

READING THE METER

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

May 5, 2021

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Forecast Meter

Forecast Summary (Updated 5/5)

2020-2021 Sales, ¹ Extended Sales Forecast ² and Production Forecasts ³		
	U.S. Sales & Forecasts	North American Production
June '20	1,103,791 (-24% YoY)	743,216 (-17% 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 st Quarter '20	3,476,512 (-12.7% YoY)	3,754,533 (-11.7% YoY)
2 nd Quarter '20	2,948,410 (-33.3% YoY)	1,371,420 (-67.6% YoY)
3 rd Quarter '20	3,904,539 (-9.2% YoY)	3,989,982 (-.5% YoY)
4 th Quarter '20	4,159,622 (-2.1% YoY)	3,789,512 (-2.5% YoY)
1 st Quarter '21	3,869,872 (+11.3 YoY)	3,688,512 (-4.7% YoY)
2020 Calendar Year	14,463,935 (-14.7% YoY)	12,905,447 (-23.1%)
2021 Full Year Estimate	16.6 million units (14.5% YoY)	15.8 million units (22.7% YoY)

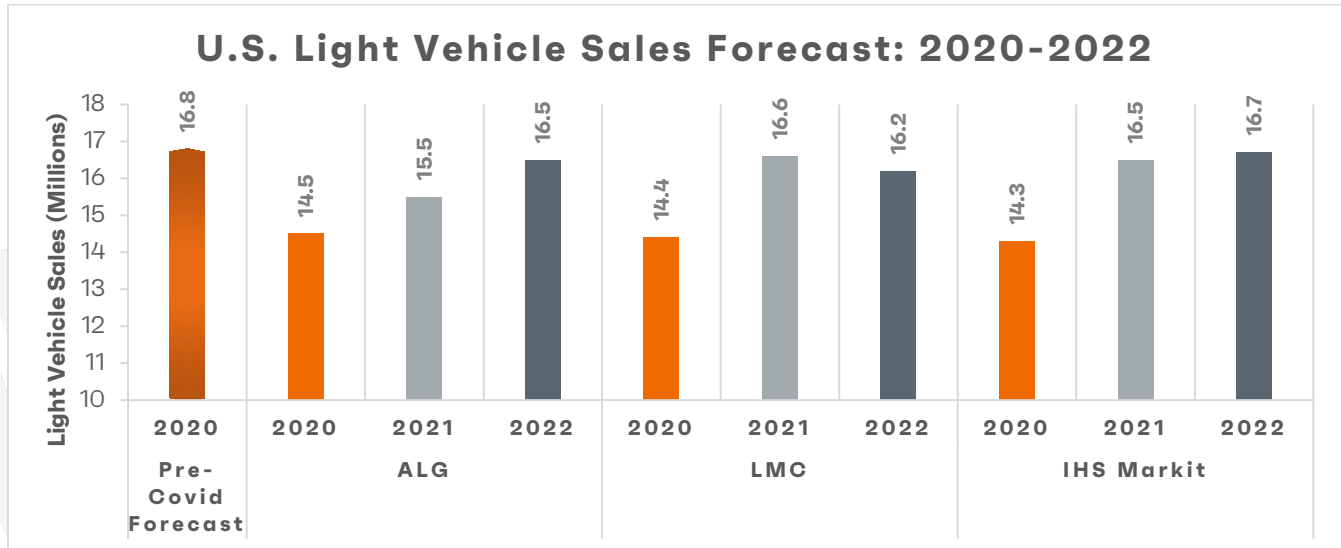
U.S. Light Vehicle Sales Outlook (Updated 5/5)

Wards Intelligence May Outlook⁴: “Current demand is enough to keep sales above an 18 million annualized rate in the short term, but the inventory drain – which is not expected to start improving until Q3 – at some point will drag sales down to much lower levels.

“Normal month-to-month patterns are broken, making it tougher to get a bead on the rest of Q2. Sales likely will start off May continuing March-April demand but how strong they can remain through the end of the month is an open question.

“Theoretically, sales could be as high as beginning-month inventory plus deliveries dealers get during the month. How well dealers can facilitate turnover – getting a customer into a vehicle in stock, including products not their first choice, and turnover vehicles in transit to dealerships – could keep sales at March-April levels. ...

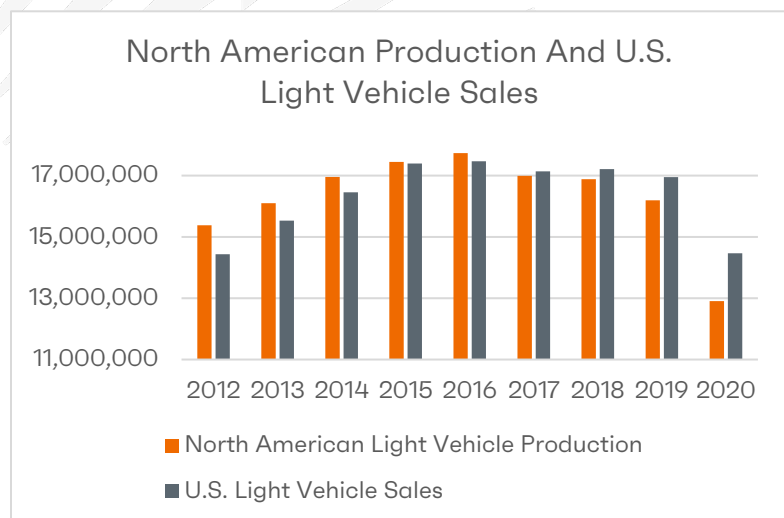
[O]ur initial outlook for May is a SAAR range of 16.3 million to 18 million units. June will decline – perhaps significantly – from May’s results. Sales should start turning upward again in Q3. Wards Intelligence/LMC Automotive is forecasting 2021 light-vehicle sales of 16.6 million units with a strong end-of-year expected. But if the chip shortage continues to worsen, that will put downward pressure on the 2021 forecast.”



North American Production Outlook (Updated 4/21)

WardsIntelligence Update:

“Production losses mostly related to the microchip shortage continue to stack up. North America production of light-vehicles and medium-/heavy-duty trucks is tracking to 199,000 units less in the second quarter than what was projected for the period a month ago in Wards Intelligence’s Production Tracker. It was offset partially by the first quarter finishing higher than expected, but total first-half 2021 output has been reduced 117,000 units from March’s revision. Thanks to the global microchip shortage and a winter-storm-caused reduction in oil produced to make petrochemicals for automotive parts, the short-term production outlook remains shaky. During March, and in the first half of April, scheduled production



slowdowns in the second quarter continually grew, creating a sense that the microchip shortage still has more to play out in terms of production stoppages before summer.

“Furthermore, although the messaging remains that most of the supply issues can be smoothed out heading in the second half of the year, there are rumblings that microchip capacity for the automotive industry still will be a problem throughout the remainder of the year. . . .

“The second-quarter outlook is 191,000 units below December’s projection for the period. Thus, the estimated total first-half loss stands at 678,000 units. Second-quarter production is pegged at 3.941 million units, 176% above Q2-2020’s pandemic-smacked total of 1.427 million units.”⁵

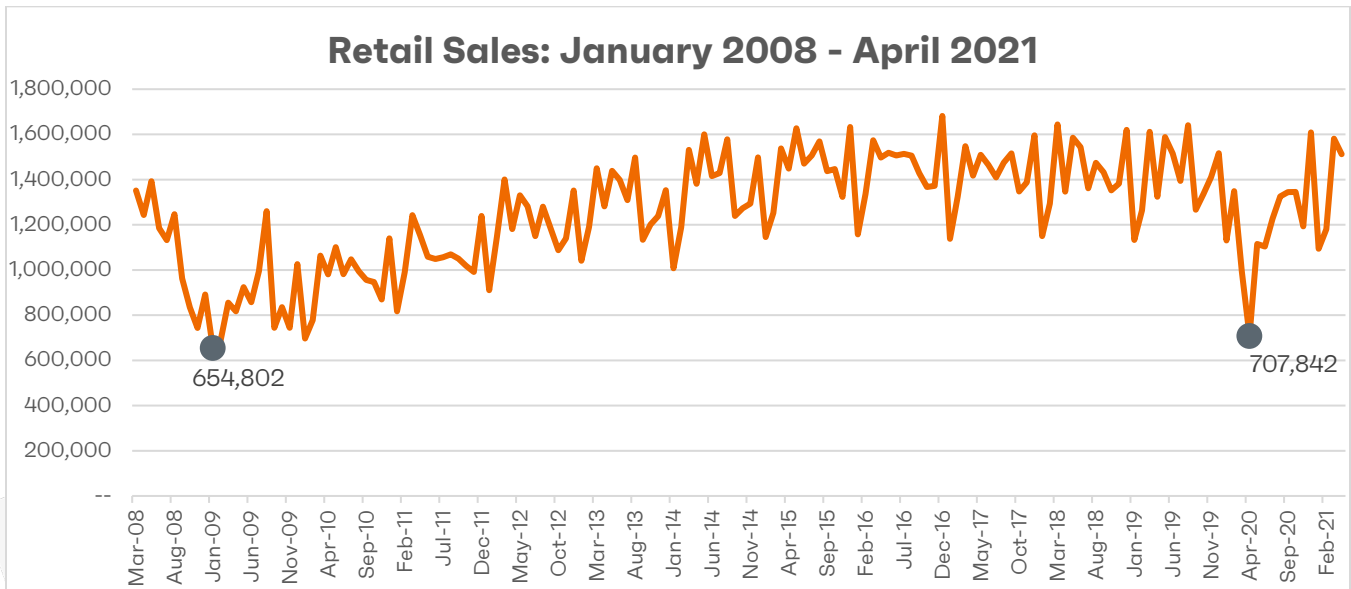
IHS Markit April Update: “The outlook for North America light vehicle production was reduced by 79,000 units and increased by 28,000 units for 2021 and 2022, respectively (and increased by 64,000 units for 2023). The production outlook for 2021 was reduced amid the ongoing semiconductor shortage and other supply chain and logistical issues. The quarterly progression for 2021 continues to reflect the first and second quarter as being most impacted by the shortages with a return closer to normal beginning in third quarter at baseline operating levels with minimal overtime to recover lost volume in fourth quarter. While actual production for Q1-2021 came in slightly ahead of expectations, given the ongoing impact of semiconductor shortages, more meaningful downward revisions were made to the forecast for the second quarter. The third quarter of 2021 remains a wild card as some automakers are reportedly reducing summer shutdown plans amid the prospect for at least a more consistent supply of semiconductors. Strength in average transaction prices and manufacturer profitability are expected to continue amid the resilient strength of US autos demand and further extension of constrained supply. As manufacturers and dealers enjoy improved profitability amid tighter supply, a new normal in inventory stocking may emerge as the various shortages subside.”⁶

Market Meter

U.S. Light Vehicle Sales (Updated 5/5)

Monthly Sales (Updated 5/4)

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.



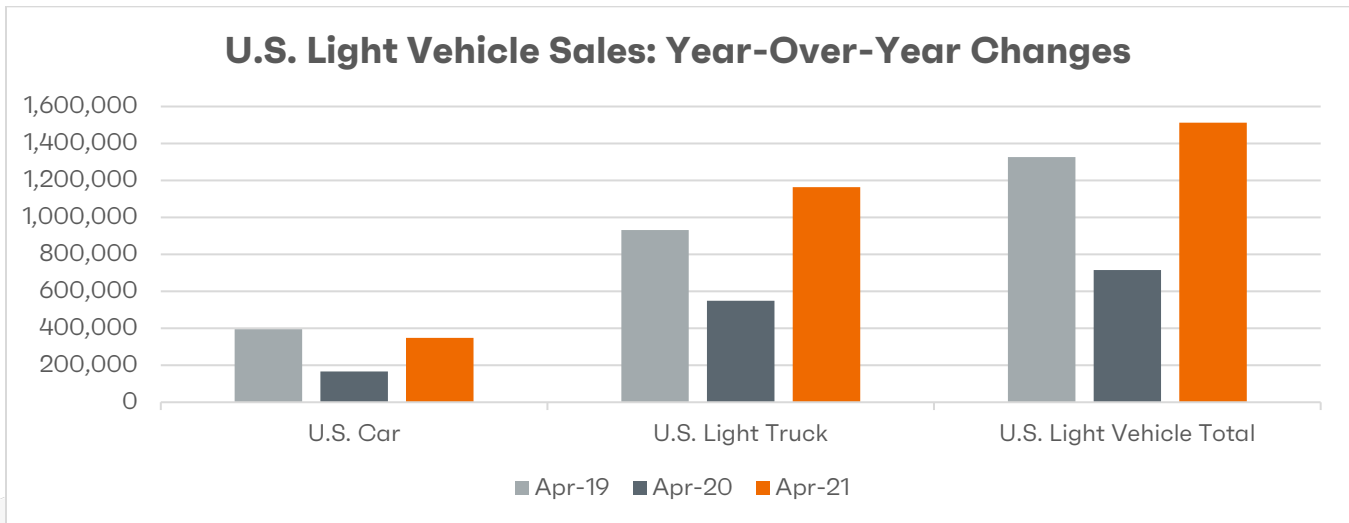
April Sales (Updated 5/5)

WardsIntelligence: “U.S. new-vehicle sales continued to roar in April, even finishing above extremely high expectations for the month, which, given recent history, was not surprising even in the face of the inventory drain the industry has undergone since the beginning of the year.

“April light-vehicle sales totaled an 18.5 million-unit seasonally adjusted annual rate, topping the prior month’s revised 18.0 million and highest for any month since July 2005’s 20.6 million. It more than doubled April 2020’s 8.7 million-unit SAAR, which was the first full month the industry was in the grip of the Covid-19 pandemic.

“Though there are other reasons, March-April’s combined 18.2 million-unit SAAR was mostly spurred by pent-up demand created from purchases delayed from last year and early-2021 due to uncertainty caused by the pandemic. There also could be a small amount of pull-ahead from consumers who otherwise might have waited to buy fearing the vehicle they want will not be there later because of the ever-worsening depletion of inventory. . . .

“April’s raw sales volume totaled 1.51 million units, good for a daily selling rate of 58,165, 111% above like-2020 – 26 selling days both periods. April’s DSR was the highest for the month since 2000’s 59,813.”⁷



Fleet Sales (Updated 4/7)

Wards Intelligence: “Fleet increased an estimated 88% from April 2020 but was 42% below same-month 2019.

If fleet were at pre-pandemic levels, and enough inventory available, April’s SAAR could have hit 20 million units. In fact, the first four months of 2021 would have been much higher than the 17.3 million-unit SAAR the period totaled.

With the economy expected to keep running on all cylinders as it did in the first quarter when annualized GDP grew 6.4%, increased confidence is boosting signs for more travel, which should lift fleet demand. However, and the trend started months ago, fleet operators will be hardpressed in several cases to get vehicles due to the lack of supply. While the economy continues chugging along, pent-up demand will build up in the fleet sector – upward pressure on overall sales that might continue into 2022.”⁸

Segments vs. Gas Prices (Updated 5/5)

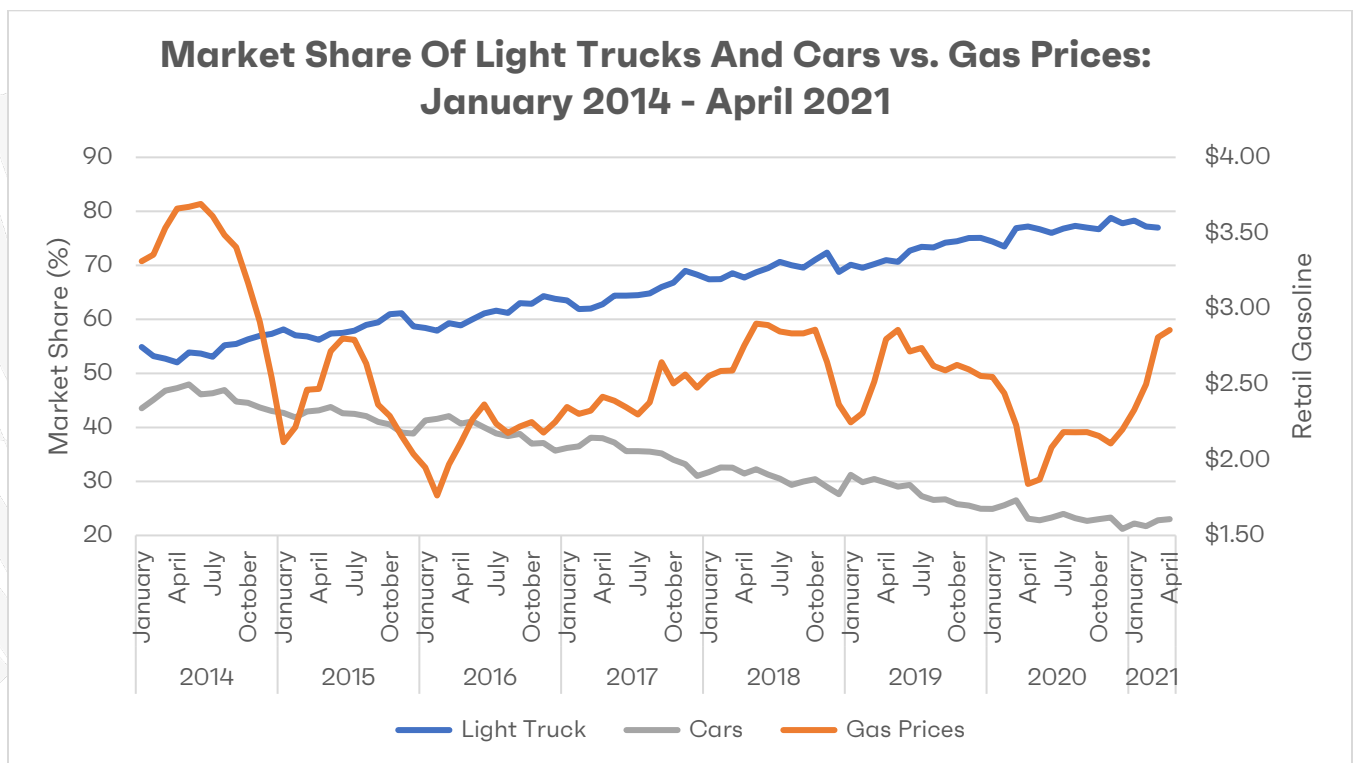
Wards Intelligence: “Although there is anecdotal evidence more consumers, and perhaps some fleet operators, are increasingly opting to take what they can get over what they want, which presumably could be advantageous to cars, penetration in April of the vehicle type declined year-over-year to 23.0% from 23.3%. Car penetration has declined every month since December 2012.

“However, April was the first month since October – prior to then it was March 2020 - any car segment group increased share over the same year-ago period, as market share for Small increased to 9.9% from 9.0%.

“CUV (46.0%) and Van (4.7%) increased share in April over the year-ago month, while SUV (8.9%) and Pickup – 17.4% vs. like-2020’s 25.6% - declined. After increasing market share year-over-year in 27 of

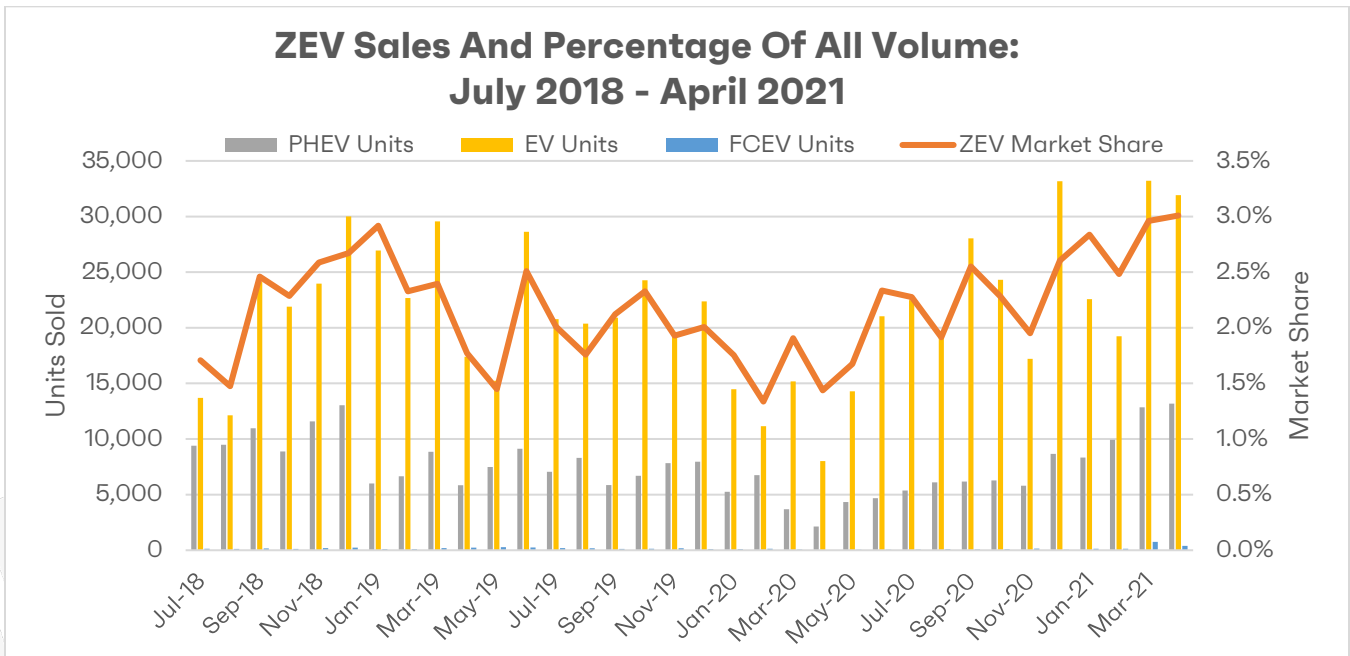
28 months, April was the second straight decline for Pickup. Share of SUV had risen 12 straight months until April. Both also have the leanest inventory relative to demand among all segment groups.”⁹

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 segments¹⁰ and gas was over \$3.00¹¹ a gallon. As fuel prices dropped below the \$3.00 mark in mid-September 2014, light truck sales began to take off – and never looked back. Gas prices since have averaged only \$2.68 a gallon (through October 2020) 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.¹²



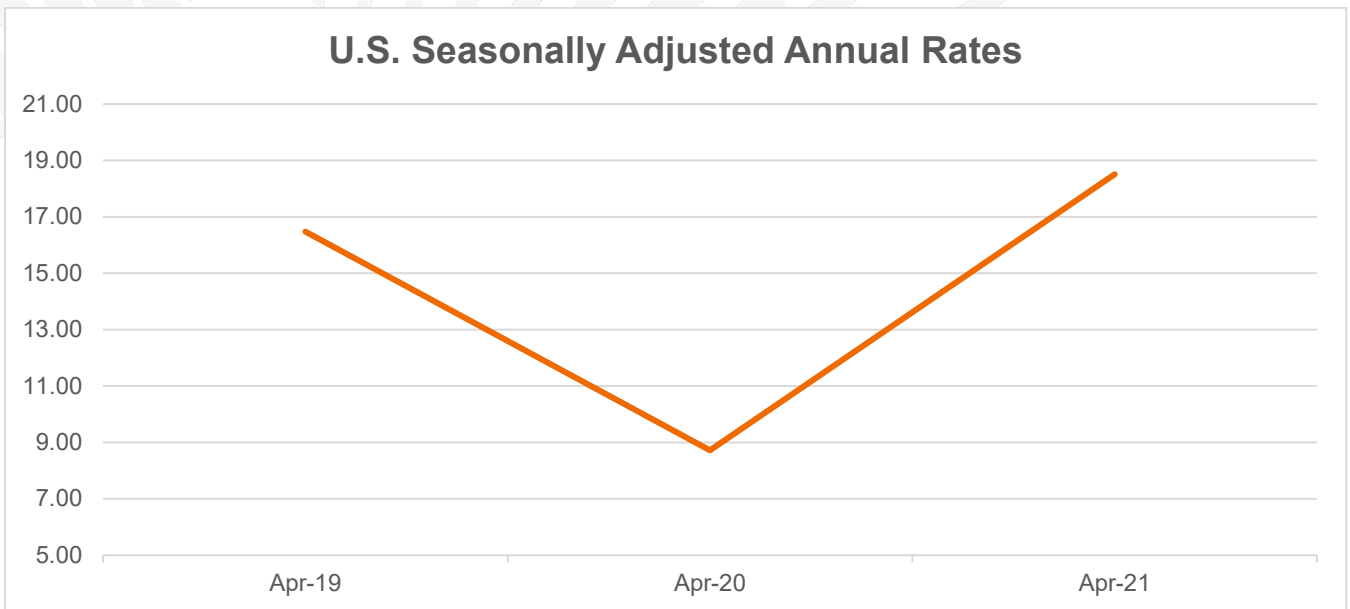
ZEV Powertrain Sales (Updated 5/5)

Sales of zero emission vehicles (BEV, PHEV, & Fuel Cell) accounted for 3% of total vehicle sales in April 2021, up from 1.4% from a year ago and the same as March 2021. Sales of battery electric vehicles led the way for ZEVs, accounting for 2.11% of total sales, up .98% from April 2020. Plug-in hybrids accounted for 0.87%, nearly triple the amount from the same time last year.¹³



Seasonally Adjusted Annual Rates (Updated 5/5)

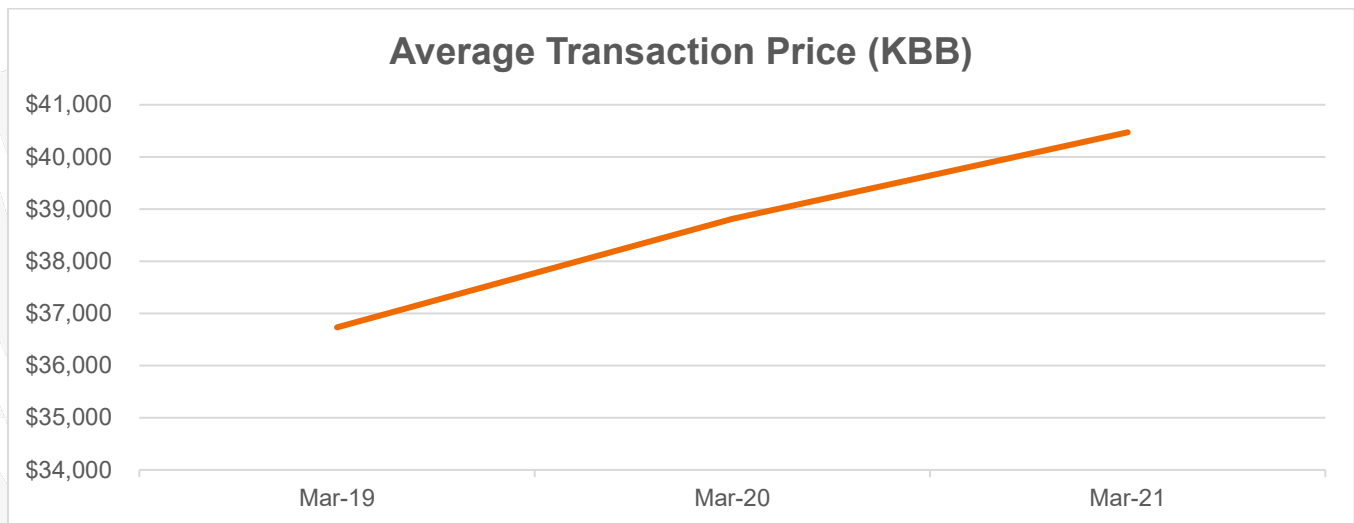
“April light-vehicle sales totaled an 18.5 million-unit seasonally adjusted annual rate, topping the prior month’s revised 18.0 million and highest for any month since July 2005’s 20.6 million. It more than doubled April 2020’s 8.7 million-unit SAAR, which was the first full month the industry was in the grip of the Covid-19 pandemic.”¹⁴



Average Transaction Price (Updated 5/5)

J.D. Power: “Average transaction prices are expected reach another monthly high, rising 6.8% to \$37,572, the highest ever for the month of April and second highest all time on record behind December 2020. For context, average transaction prices are 20% higher in April 2021 than they were in April 2016 at \$31,240.”¹⁵

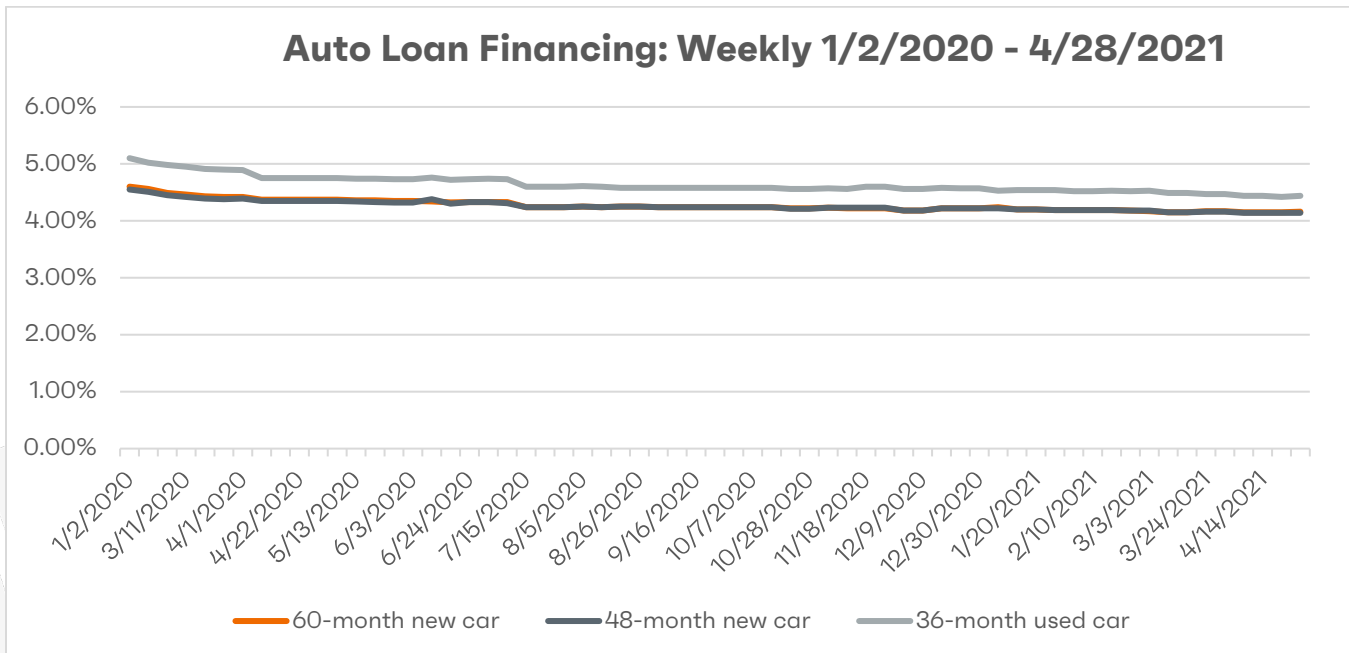
Kelley Blue Book: “The valuation analysts at Kelley Blue Book today reported the estimated average transaction price for a light vehicle in the United States was \$40,472 in March 2021. New-vehicle prices increased \$1,660 (up 4.3%) from March 2020, while dropping \$608 (down 1.5%) from February 2021.”¹⁶



Auto Loan Financing (Updated 5/5)

Financing Rates Generally Holding Steady: Interest rates for new cars remained mostly static for the past two weeks, as the 36-month rate rose slightly for used cars. The interest rate for 60 months currently stands at 4.16%, up .01% from last week. Rates rose .02% to 4.44% for a 36-month used car loan. Since the beginning of last year, rates are down 0.44%, but only down 0.21% since the same time a year ago.¹⁷

Dates	60-month new car	48-month new car	36-month used car
4/29/2020	4.37%	4.35%	4.75%
1/2/2020	4.60%	4.55%	5.10%
4/21/2021	4.15%	4.14%	4.42%
4/28/2021	4.16%	4.14%	4.44%
One Week Change	0.01%	0.00%	0.02%
Two Week Change	0.01%	0.00%	0.00%
Change since 1/3/20	-0.44%	-0.41%	-0.66%
One Year Change	-0.21%	-0.21%	-0.31%



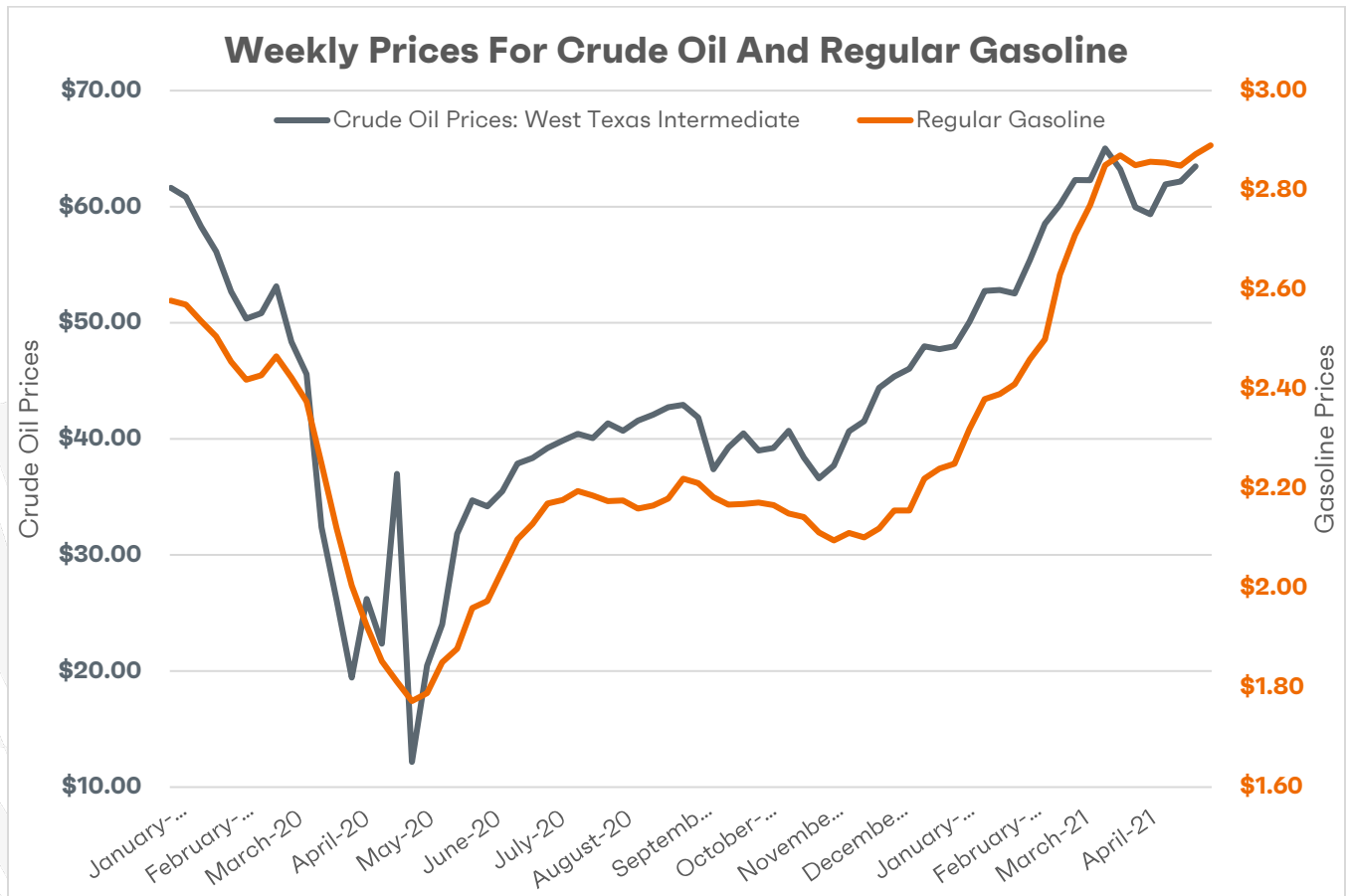
Crude Oil and Gas Prices (Updated 5/5)

EIA Outlook For Gasoline: “For the 2021 summer driving season (April–September), the U.S. Energy Information Administration (EIA) forecasts U.S. regular gasoline retail prices will average \$2.78 per gallon (gal), up from an average of \$2.07/gal last summer (Summer Fuels Outlook). Higher forecast gasoline prices reflect higher forecast crude oil prices, higher wholesale gasoline refining margins, and higher U.S. consumption of motor gasoline. For all of 2021, we expect U.S. retail prices of regular-grade gasoline to average \$2.66/gal and retail prices for all grades to average \$2.78/gal, which would result in the average U.S. household spending about \$480 (31%) more on motor fuel in 2021 compared with 2020.”¹⁸

EIA Outlook For Production: “According to EIA’s most recent data, U.S. domestic crude oil production averaged 11.1 million b/d in January 2021. We estimate that U.S. domestic crude oil production declined by 0.8 million b/d in February, mostly because of cold temperatures that affected much of the country, particularly Texas. We forecast crude oil production will average 10.9 million b/d in the second quarter of 2021 and increase to almost 11.4 million b/d by the fourth quarter of 2021. We expect U.S. crude oil production will average 11.9 million b/d in 2022. The forecast of rising U.S. crude oil production is the result of our expectation that West Texas Intermediate crude oil prices will remain above \$55/b through the forecast period.”¹⁹

Gas Prices Remain Flat: Oil prices, as benchmarked at West Texas Intermediate, rose by \$1.29 the week of April 30 to \$63.47 per barrel. Since election day, oil prices have climbed over \$25 a barrel. For

the seventh week in a row, prices at the pumps remained basically the same, increasing \$.02 to \$2.89. Gas is about 12 percent higher than the beginning of 2020.²⁰

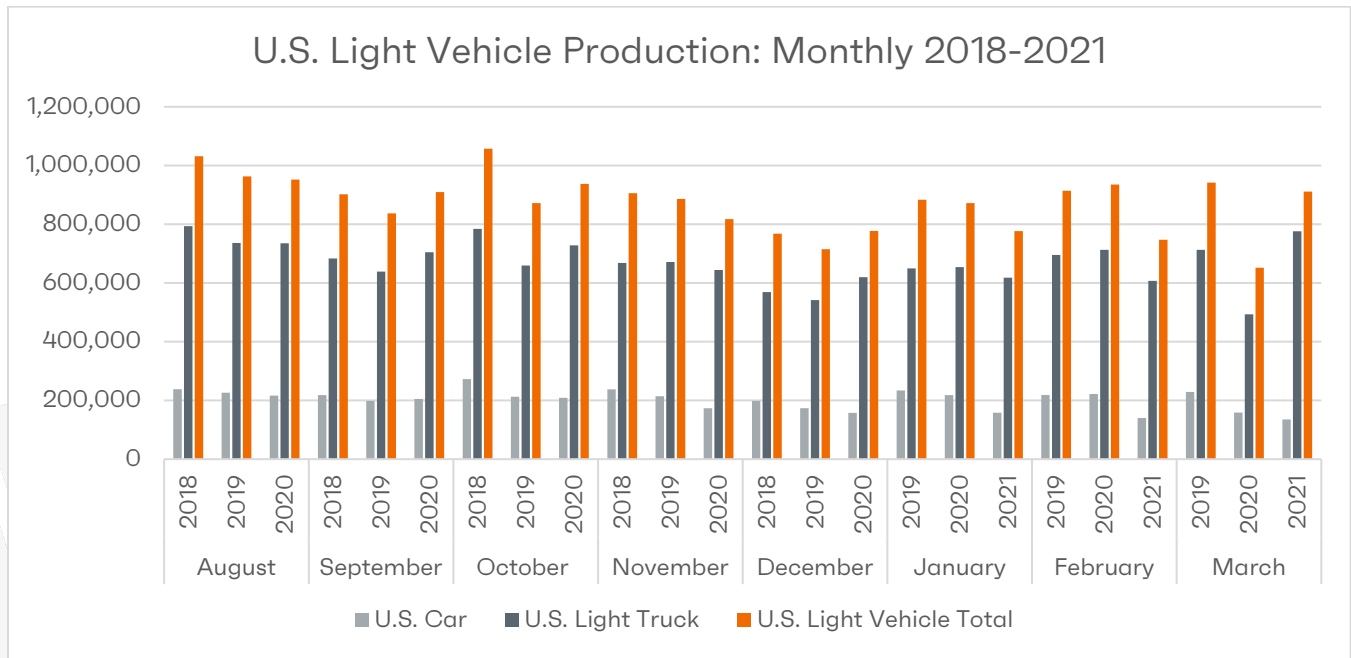


Production Meter

U.S. Light Vehicle Production (Updated 4/21)

WardsIntelligence: “Production losses mostly related to the microchip shortage continue to stack up. . . Production in March, which temporarily includes some estimates for medium-/heavy-duty trucks, totaled 1.377 million units, 31.0% above like-2020’s 1.051 million - the pandemic first impacted North American manufacturers in March 2020 cutting 475,000 units from what was expected in that month. . . First-quarter 2021 production totaled 3.689 million units, 4.7% below like-2020’s 3.872 million. Compared with the outlook for the period in December, prior to the development of the chip shortage, petrochemical issue and severe weather that temporarily closed some plants in February, the Q1 total was down 487,000 units. Most of the losses are related to the chip issue.”²¹

Light vehicle production for March 2021 totaled 911,245, 40% higher than March 2020, and down 3% from 2019:



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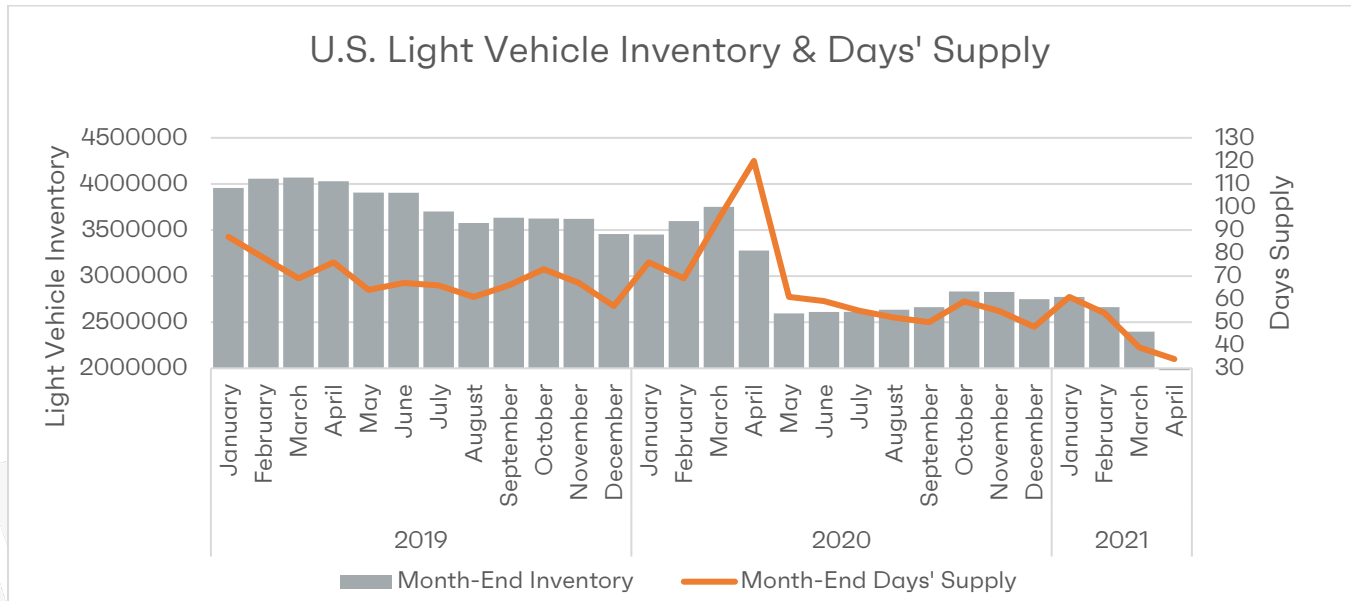
U.S. Light Vehicle Inventory and Days' Supply (Updated 5/5)

WardsIntelligence Inventory Update: “The ongoing plague of production slowdowns and stoppages at a time when vehicle availability is at a premium sent April U.S. light-vehicle inventory spiraling down 17.9% from the prior month to a depleted total of 1.972 million units. The April 30 total was the lowest in at least three-plus decades for the month and lowest for any month since 1.969 million in July 2011. By comparison, April 2020 inventory, which was slashed from the prior month due to a nearly total Covid-19-related shutdown of manufacturing operations in North America, totaled 3.26 million. The five years through 2019, or prior to the pandemic, saw April average 3.9 million units.

“The shortfall of chips for the automotive industry has become worse in the second quarter than the first, and signs point to pockets of shortages continuing throughout second-half 2021. With sales at nearly record highs, automakers, and their suppliers, will be strained to the maximum just to meet demand, much less fill inventory holes, over the remainder of the year.

“Current demand is enough to keep sales above an 18 million annualized rate in the short term, but the inventory drain – which is not expected to start improving until Q3 – at some point will drag sales down to much lower levels.”

“Days’ supply fell to 34, lowest since 29 in August 2009, and well below the optimal range of 70 to 75 for the month.”²³



Global Meter

Global Light Vehicle Sales Outlook (Updated 4/14)

Wards Intelligence Outlook: “World light-vehicle sales jumped 13.6% to 5.96 million units in February. The growth was almost exclusively from soaring results in China and several other Asia-Pacific markets, while the rest of the world saw steep declines. Still, the global total fell well short of the February record of 7.0 million in 2017.

“Sales in China jumped a stunning 346.5% to 1.45 million for the month and were up 69.6% year-to-date with 3.96 million deliveries. Though marking an encouraging recovery, the growth was mostly artificial because February 2020 was China’s lowest total of any month in over 15 years. This year’s result still was below the 2010-2019 February average of 1.58 million.

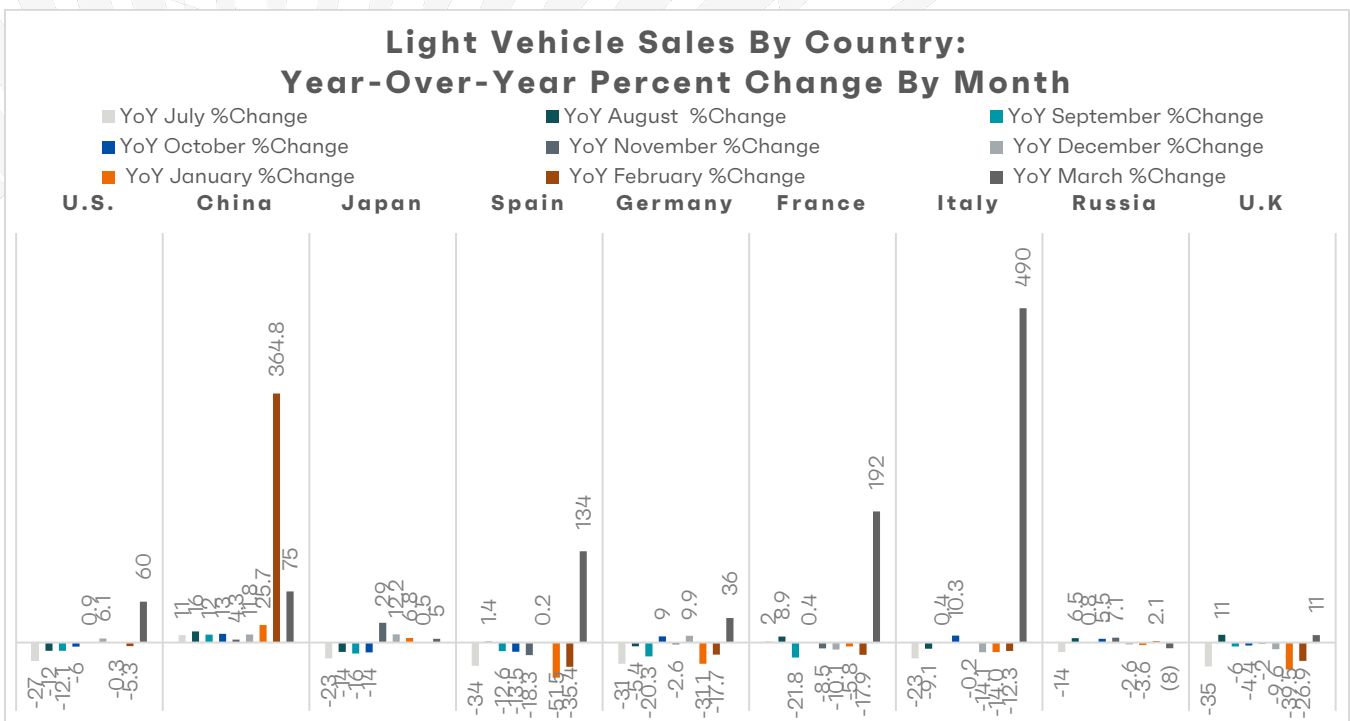
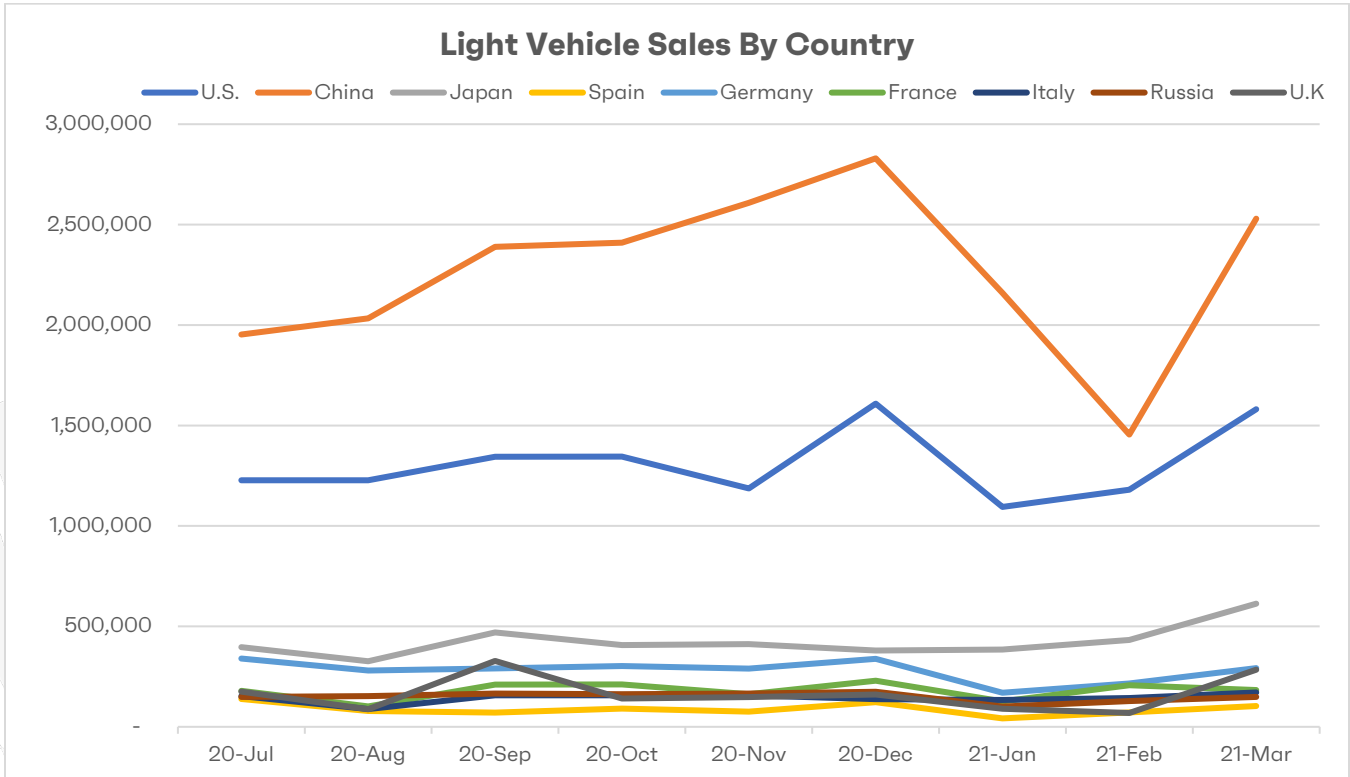
“Several other countries in the Asia-Pacific region saw impressive growth over year-ago’s lows, including India (+18.1%), Pakistan (+30.0%) and South Korea (+25.6%). The region’s total was up 76.9% at 2.73 million for the month and 36.6% ahead for the year. Global market share increased from 39.4% in same-period 2020 to 50.2% in 2021.

“It was a different story in Europe, where many countries still were struggling with high COVID-19 case counts and February sales dropped 14.1% to 1.22 million vehicles.

“The global 2-month tally was 12.94 million, up 7.3% from year-ago’s 12.06 million.”²⁴



Sales in select countries around the globe, including year-over-year percent change by month as well as raw volume by month:

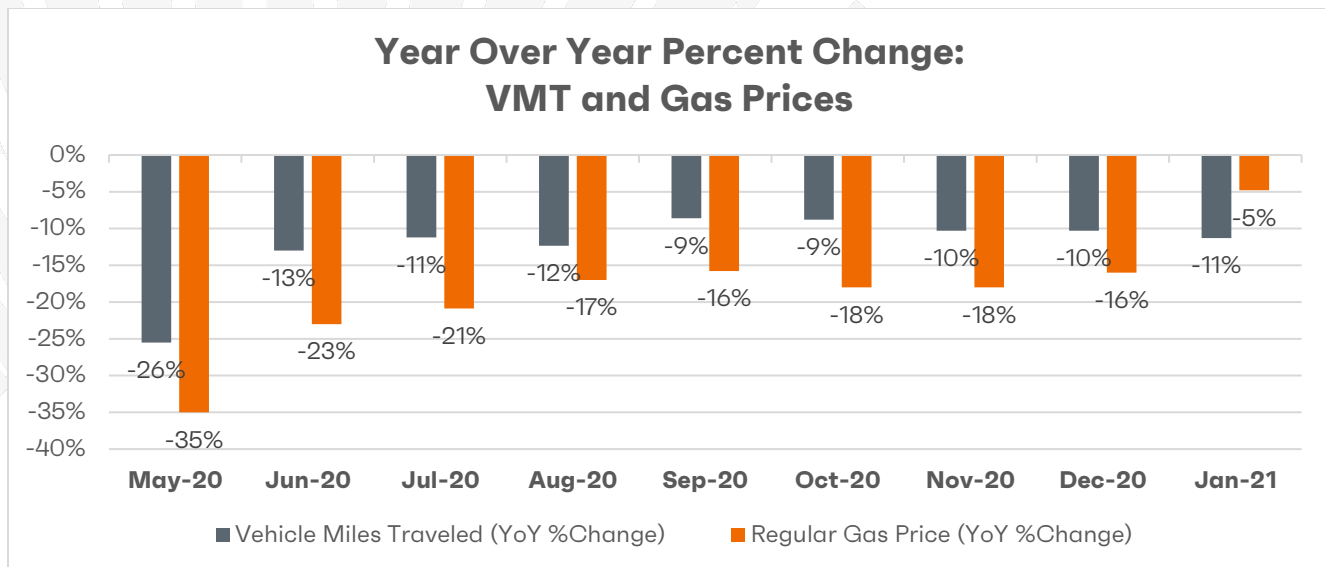


Recovery Meter

Roadway Travel (Updated 3/24)

According to the U.S. Department of Transportation, seasonally-adjusted vehicle miles traveled in January fell over 11 percent from the same time a year ago, with year-over-year VMT rising ever so slightly after four months of lower year-over-year change. The cumulative travel estimate for 2021 is 223 billion vehicle miles.²⁵

- Travel on all roads and streets changed by -11.3% (-28.4 billion vehicle miles) for January 2021 as compared with January 2020. Travel for the month is estimated to be 223.3 billion vehicle miles.
- The seasonally adjusted vehicle miles traveled for January 2021 is 247.1 billion miles, a -9.6% (-26.2 billion vehicle miles) decline from January 2020. It also represents 1.2% increase (2.8 billion vehicle miles) compared with December 2020.
- Cumulative Travel for 2021 changed by -11.3% (-28.4 billion vehicle miles). The cumulative estimate for the year is 223.3 billion vehicle miles of travel.



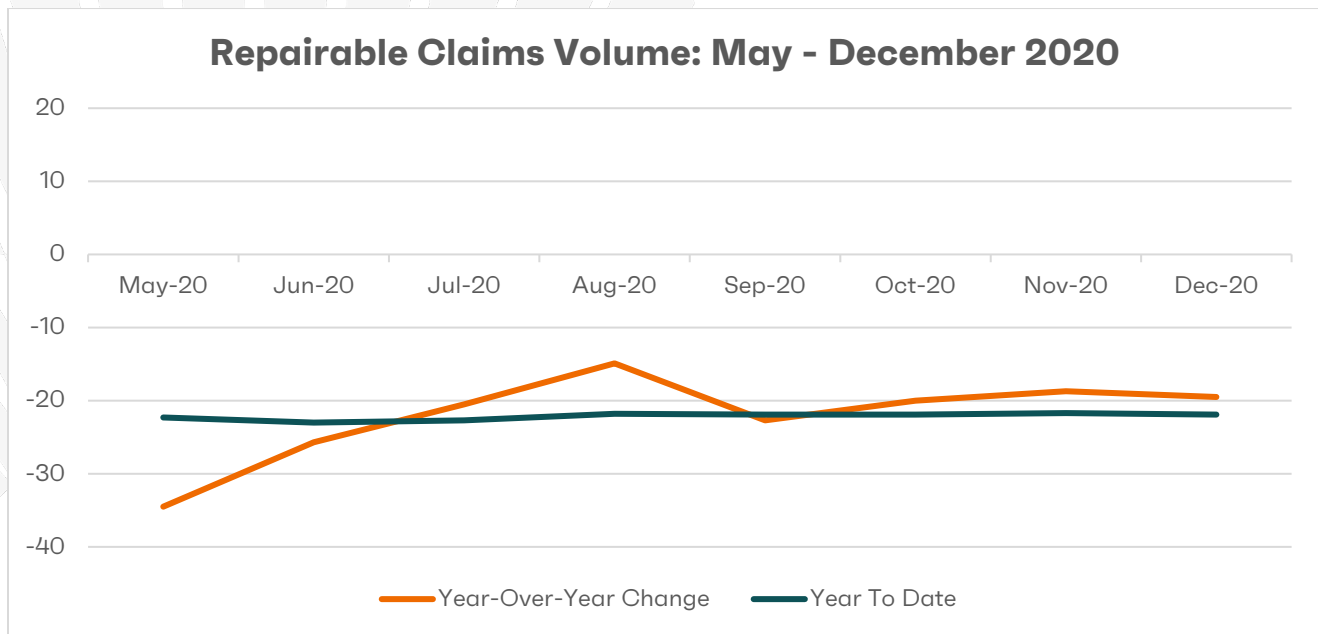
Repairable Claims (Updated 1/13)

At the beginning of 2020, the economy was strong, unemployment rates were low, congestion levels were high in many urban areas, and miles driven continued to grow. Auto accident and claim frequency had started to flatten, but average vehicle repair costs continued to rise. And then the pandemic. In response to rising diagnoses, hospitalizations, deaths, and immense uncertainty, many states began issuing shelter-at-home orders in mid-March. All but essential and frontline workers sheltered at home; many companies furloughed or let employees go, while those that could have their

employees work remotely, quickly set them up to do so. Daily trips and miles driven in the U.S. plummeted, and auto accidents and claim counts followed suit.

Latest Data From CCC: “Repairable appraisal counts for the full calendar year were down -21.3 percent versus CY 2019; when excluding comprehensive losses, repairable counts were down -26 percent for the full year.

- After plunging -35 percent in Q2, repairable appraisal counts improved to -20.2 percent in Q3 and to -19.7 percent in Q4, with bad weather in many parts of the U.S. helping to counter decline in volume due to less driving, particularly during rush hour.
- Non-comprehensive repairable appraisal counts however reversed course again in Nov’20 and Dec’20, as the CDC recommended people forgo holiday travel, and a third wave of the virus drove up new COVID-19 cases, hospitalizations, and fatalities.
- Even numerous winter storms with lots of ice failed to lift accident counts in December, since many drivers were off the roads altogether, working remote and doing much of their holiday shopping online.²⁶



Economic News (Updated 5/5)

Auto Sales Make Big Contribution To Increase In GDP In The First Quarter. “In the first months of 2021, what was good for the auto industry was decidedly good for the American economy. Spending on motor vehicles and parts rose almost 13 percent in the first quarter, making a big contribution to the increase in gross domestic product, the Commerce Department reported Thursday. .. In fact, demand in the first quarter was robust enough that the auto industry was able to post healthy results despite a shortage of computer chips that forced temporary shutdowns of many auto plants.”²⁷

Manufacturing Activity Grew At A Smaller Pace In April, Due To Supply Chain Disruption. “U.S. manufacturing activity grew at a slower pace in April, restrained by shortages of inputs as rising vaccinations against COVID-19 and massive fiscal stimulus unleashed pent-up demand. The survey from the Institute for Supply Management (ISM) on Monday showed record-long lead times, wide-scale shortages of critical basic materials, rising commodities prices and difficulties in transporting products across industries.”²⁸

Manufacturing Added 53,000 Jobs In March, Including 30,000 In Durable Goods. “U.S. manufacturing added 53,000 jobs in March, with contributions from both durable and non-durable goods, the U.S. Bureau of Labor Statistics said. Durable goods added 30,000 jobs, with non-durable goods contributing a 23,000-job gain, according to a breakdown by industry issued by the bureau on April 2.”²⁹

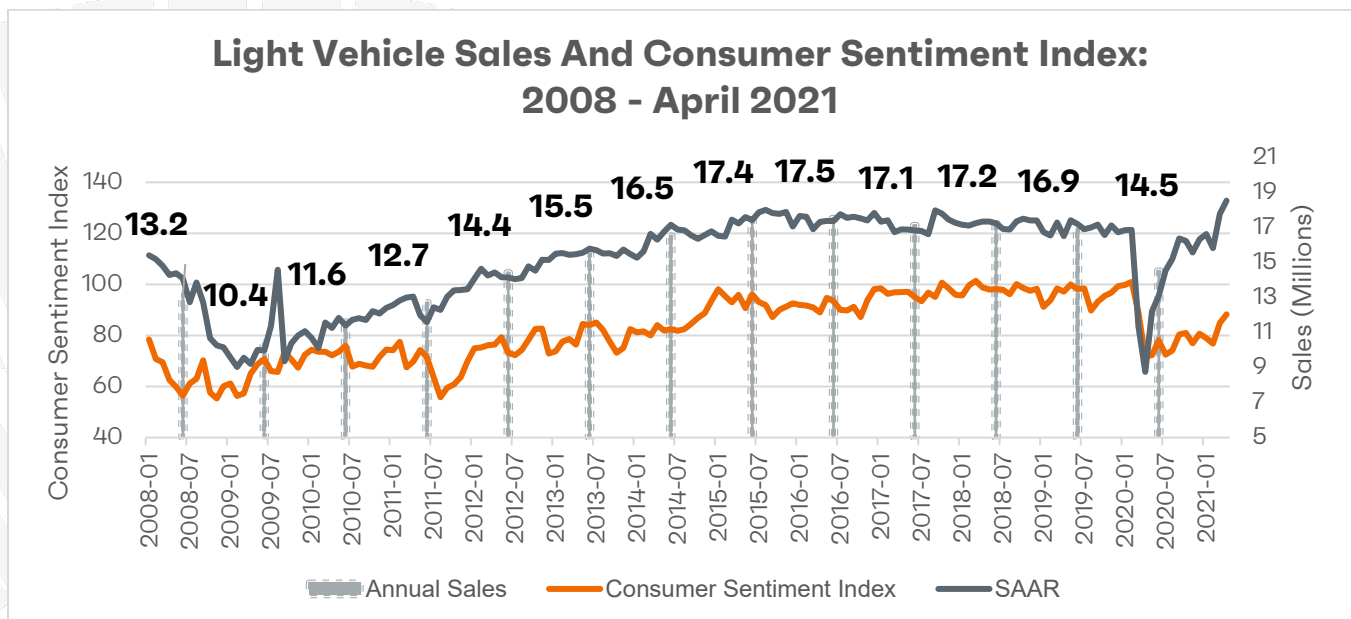
- **Motor Vehicle And Parts Manufacturing added 3,000 Jobs In March (not seasonally adjusted).**
- **Motor Vehicle And Parts Manufacturing lost 1,000 Jobs In March On A Seasonally Adjusted Basis.**³⁰

The Institute For Supply Management’s Manufacturing Index For March Reached Its Highest Level In Nearly 40 Years. “The manufacturing economy has been strengthening in recent months as it recovers from the COVID-19 pandemic. The Institute for Supply Management said last week its manufacturing index for March reached its highest level in almost 40 years. That index is considered a leading indicator and is a barometer of where manufacturing is headed economically.”³¹

Paul Traub Of The Federal Reserve Bank of Chicago Predicted The U.S. Economy Will Rebound In 2021 From Previous Peaks If Vaccines And Public Action Stops The Virus. “The economy recovered relatively quickly after the initial hit of the Covid-19 pandemic. We saw a V-shape recovery in GDP. ‘We spent our way out of it,’ Paul said. While personal consumption expenditures on service were down greatly, spending on durable and non-durable goods shot up. The new-car-buying population is high-income, the group least affected by unemployment and reduced wages. Employment figures look better than they really are. Unemployment looks low, but participation is down (people, especially women, have given up looking for a job, and thus are no longer counted as ‘unemployed’). Wages seem to have risen, but the lower-income population was hit most by job losses, shifting the average to those who were able to retain their position. Economic forecasts estimate the U.S. economy could get back to its previous peak sometime in 2021, but only if vaccines and public action are successful at controlling the spread of the virus. Current trends that could have a negative impact on light-vehicle sales in the future: decline in the rate of licensed drivers, lower number of households plus household size declining, normalizing of working from home, and overall drop in average vehicles miles traveled.”³²

Consumer Confidence and Sales (Updated 5/5)

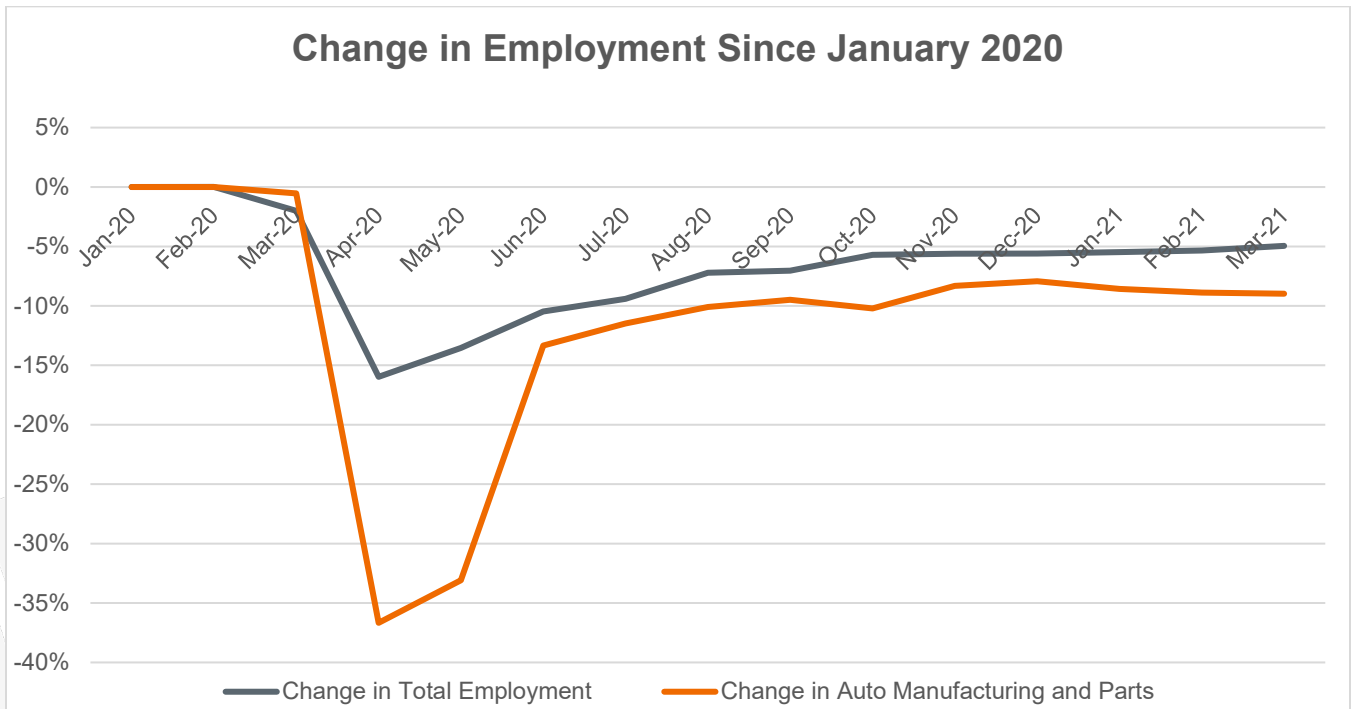
“The April survey recorded continued gains in consumer confidence due to a growing sense that the upward momentum in jobs and incomes will persist. The renewed confidence is due to record federal stimulus spending, both recently passed and proposed, as well as the positive impact from a growing share of the population who are vaccinated. The largest and most important change in April was that an all-time record number of consumers expected declines in the unemployment rate during the year ahead. Even if a booming economy resulted in higher inflation, consumer optimism would not diminish since consumers have already anticipated a temporary increase. Overall, the data indicate an exceptional outlook for consumer spending through mid-2022. The size and persistence of the spending gains depend on continued job growth as well as wages that effectively draw people back into the labor force.”³³



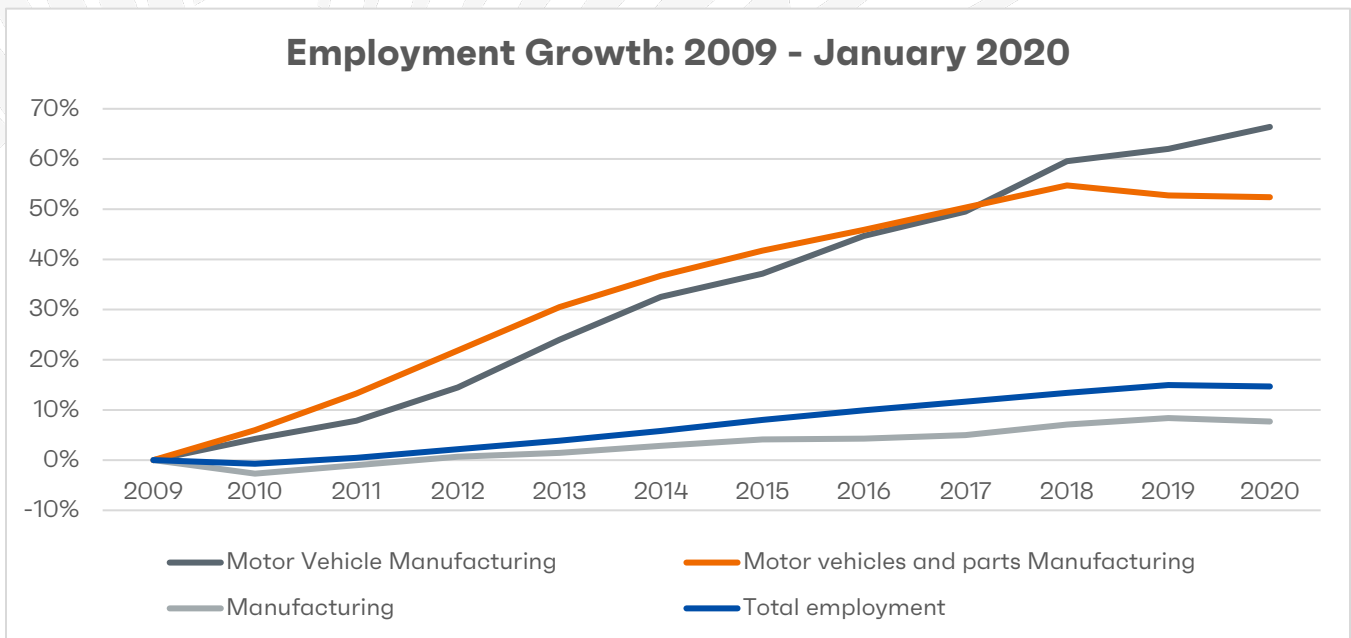
Employment (Updated 4/7)

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 has raced back and is now only down about 76,000 employees, constituting a 9% loss since January.³⁴

- **Motor Vehicle And Parts Manufacturing added 3,000 Jobs In March (not seasonally adjusted).**
- **Motor Vehicle And Parts Manufacturing lost 1,000 Jobs In March On A Seasonally Adjusted Basis.**³⁵



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.³⁶ 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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