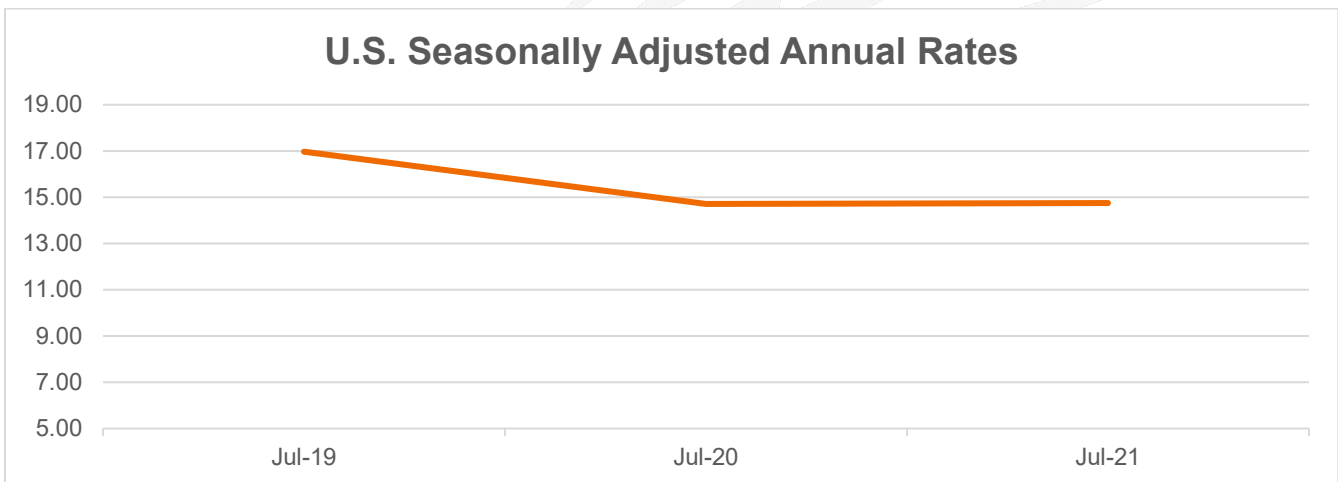
ZEV Powertrain Sales (Updated 8/4)

Sales of zero emission vehicles (BEV, PHEV, & Fuel Cell) accounted for 4.1% of total vehicle sales in June 2021, up 1.8% from a year ago and up .3% from June 2021. Sales of battery electric vehicles led the way for ZEVs, accounting for 2.72% of total sales, up .89% from July 2020. Plug-in hybrids accounted for 1.32%, three times the amount from the same time last year.¹⁶



Seasonally Adjusted Annual Rates (Updated 8/4)

WardsIntelligence: “July sales totaled a seasonally adjusted annual rate of 14.8 million units, nearly the same as like-2020’s 14.7 million, but the third in a string of declines that began in May when sales fell to 17.0 million from April’s 18.3 million, followed by another huge drop to 15.4 million in June. Prior to 2020, the last time a monthly SAAR was lower than July’s total was 14.5 million units in October 2012.”¹⁷

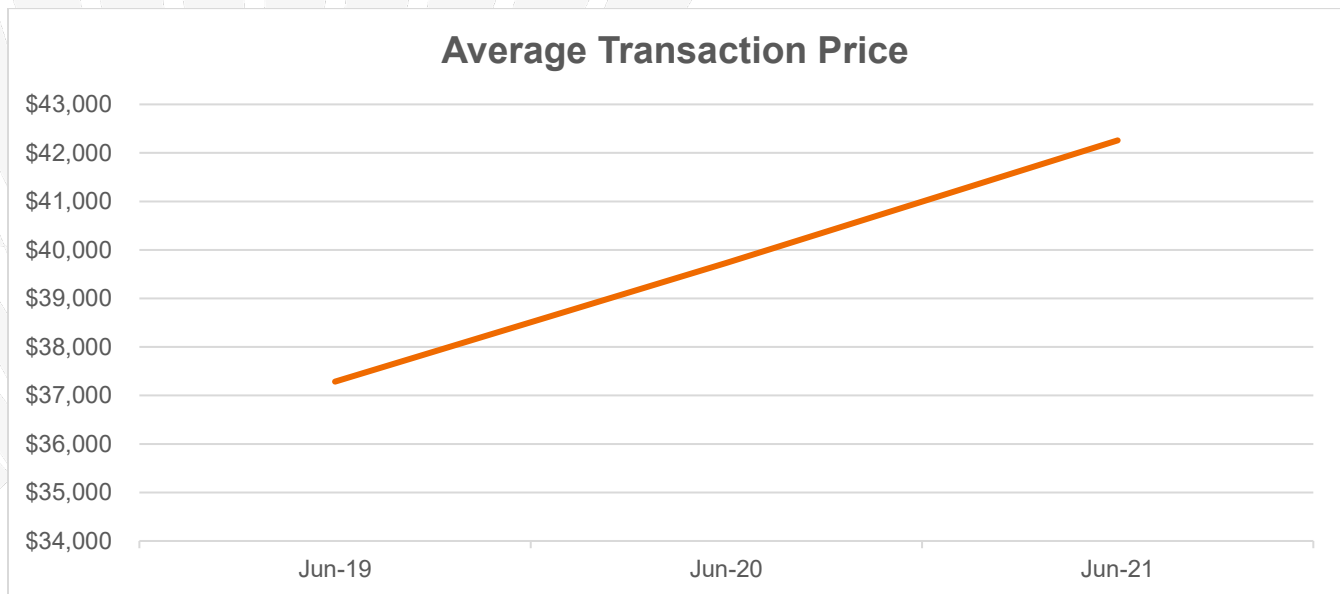


Average Transaction Price (Updated 8/4)

J.D. Power¹⁸: “For July 2021, average transaction prices are expected reach an all-time high of \$41,044. For context, average transaction prices are trending to be nearly 17% higher in July 2021 than they were in July 2020. This is partially due to the continued retraction in manufacturer incentives. The average manufacturer incentive per vehicle is on pace to be \$2,065, a decrease of \$2,170 from a year ago and the lowest amount on record for the month of July. Expressed as a percentage of the average vehicle MSRP, incentives for July 2021 are trending toward a record low of 4.8%, down nearly 5.5 percentage points from a year ago, and the first time on record below 5%.

“The combination of strong retail volumes and higher prices means that consumers are on track to spend \$48.7 billion on new vehicles this month, the highest on record for the month of July.”

Kelley Blue Book: “The estimated average transaction price for a light vehicle in the United States was \$41,263 in May 2021, according to the analysts at Kelley Blue Book. New-vehicle prices increased \$2,125 (up 5.4%) from May 2020, while increasing \$493 (up 1.2%) from April 2021.”¹⁹

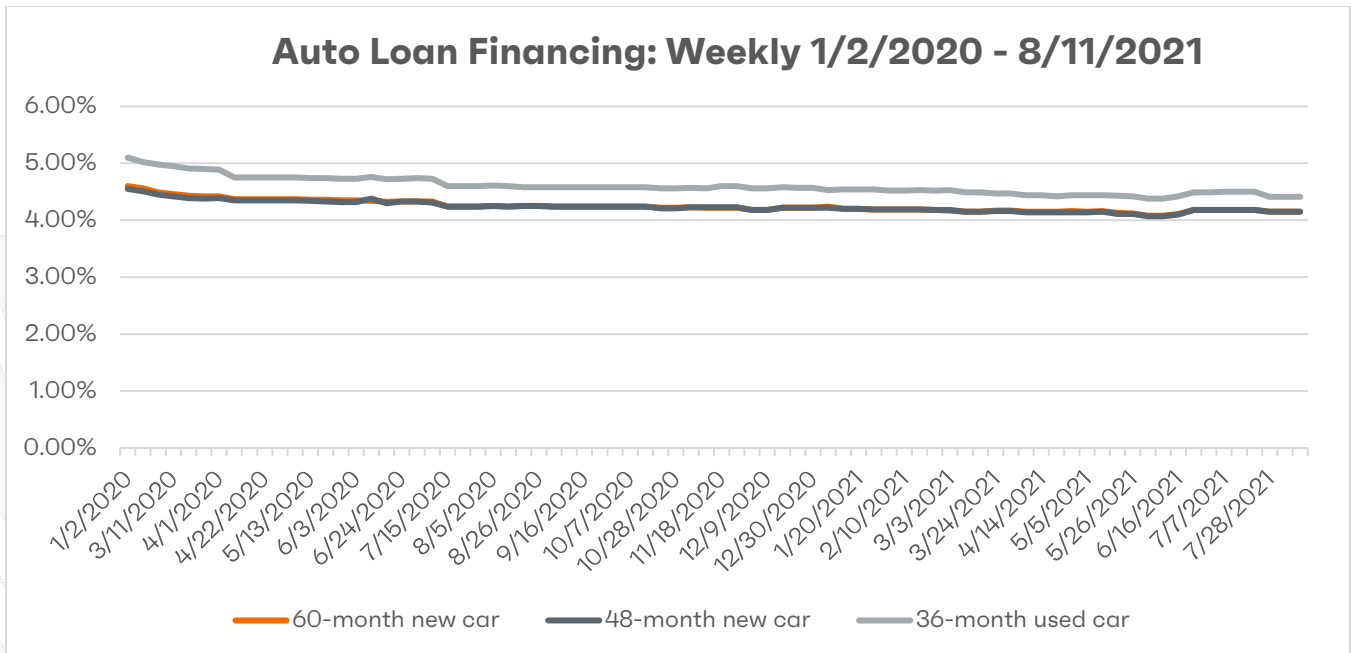


Auto Loan Financing (Updated 8/12)

Financing Steady: Interest rates for new cars and used cars held steady for the third week in a row. The interest rate for 60 months currently stands at 4.15%. Rates also remained the same for a 36-month used car loan at 4.41%. Since the beginning of last year, rates are down 0.45%, and down 0.09% since the same time a year ago.²⁰

Dates	60-month new car	48-month new car	36-month used car
8/12/2020	4.24%	4.24%	4.60%
1/2/2020	4.60%	4.55%	5.10%

8/4/2021	4.15%	4.15%	4.41%
8/11/2021	4.15%	4.15%	4.41%
One Week Change	0.00%	0.00%	0.00%
Two Week Change	0.00%	0.00%	0.00%
Change since 1/3/20	-0.45%	-0.40%	-0.69%
One Year Change	-0.09%	-0.09%	-0.19%

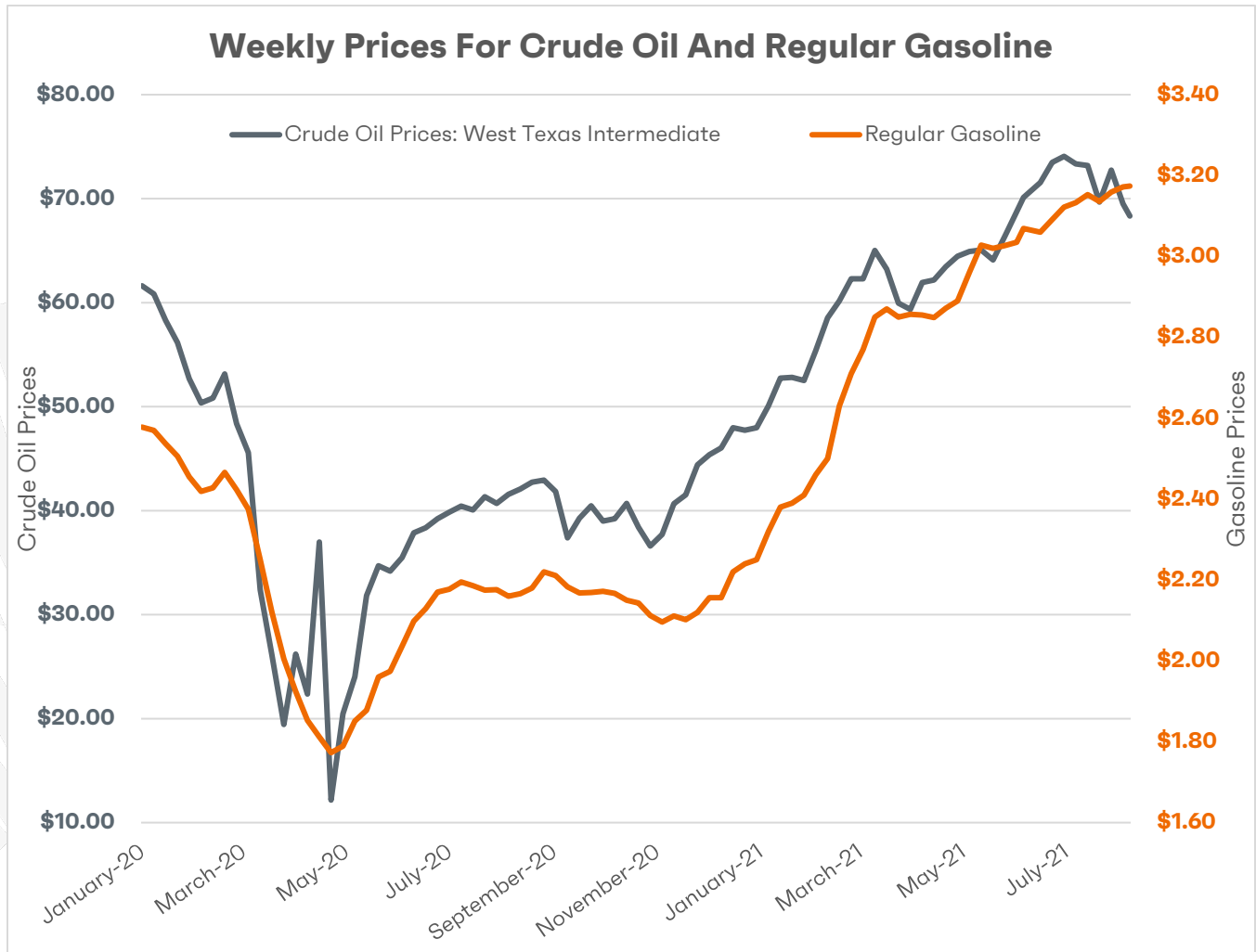


Crude Oil and Gas Prices (Updated 8/18)

EIA Outlook For Gasoline²¹: “U.S. regular gasoline retail prices averaged \$3.14 per gallon (gal) in July, the highest monthly average price since October 2014. Recent gasoline price increases reflect rising crude oil prices and rising wholesale gasoline margins, amid relatively low gasoline inventories. We expect that prices will average \$3.12/gal in August before falling to \$2.82/gal, on average, in 4Q21. The expected drop in retail gasoline prices reflects our forecast that gasoline margins will decline from elevated levels, as is typical in the United States during the second half of the year.”

EIA Outlook For Oil²²: “Brent crude oil spot prices averaged \$75 per barrel (b) in July, up \$2/b from June and up \$25/b from the end of 2020. Brent prices have been rising this year as result of steady draws on global oil inventories, which averaged 1.8 million barrels per day (b/d) during the first half of 2021 (1H21) and remained at almost 1.4 million b/d in July. We expect Brent prices will remain near current levels for the remainder of 2021, averaging \$72/b from August through November. However, in 2022, we expect that continuing growth in production from OPEC+ and accelerating growth in U.S. tight oil production—along with other supply growth—will outpace decelerating growth in global oil consumption and contribute to Brent prices declining to an average of \$66/b in 2022.”

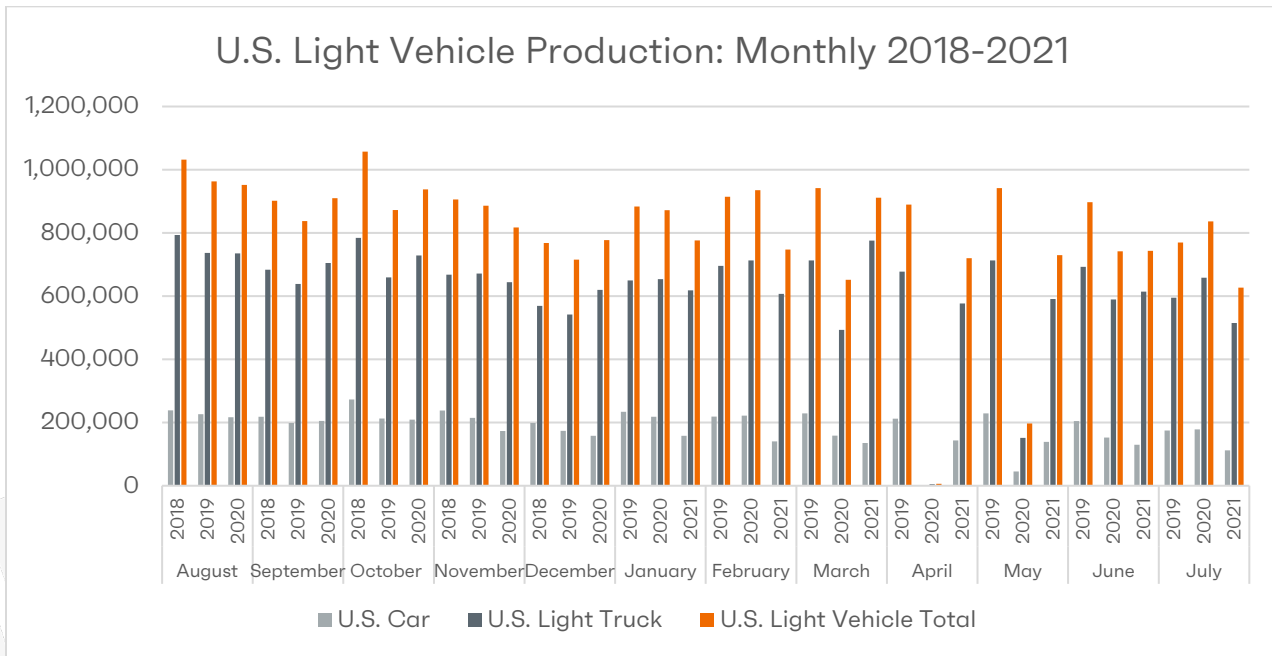
Gas Prices Holding Above \$3.17 A Gallon: Oil prices, as benchmarked at West Texas Intermediate, fell slightly in mid-August to just over \$68 a barrel, remaining near three year highs. Since election day, oil prices have climbed nearly \$31 a barrel. Gas prices held steady this week at \$3.17, the highest mark since October 2014. Gas is 23% higher than the beginning of 2020.²³



Production Meter

U.S. Light Vehicle Production (Updated 8/18)

U.S. Light vehicle production for July 2021 totaled 626,718, down 25% from 2020:



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U.S. Light Vehicle Inventory and Days' Supply (Updated 8/4)

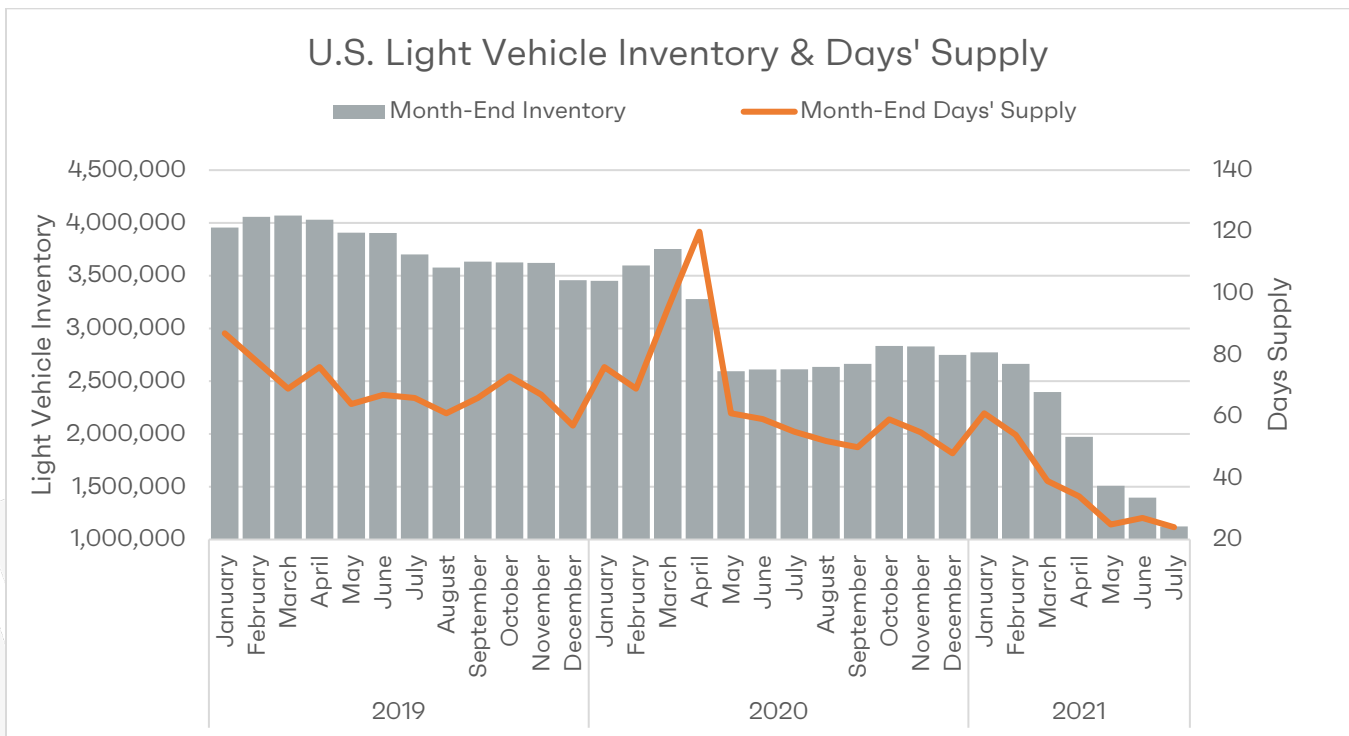
WardsIntelligence Inventory Update²⁵: “U.S. light-vehicle inventory fell 19.4% from June, finishing July at 1.12 million units, 56% below the same year-ago period.

“The decline continues a trend of sharply falling inventory due to supply disruptions caused mostly by the global microchip shortage that have sharply curtailed production for the U.S. market in North America and overseas plants. The downward slide has been ongoing since January, with declines accelerating in Q2.

“July 31 days’ supply totaled 24, down from like-2020’s 54 and well below the 60-65 range normal for the month.

“Inventory of domestically made vehicles totaled 829,889 units, down 58% from like-2020, and equal to a 23 days’ supply. Import inventory totaled 293,252 units, down 51% year-over-year, and equal to a 24 days’ supply.

“Despite the current gloom, irrespective of whether sales strengthen or weaken in August from July, inventory should rise month-to-month for the first time since January, setting the stage for robust results in Q4.”



Global Meter

Global Light Vehicle Sales Outlook (Updated 7/21)

Wards Intelligence Outlook: “Global vehicle sales reached 7.15 million in May, jumping 34.6% over year-ago’s 5.31 million. Despite the growth, sales for the month fell 8% compared to May 2019’s 7.78 million.

“Improvement in vehicle sales was seen in every region, with South America recording the highest increase (+158.3%). Several countries across all regions experienced three-digit gains in sales.

“Through the first five months of 2021, world light-vehicle sales jumped 34.9% to 34.91 million, compared to year-ago’s 25.88 million. The recovery in vehicle sales is visible since the market is slowly approaching 2019’s levels.

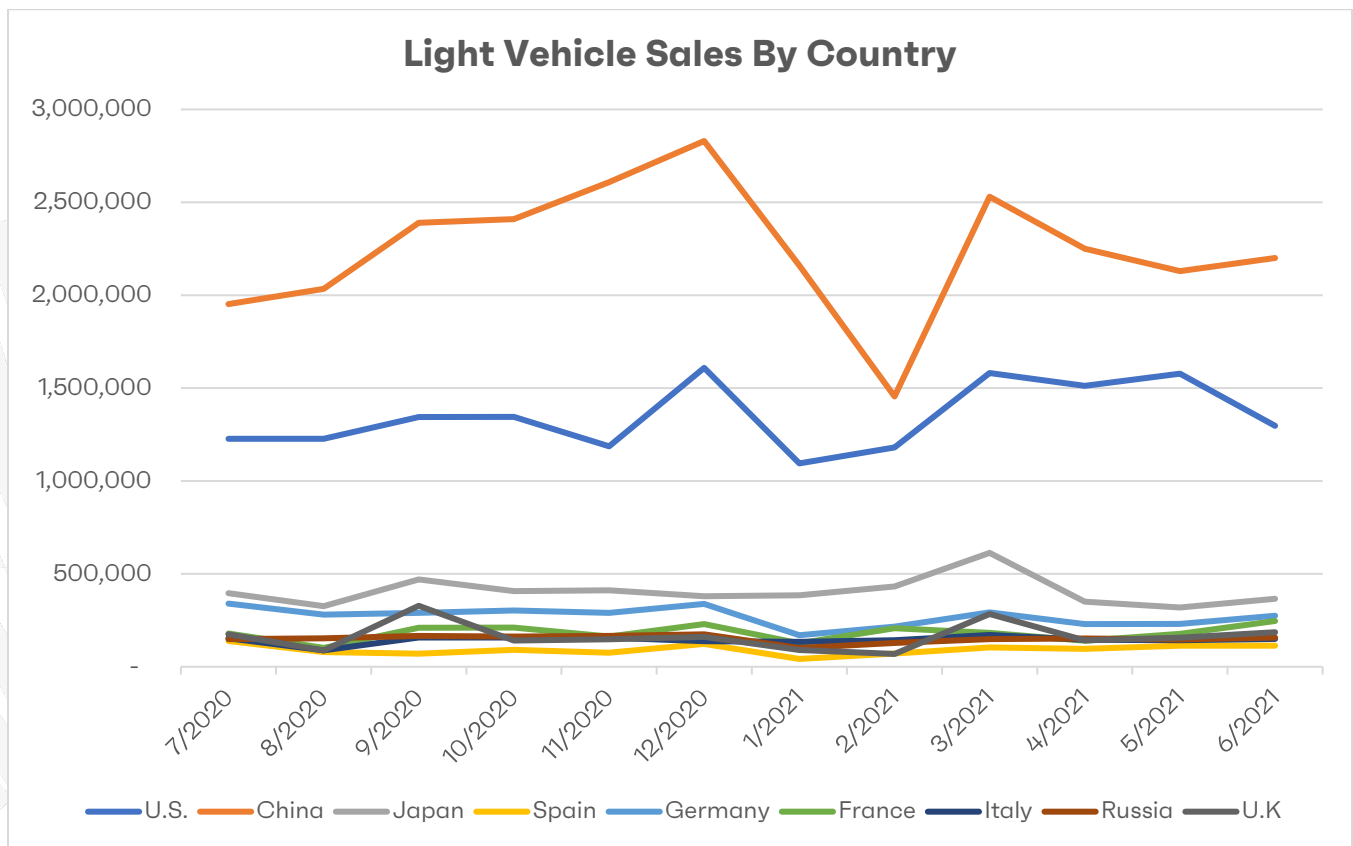
“Vehicle sales in Asia-Pacific saw an 8.1% year-on-year increase, reaching 3.15 million. But May deliveries were 12.5% lower than prior month. Most countries saw a strong uptake in total vehicle sales except for China and South Korea.

“In Europe, all countries saw vehicle sales increase in May, raising the region’s global market share to 21.1%. Total deliveries jumped 76.9% to 1.51 million. The U.K. and Ireland experienced the biggest jumps in vehicle sales at 554.6% and 264.5%, respectively.

“South America experienced the highest growth at 158.3% reaching 279,000 vehicle sales in May. Brazil, Chile, and Venezuela deliveries increased more than 200%. Year-to-date sales were up 37.7% to 1.39 million for the region.

“World sales saw slower growth in May compared to prior month, while year-to-date deliveries were down 4% compared to 2019.”²⁶

Sales in select countries around the globe, raw volume by month:

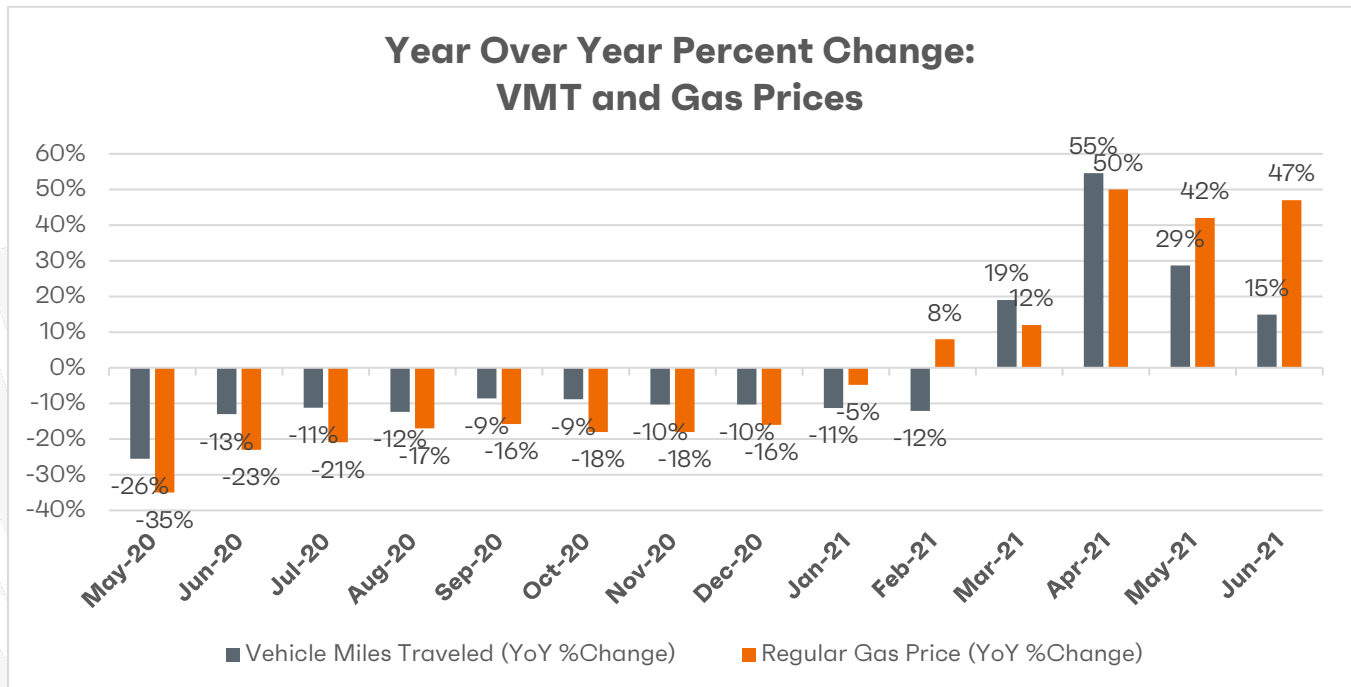


Recovery Meter

Roadway Travel (Updated 8/12)

According to the U.S. Department of Transportation, seasonally-adjusted vehicle miles traveled in June rose 14.9% from the same time a year ago. The cumulative travel estimate for 2021 is 1,504.6 billion vehicle miles.²⁷

- Travel on all roads and streets changed by 14.5% (35.7 billion vehicle miles) for June 2021 as compared with June 2020. Travel for the month is estimated to be 282.5 billion vehicle miles.
- The seasonally adjusted vehicle miles traveled for June 2021 is 267 billion miles, a 14.9% (34.7 billion vehicle miles) increase over June 2020. It also represents 1.7% increase (4.5 billion vehicle miles) compared with May 2021.
- The cumulative estimate for the year is 1,504.6 billion vehicle miles of travel.



Economic News (Updated 8/12)

Manufacturing Added 27,000 Jobs In July. “Manufacturing boosted employment by 27,000 jobs in July, with durable goods doing the heavy lifting. Durable goods accounted for 20,000 jobs of last month’s gain, according to a breakdown by industry issued today by the U.S. Bureau of Labor Statistics. . . . Manufacturing totaled 12.366 million jobs on a seasonally adjusted basis in July. That was up from an adjusted 12.339 million the month before and 12.037 million in July 2020. In 2020, manufacturing felt the impact of the COVID-19 pandemic. Some industries shut plants to implement new safety procures to deal with the virus. Manufacturing employment still lags pre-pandemic levels. The manufacturing job total is 433,000 below February 2020, the last month before COVID-19 began to hit the U.S. economy.”²⁸

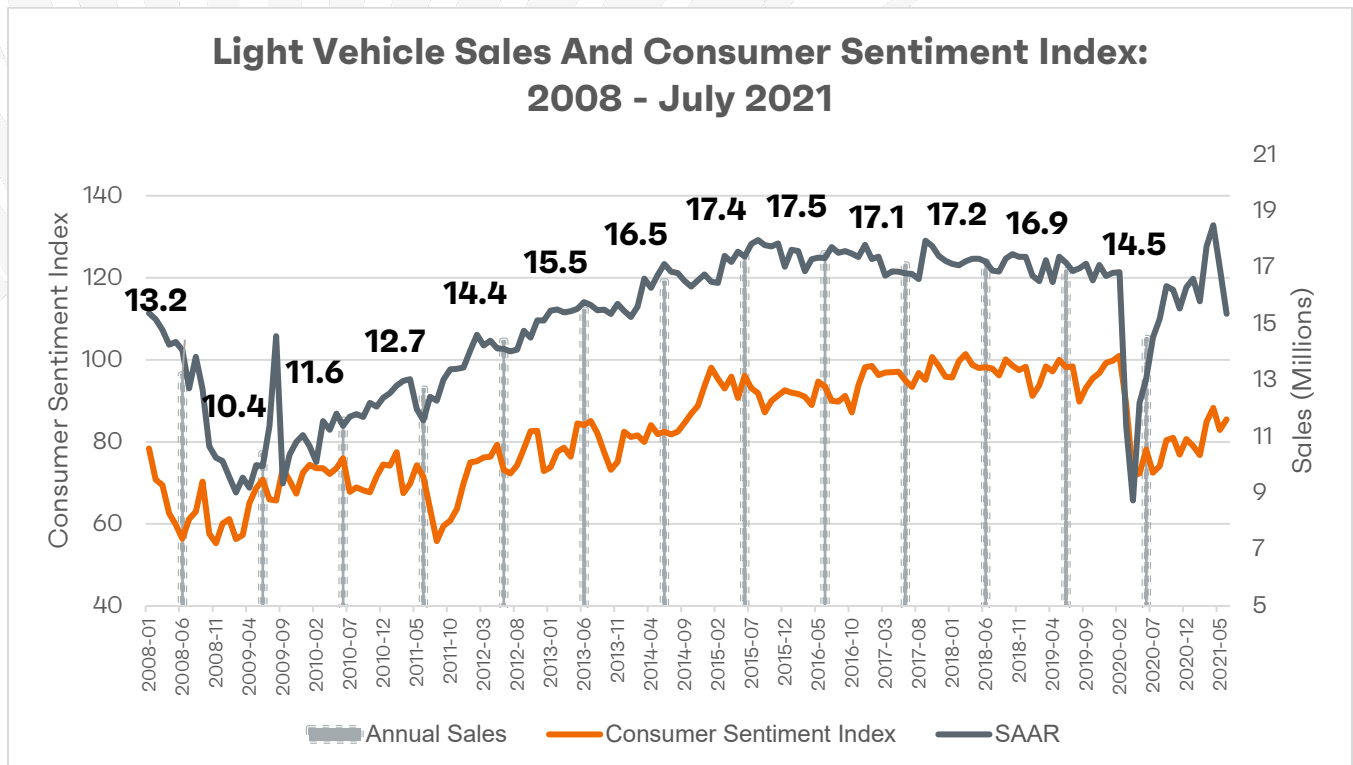
Motor Vehicles And Parts Were Up 800 (Seasonally Adjusted). “Transportation equipment, a major category, was down 1,500 jobs, although the motor vehicles and parts category was up 800.”²⁹

For July, The ISM Ticked Down To 59.5 From 60.6 In June. “U.S. manufacturing continued to grow in July, though the pace slowed for the second straight month as spending rotates back to services from goods and shortages of raw materials persist. The Institute for Supply Management (ISM) said on Monday its index of national factory activity fell to 59.5 last month, the lowest reading since January, from 60.6 in June. A reading above 50 indicates expansion in manufacturing, which accounts for 11.9% of the U.S. economy. Economists polled by Reuters had forecast the index little changed at 60.9.”³⁰

The Index Of Prices For Raw Materials Fell To 85.7, The Largest Drop Since March 2020. “The ISM survey's measure of prices paid by manufacturers fell to a reading of 85.7 last month from a record 92.1 in June, reflecting an easing in commodity prices. The drop - the largest pullback in the index since March 2020 - supports Federal Reserve Chair Jerome Powell's contention that inflation will moderate as supply constraints abate.”³¹

Consumer Confidence and Sales (Updated 8/4)

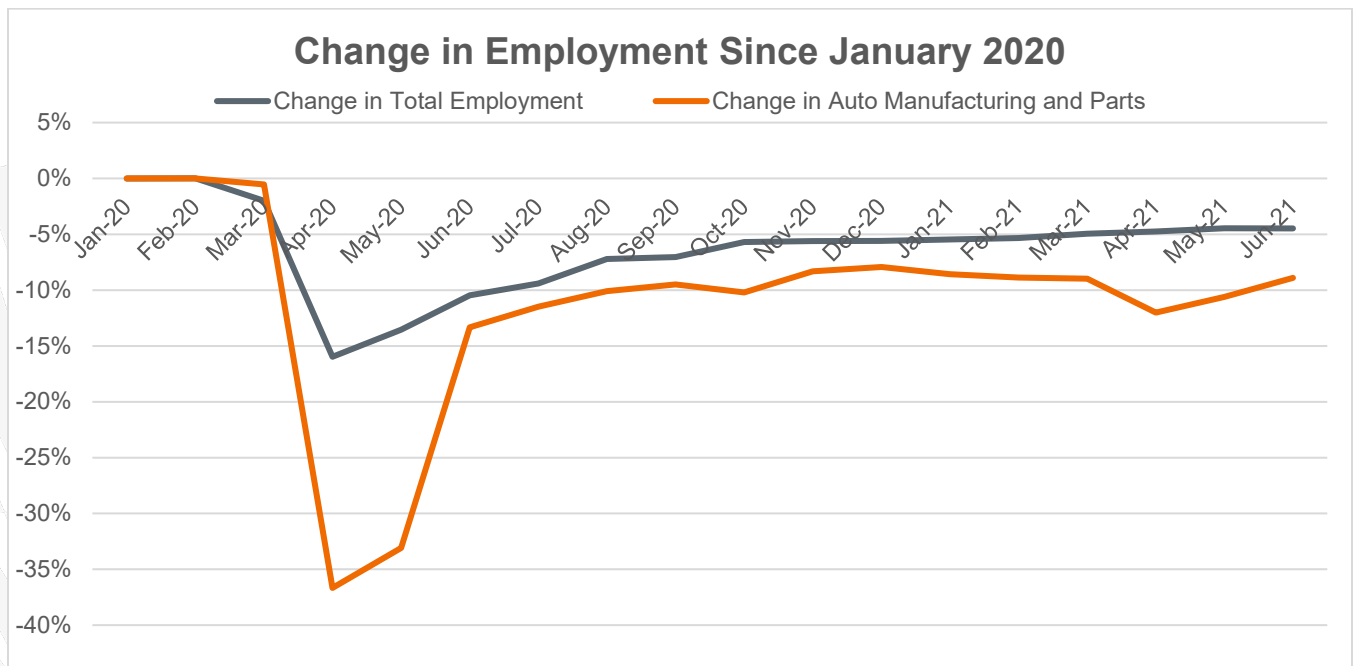
“Consumer sentiment edged upward at the end of July, although it still posted a monthly decline of 5.0%. The largest monthly declines remained concentrated in the outlook for the national economy and complaints about high prices for homes, vehicles, and household durables. While most consumers still expect inflation to be transitory, there is growing evidence that an inflation storm is likely to develop on the not too distant horizon. The improved finances of consumers have greatly reduced consumers' resistance to price increases.”³²



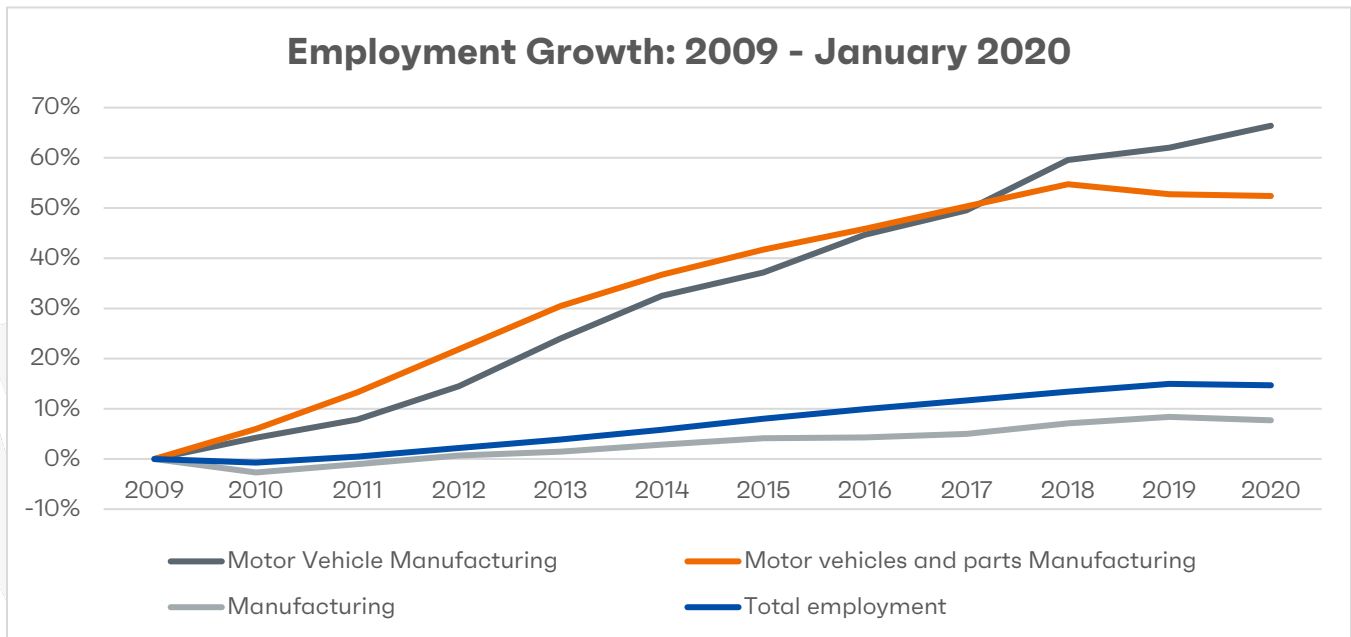
Employment (Updated 8/12)

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. Employment in motor vehicles and parts is down 96,000 jobs since January 2020.³³

- **Motor Vehicle And Parts Manufacturing Added 800 Jobs In July.**³⁴



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.³⁵ 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.



Sources

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² Haig Stoddard, "COVID-19 Impact Will Tank March, Second-Quarter U.S. Light-Vehicle Sales," *WardsIntelligence*, 3/25/20; Haig Stoddard, "March 25 COVID-19 Update: 2020 North America Production, U.S. Sales Forecasts," *WardsIntelligence*, 3/30/20; Haig Stoddard, "U.S. Light-Vehicle Sales Start on the Road Back in May," *WardsIntelligence*, 5/21/20

³ Haig Stoddard, "COVID-19's Toll on North America Vehicle Production in March, Q2," *WardsIntelligence*, 3/30/20; Haig Stoddard, "North America Platform by Plant Production Forecast - 2020-2022," *WardsIntelligence*, 1/8/21

⁴ Haig Stoddard, "July U.S. Light-Vehicle Inventory Falls 19%; 2021 Sales Outlook Chopped," *WardsIntelligence*, 8/4/21

⁵ Wards Intelligence, "North America Platform by Plant Production Forecast - 2021-2023," 8/9/21

⁶ Haig Stoddard, "Microchip Shortage to Shave 3.75 Million Units from 2021 Global Light-Vehicle Output," *WardsIntelligence*, 8/10/21

⁷ IHS Markit, email, "IHS Markit Monthly Automotive Update - August 2021," 8/16/21

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⁹ Haig Stoddard, "July U.S. Light-Vehicle Inventory Falls 19%; 2021 Sales Outlook Chopped," *WardsIntelligence*, 8/4/21

¹⁰ Haig Stoddard, "U.S. Light-Vehicle Sales Continue Downward Slide in July," *WardsIntelligence*, 8/4/21

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