

READING THE METER

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

November 24, 2021

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Forecast Meter

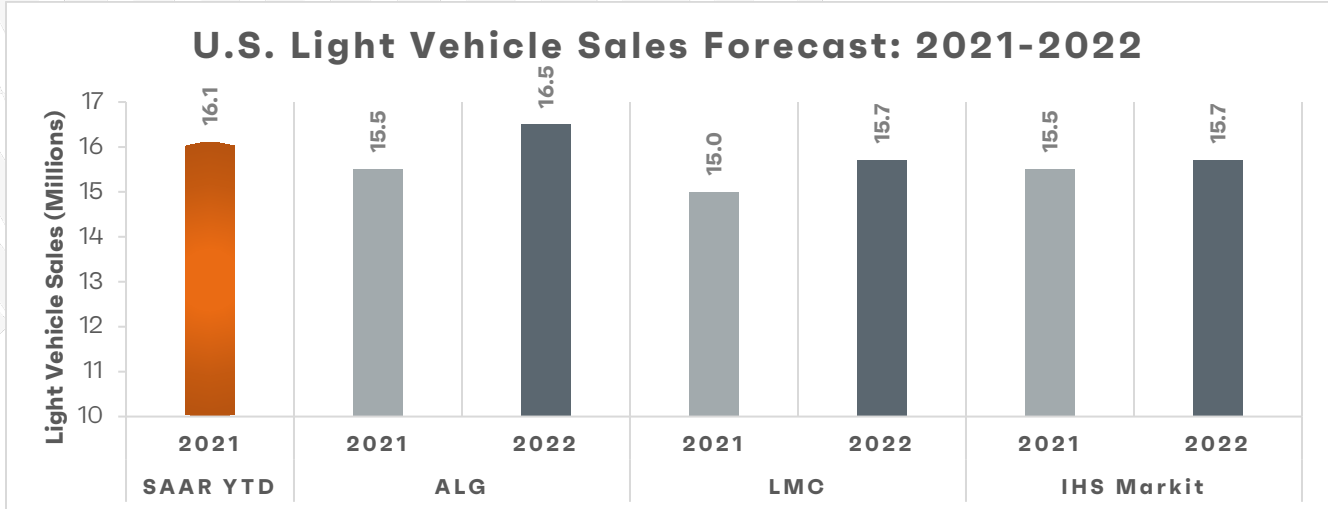
Forecast Summary (Updated 11/24)

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)	926,035 (3% YoY)
August '21	1,090,446 (-11% YoY)	1,113,327 (-19% YoY)
September '21	1,006,875 (-25% YoY)	907,470 (-33.4% YoY)
October '21	1,046,282 (-20% YoY)	1,140,383 (-22.1% YoY)
November '21	1,060,000 (forecast) (-11% YoY)	
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)	3,925,709 (-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	13.3 SAAR (-14% YoY)	2,930,000 (-26.7% YoY)
4th Quarter '21	13 SAAR (forecast)	3,330,000 (-15.5% YoY) (forecast)
2020 Calendar Year	14,463,935 (-14.7% YoY)	13,210,000 (-23.1%)
2021 Full Year Estimate	15 million units (4% YoY)	13,380,000 (-.1% YoY)

U.S. Light Vehicle Sales Outlook (Updated 11/24)

Wards Intelligence Outlook (11/24)⁴: “U.S. light-vehicle sales are forecast to total a 13.6 million-unit seasonally adjusted annual rate in November, the second consecutive month of growth since September bottomed out at 12.2 million following five straight month-to-month declines. The total is a significant uptick from October’s 13.0 million-unit SAAR but still well below like-2020’s 15.9 million. . . . Although constrained because it has fewer selling days – 24 – than October’s 27, November’s raw volume is expected to slightly rise to 1.06 million units from last month’s 1.05 million. Whether the SAAR increases next month, December’s volume almost certainly will outdo November. . . . November’s forecast sales volume equates to a daily selling rate of 44,083, 20.4% below like-2020’s 52,136 – 23 selling days. Based on DSRs, sales have declined each month since January’s 1.4% year-over-year gain.”

J.D. Power October Forecast (11/24)⁵: “New-vehicle retail sales for November 2021 are expected to decline when compared with November 2020, according to a joint forecast from J.D. Power and LMC Automotive. Retail sales of new vehicles this month are expected to reach 933,700 units, a 12.6% decrease compared with November 2020 when adjusted for selling days. November 2021 has one more selling day than November 2020. Comparing the same sales volume without adjusting for the number of selling days translates to a decrease of 8.8% from 2020.”



North American Production & Inventory Outlook (Updated 11/24)

Wards Intelligence Production Outlook (11/24)⁶: “the North America production outlook for November and December also has been reduced (again) due to supply-chain issues. Furthermore, though not directly related to local output, overseas plants – especially in Europe - that supply the North American market continue to be hurt by the chip shortage, too, which also has negative implications for inventory over the rest of the year.”

“The production outlook for November has been cut 93,000 units from month-ago’s projections, while December has been chopped 51,200. In total, Q4 is tracking to 3.33 million units, 15.5% below like-2020 and a robust 230,000 units below the most recent expectations. Excluding medium- and heavy-duty trucks, light-vehicle production in Q4 is pegged at 3.22 million units, 15.8% below October-December 2020 and 218,000 below month-ago’s projection.

Wards Intelligence Inventory Outlook (11/24)⁷: “Inventory also is forecast to rise a second straight month from the prior period in November, boding well for a third straight sales increase in December. Entire-Q4 quarter has a strong possibility of improving on Q3’s 13.3 million-unit SAAR, which was well below the 16.9 million totaled in first-half 2021. . . . Inventory remains at an extreme low and there might not be enough product on dealer lots or in transit to push volume up as much as typically happens in the November and December holiday periods. Depleted inventory also means there will continue to be less price discounting or other lures for the vehicles that are available, as has been the case throughout 2021 with incentive spending falling to long-time lows. . . . Furthermore, including fullsize trucks and all luxury segments, the inventory mix leans to higher-priced vehicles. Combined sales of all large trucks plus other luxury-segmented CUVs and SUVs, as well as premium-priced cars, accounted for 44% of the market in October, an any-month high for that grouping. Inventory for that same grouping equaled 51% of the industry total heading into November, indicating the trend favoring premium-priced vehicles will continue, and possibly get stronger. . . .

“Nov. 30 inventory is forecast at 1.17 million units, 14.9% above the prior month, but 59% below like-2020. Days’ supply is forecast to total 27, up from the prior month’s 26, and below November 2020’s 55.”

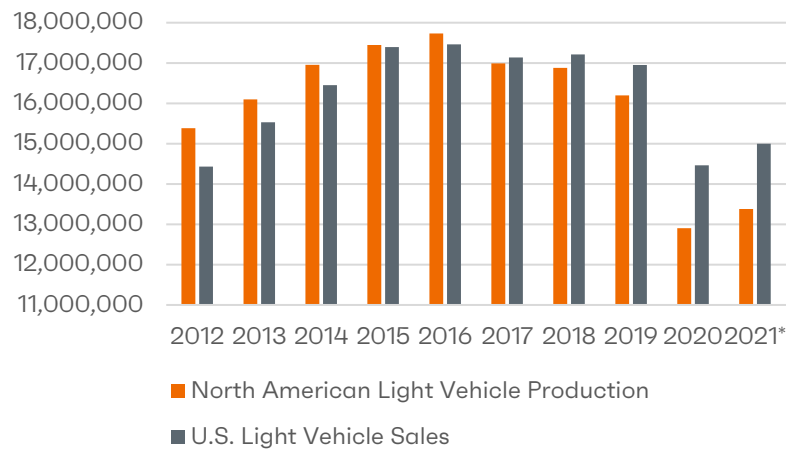
IHS Markit North American Outlook (11/18)⁸: “The outlook for North America light vehicle production was reduced by 45,000 units and by 70,000 units for 2021 and 2022, respectively (and reduced by 205,000 units for 2023). The forecast revisions for 2021 were primarily driven by semiconductor challenges and other supply chain, logistics and worker related issues taking a greater toll on production in the region. On a positive note, mass downtime announcements have slowed to a steady trickle with production in fourth quarter 2021 expected to mark an improvement over the second and third quarters, though remaining worse off than the first quarter. Production in 2022 was revised down by 70,000 units to 15.2 million units. The November 2021 forecast continues to reflect reductions more heavily weighted in the first half as expectations are for the supply of semiconductors to improve steadily throughout the year. While production is projected to improve over the low bases of 13.0 million in 2020 and 2021, production will remain constrained by not only the shortage of semiconductors and their long lead times, but other supply chain, logistics and worker related issues hampering a return to more normalized production levels. Additionally, production in 2023 was revised down 1.2% or 205,000 units to total 17.1 million units on concerns surrounding semiconductor capacity gains and that supply will remain a bit tighter than previously forecast.”

Wards Intelligence Outlook For 2021 (11/24)⁹: “Production for entire-2021 is tracking to 13.38 million units, a smidgeon above 2020’s 13.36 million. Excluding last year, it is the lowest calendar-year total since 12.2 million in 2010 – the first full year after the recession of 2008-2009. Light-vehicle output is

projected to total 12.91 million units, 0.3% below 2020's 12.95 million, also an 11-year low – 11.91 million in 2010.”

IHS Global Outlook (9/22)¹⁰: “The IHS Markit light vehicle production forecast has been cut by 6.2% or 5.02M units in 2021, and by 9.3% or 8.45M units in 2022, to stand at 75.8M units and 82.6M units, respectively. For 2023 we have reduced the forecast by 1.05M units or 1.1% to 92.0M units; this is a front-loaded adjustment and from the second quarter we expect output levels will be able to accelerate as supply chains return to normal. If this is the case then strong pent-up demand and the pressure to rebuild stock levels is expected to support elevated levels of production in 2024 and 2025, with 2024 now forecast to hit 97.3M units, up 3.2% compared to the previous forecast and 2025 forecast at 98.9M units an increase of 2.4%.

North American Production And U.S. Light Vehicle Sales



“This is the largest single adjustment to the outlook in what has been a turbulent past nine months.

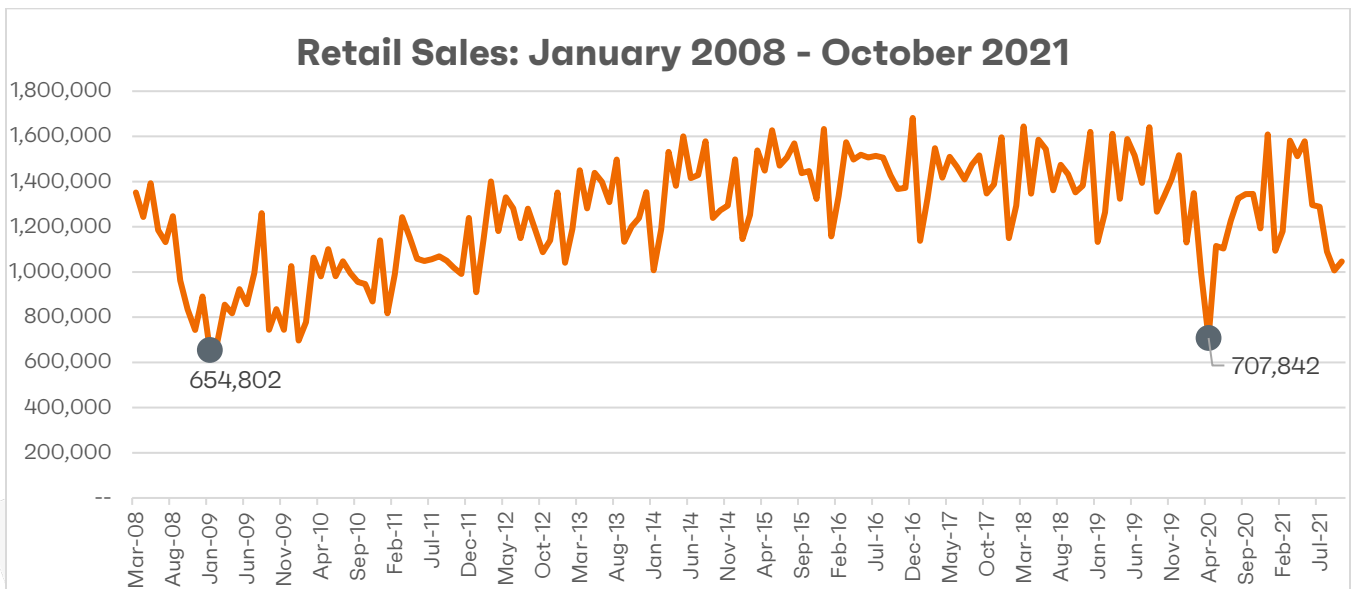
“We estimate that 1.44 million units of production were lost in Q1 and a further 2.60 million units in Q2; currently Q3 losses are running at 3.1 million units and rising. The outlook for Q4 now reflects heightened risk as challenges to the supply chain - primarily semiconductors - remain entrenched.”

Market Meter

U.S. Light Vehicle Sales (Updated 11/5)

Monthly Sales (Updated 11/5)

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.



September Sales (Updated 11/5)

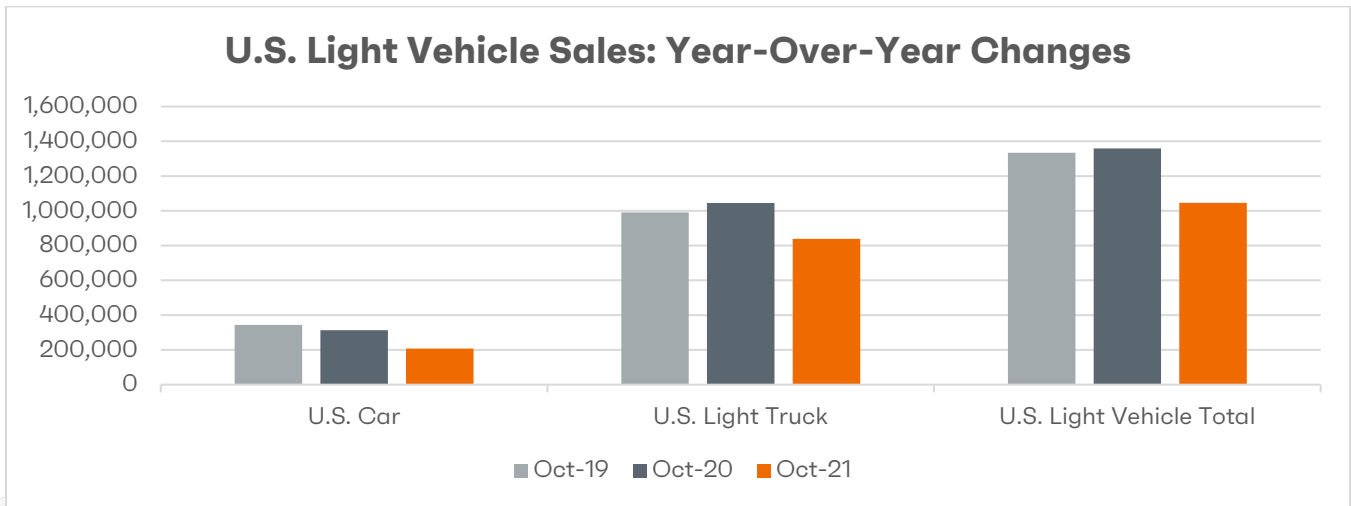
WardsIntelligence: “U.S. light-vehicle sales turned up in October on a seasonally adjusted annualized basis for the first time since beginning a precipitous drop in May, even finishing the month on a strong note to beat expectations.

“October sales totaled a 13.0 million-unit seasonally adjusted annual rate, still weak results - and well below actual demand - but up from the prior month’s 12.2 million, which had marked the fifth straight month-to-month decline and was 33% below the most recent peak of 18.3 million in April.

“The month-to-month gain occurred despite inventory at the end of September dropping to 972,000 units, the first time in decades the total fell below one million, and roughly one-fourth the total averaged over the five years prior to the onset of the pandemic in 2020. Sales averaged more than 17 million units annually over those five years – 2015-2019 - and volume this year would have matched that period if enough inventory had been on hand.

“Raw sales volume increased 3.6% month-to-month – the first increase since May – to 1.046 million units, though that was thanks to October’s extended sales period, which included deliveries on Nov. 1, because of the way the industry treats any month that ends on a weekend. Measured by daily selling rates, sales fell 4.1% to 38,751 over October’s 27 selling days from September’s 40,407 – 25 selling days.

“In comparison to same-month 2020, October’s SAAR was well below year-ago’s 16.4 million units, while the DSR fell 20.2% from last year’s 48,533 - 28 selling days – and total volume of 1.046 million was down 23.0% from 1.359 million. Sales in October were expected to improve on September’s SAAR but apparently picked up some steam at the end of the month.”¹¹



Fleet Sales (Updated 11/5)

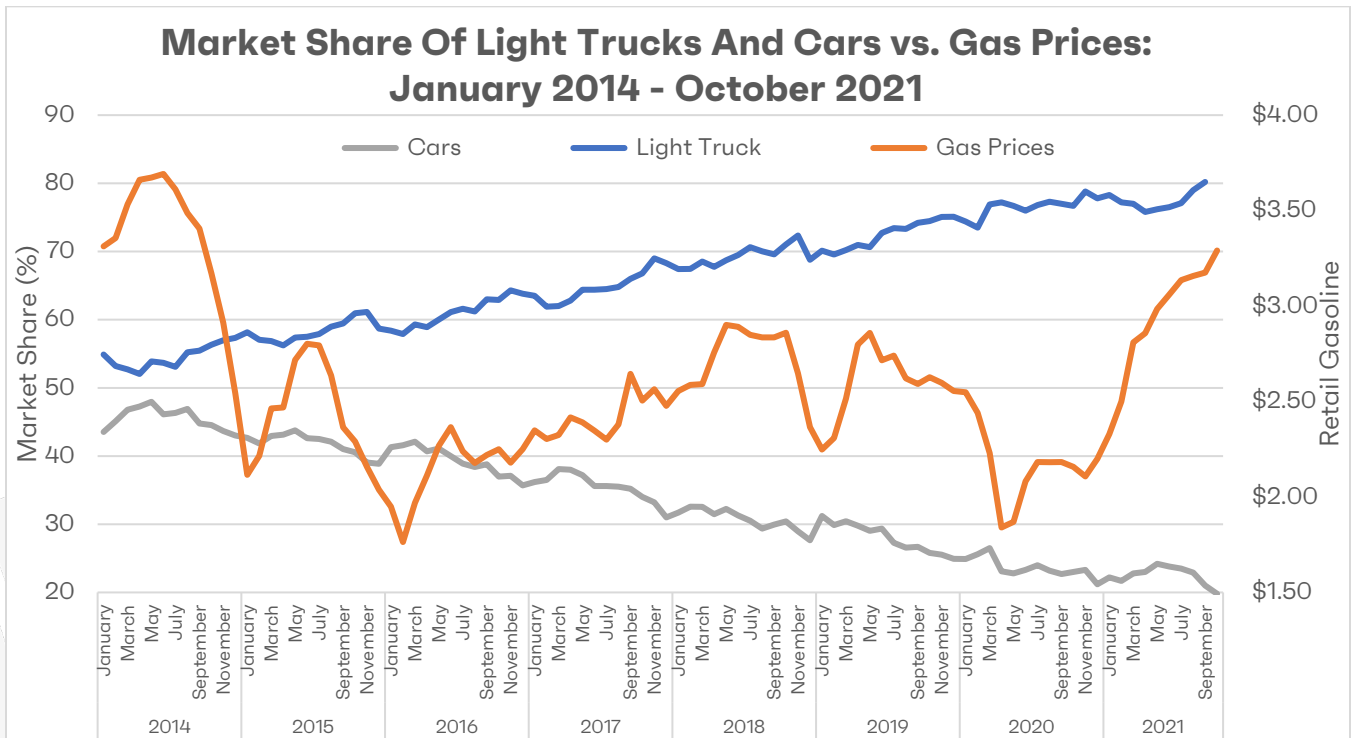
TrueCar¹²: “Fleet sales for October 2021 are expected to be down 14% from a year ago and down 5% from September 2021 when adjusted for the same number of selling days.”

J.D. Power¹³: “Fleet sales are expected to total 142,000 units in October, down 15.2% from October 2020 and down 35.8% from October 2019 on a selling day adjusted basis. Fleet volume is expected to account for 13% of total light-vehicle sales, flat from 13% a year ago.”

Segments vs. Gas Prices (Updated 11/5)

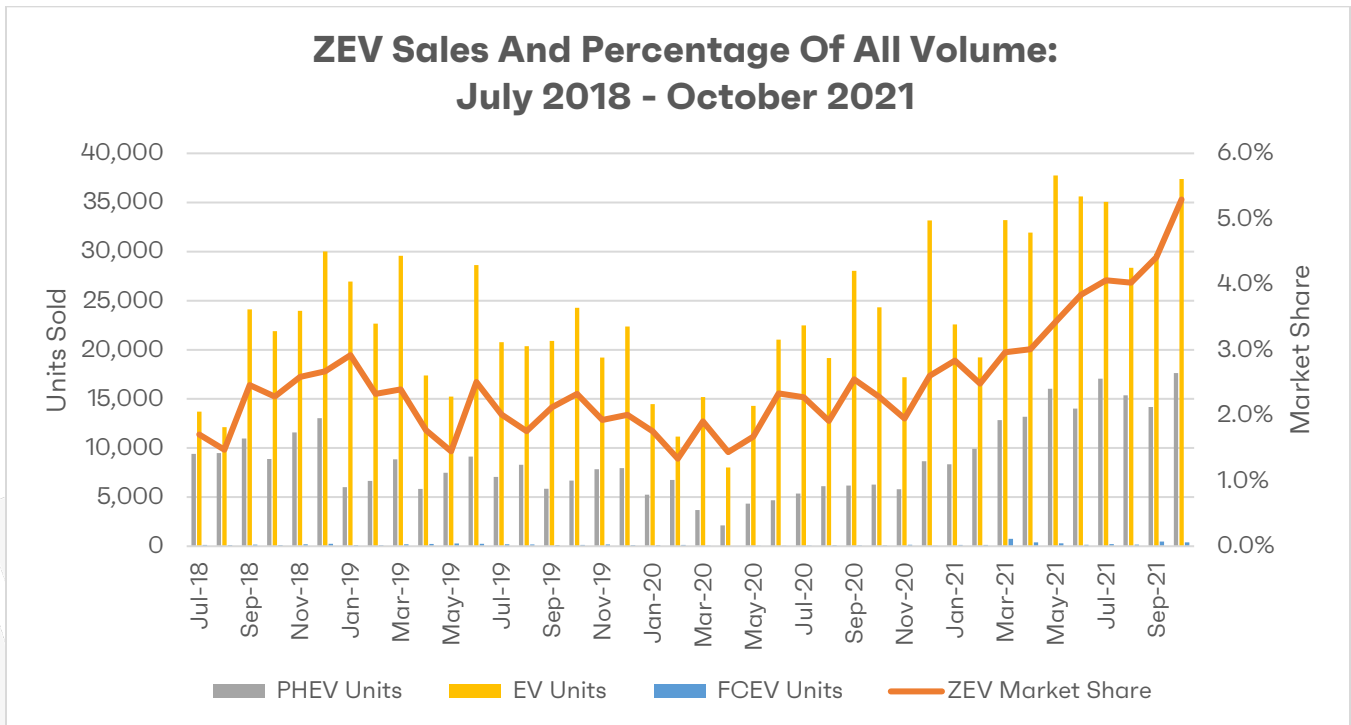
Monthly Sales For September: Light trucks accounted for 80% of sales in October, a 3.3 pp increase in market share from a year ago, and the highest level ever. Compared to 2020, sales of cars are down more than 106,000, and down more than 136,000 from October 2019, when cars comprised 26% of the market as opposed to the 20% 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 segments¹⁴ and gas was over \$3.00¹⁵ 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 \$2.57 a gallon (through August 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.¹⁶



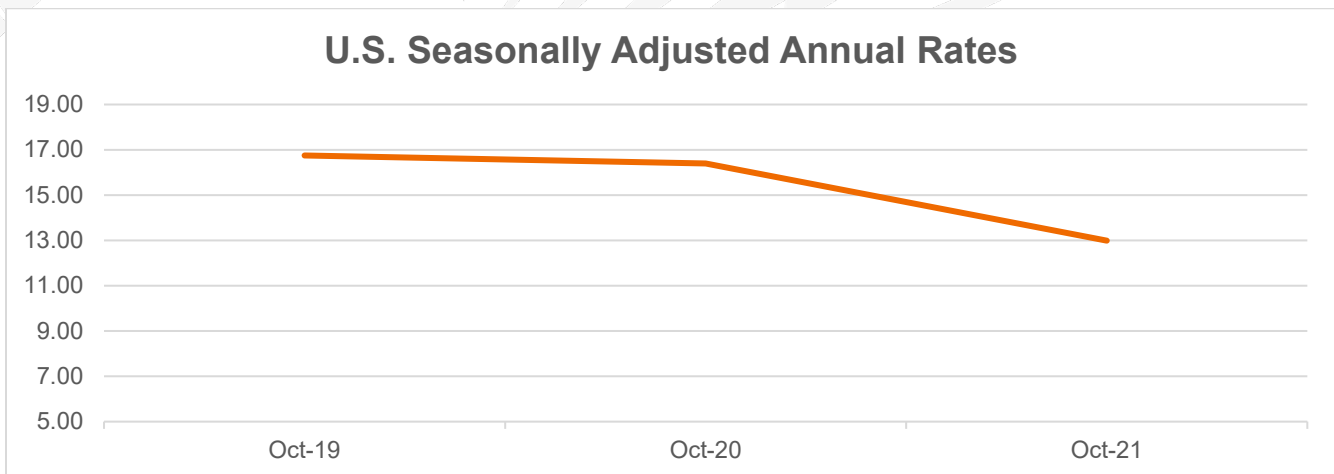
ZEV Powertrain Sales (Updated 11/5)

Sales of zero emission vehicles (BEV, PHEV, & Fuel Cell) accounted for 5.3% of total vehicle sales in October 2021, up 3 pp from a year ago and up .9 from September 2021. Sales of battery electric vehicles led the way for ZEVs, accounting for 3.6% of total sales, up 1.2 pp from October 2020. Plug-in hybrids accounted for 1.68%, more than three times the amount from the same time last year.¹⁷



Seasonally Adjusted Annual Rates (Updated 11/5)

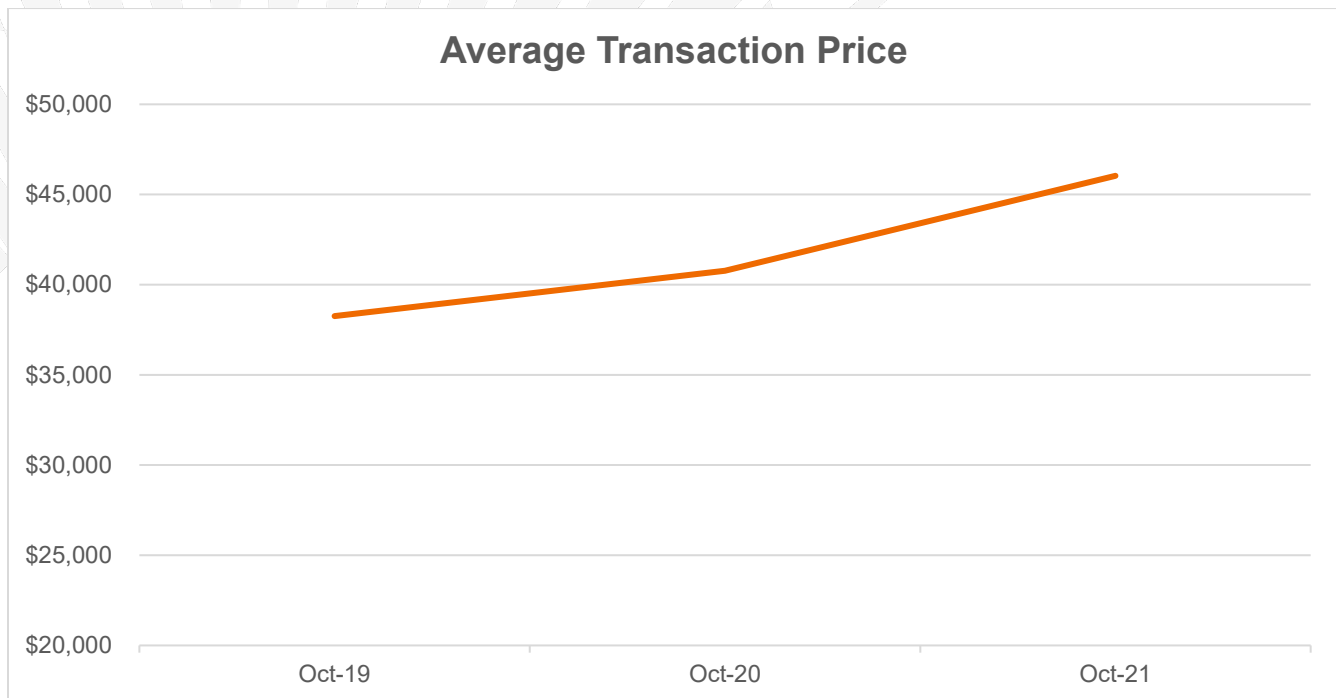
WardsIntelligence: “In comparison to same-month 2020, October’s SAAR was well below year-ago’s 16.4 million units, while the DSR fell 20.2% from last year’s 48,533 - 28 selling days – and total volume of 1.046 million was down 23.0% from 1.359 million. Sales in October were expected to improve on September’s SAAR but apparently picked up some steam at the end of the month.”¹⁸



Average Transaction Price (Updated 11/11)

J.D. Power¹⁹: “In October 2021, average transaction prices are expected reach a record high of \$43,999, the fifth consecutive month above \$40,000. For context, average transaction prices are trending to be 19.3% higher than in October 2020 when prices hit \$36,887. This is partially due to the near evaporation of manufacturer incentives. The average manufacturer incentive per vehicle is on pace to be a record low of \$1,628, a decrease of \$1,871 from a year ago. Expressed as a percentage of the average vehicle MSRP, incentives for October 2021 are trending toward a record low of 3.7%, down nearly 4.7 percentage points from a year ago and the first time on record below 4.0%.”

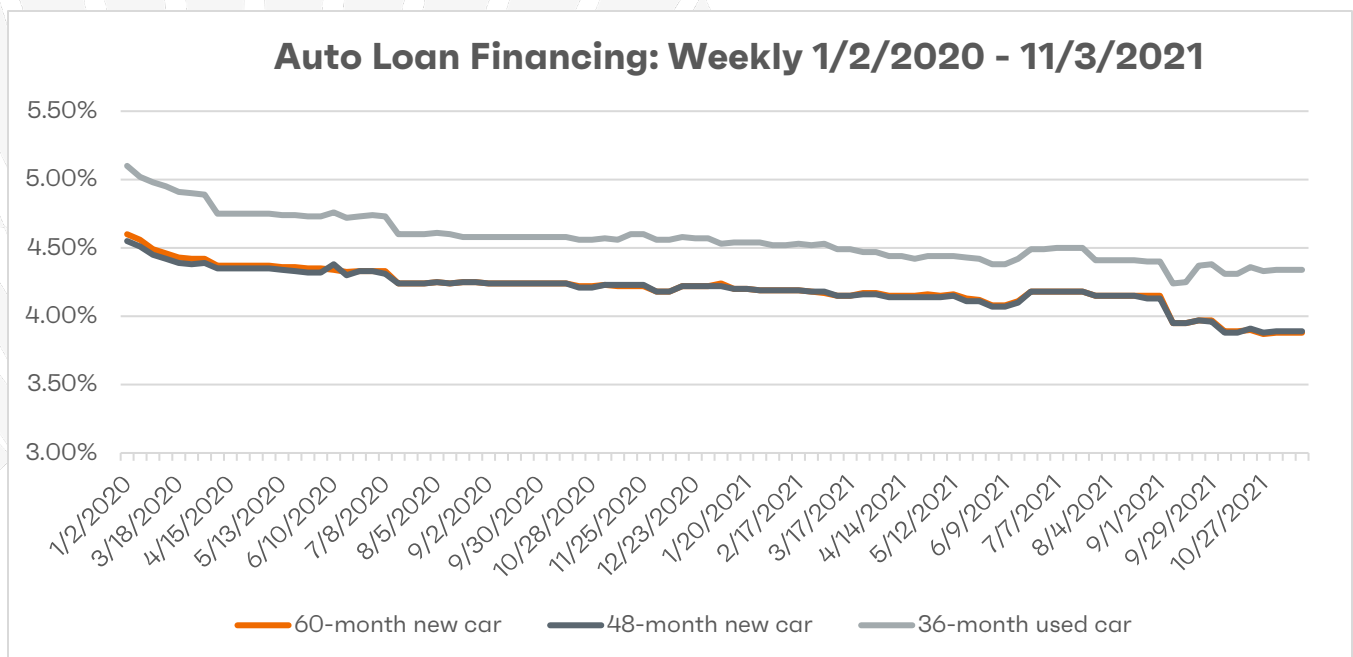
Kelley Blue Book (October): “New-vehicle prices jumped up for a seventh straight month and hit another all-time high in October 2021, surpassing \$46,000 for the first time, according to a new report from Kelley Blue Book. At \$46,036, the average transaction price (ATP) for a new vehicle was up 12.9% (or \$5,266) from one year ago in October 2020 and up 2.0% (or \$910) from September 2021. With tight supply and continued demand, new-vehicle prices remain elevated overall. Price gains in October were especially driven by higher luxury sales and a richer mix of large SUVs and pickup trucks. Luxury share rose to 16.3% of the total market in October, up from 15.2% a year ago. Luxury buyers paid an average of \$61,020 for a new vehicle last month. The average new vehicle is now selling well above the manufacturer's suggested retail price (MSRP), with the ATP clocking in at 2% above MSRP in October. In other words, buyers were paying an average of \$800 over sticker price last month. In October 2019, transaction prices were roughly \$2,300 below MSRP.”²⁰



Auto Loan Financing (Updated 11/18)

Interest Rates Remain Near Year-Long Low: Interest rates for new cars remain at the lowest level in more than a year at 3.88%. Rates also remained near a year-long low on the 36-month used car loan at 4.34%. Since the beginning of last year, rates are down 0.72%, and down 0.34% since the same time a year ago.²¹

Dates	60-month new car	48-month new car	36-month used car
1/2/2020	4.60%	4.55%	5.10%
11/18/2020	4.22%	4.23%	4.60%
11/10/2021	3.88%	3.89%	4.34%
11/17/2021	3.88%	3.89%	4.34%
One Week Change	0.00%	0.00%	0.00%
Two Week Change	0.00%	0.00%	0.00%
Change since 1/3/20	-0.72%	-0.66%	-0.76%
One Year Change	-0.34%	-0.34%	-0.26%



Crude Oil and Gas Prices (Updated 11/24)

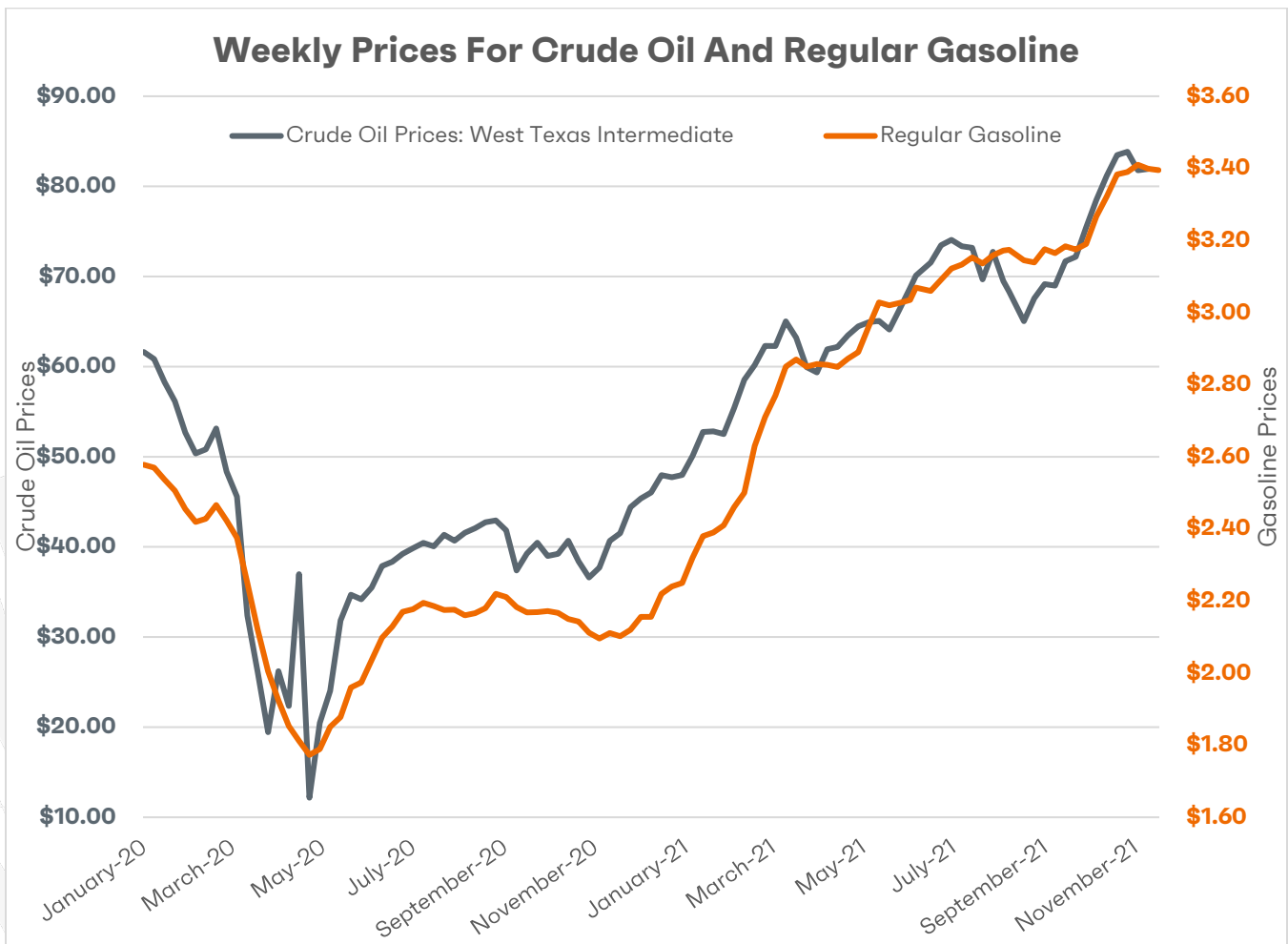
Biden Announced Plan To Release 50 Million Barrels Of Oil From Strategic Petroleum Reserve To Tamp Down High Gas Prices. “President Biden on Tuesday announced a plan to release oil from the Strategic Petroleum Reserve (SPR), in coordination with other countries, as part of efforts to tamp down high gas prices facing American consumers with the busy Thanksgiving holiday and travel season beginning. The Department of Energy will release 50 million barrels of oil from the SPR, of which

32 million will be an exchange of oil that will be returned in the years ahead, and 18 million will be the acceleration of a sale of oil previously authorized by Congress, according to the White House.”²²

EIA Outlook For Gasoline (11/11)²³: “U.S. regular gasoline retail prices averaged \$3.29 per gallon (gal) in October, up 12 cents/gal from September, and \$1.13/gal higher than in October 2020. The October price was the highest monthly average since September 2014. We forecast that retail gasoline prices will average \$3.32/gal in November before falling to \$3.16/gal in December, which are 16 cents/gal and 11 cents/gal higher than our previous forecast, respectively.”

EIA Outlook For Oil (11/11)²⁴: “Brent crude oil spot prices averaged \$84 per barrel (b) in October, up \$9/b from September and up \$43/b from October 2020. Crude oil prices have risen over the past year as result of steady draws on global oil inventories, which averaged 1.9 million barrels per day (b/d) during the first three quarters of 2021. In addition to sustained inventory draws, prices increased after OPEC+ announced in early October—and reaffirmed on November 4—that the group would keep current production targets unchanged. We expect Brent prices will remain near current levels for the rest of 2021, averaging \$82/b in the fourth quarter of 2021. In 2022, we expect that growth in production from OPEC+, U.S. tight oil, and other non-OPEC countries will outpace slowing growth in global oil consumption and contribute to Brent prices declining from current levels to an annual average of \$72/b.”

Gas and Oil Remain Near Multi-Year Highs: Oil prices, as benchmarked at West Texas Intermediate, remained just below \$82 a barrel, highest since 2014. Since election day, oil prices have climbed nearly \$44 a barrel. Gas prices remained at \$3.40, near the highest level since October 2014. Gas is 32% higher than the beginning of 2020.²⁵

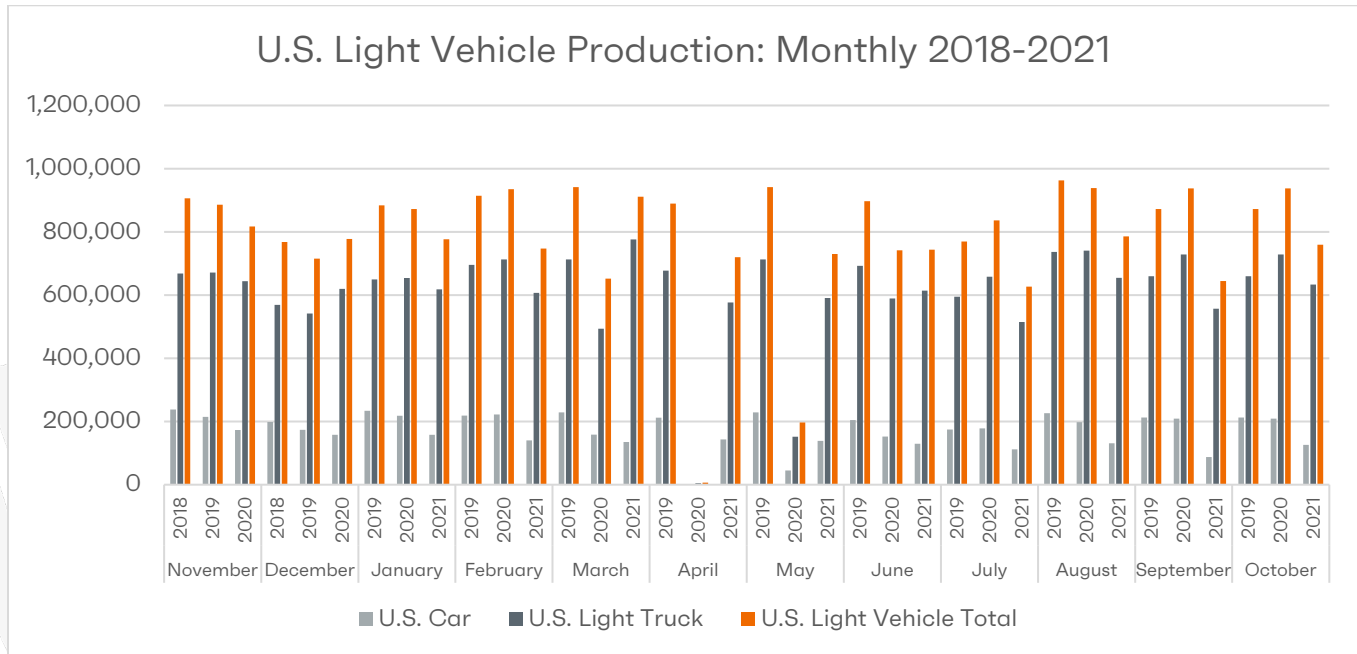


Production Meter

U.S. Light Vehicle Production (Updated 11/24)

Wards Intelligence (11/24)²⁶: “North America vehicle production in October – including light vehicles and medium-/heavy-duty trucks – totaled 1.140 million units, 22.1% below like-2020, and 86,100 units below month-ago’s expectations for the period. October’s total was the lowest for the month since 2009’s 1.03 million units. The shortfall, though not nearly as bad as some other months in 2021, continued the pattern that has prevailed throughout most of this year of output not meeting expectations – due mainly to the uncertainty of unscheduled and unknown production stoppages related to parts shortages, mostly caused by the global microchip shortage. . . . Although coming off a low base – September’s total of 946,117 was a decades-long low for the period - North America production in October marked a 20.5% rise from the prior month. Production normally increases in October from September, but this year’s gain was the biggest in 31 years.”

U.S. Light vehicle production for October 2021 increased month-over-month by 18 percent, totaling 759,219 (125,783 cars, 633,436 light trucks), year-over-year, production is down 19% from 2020.



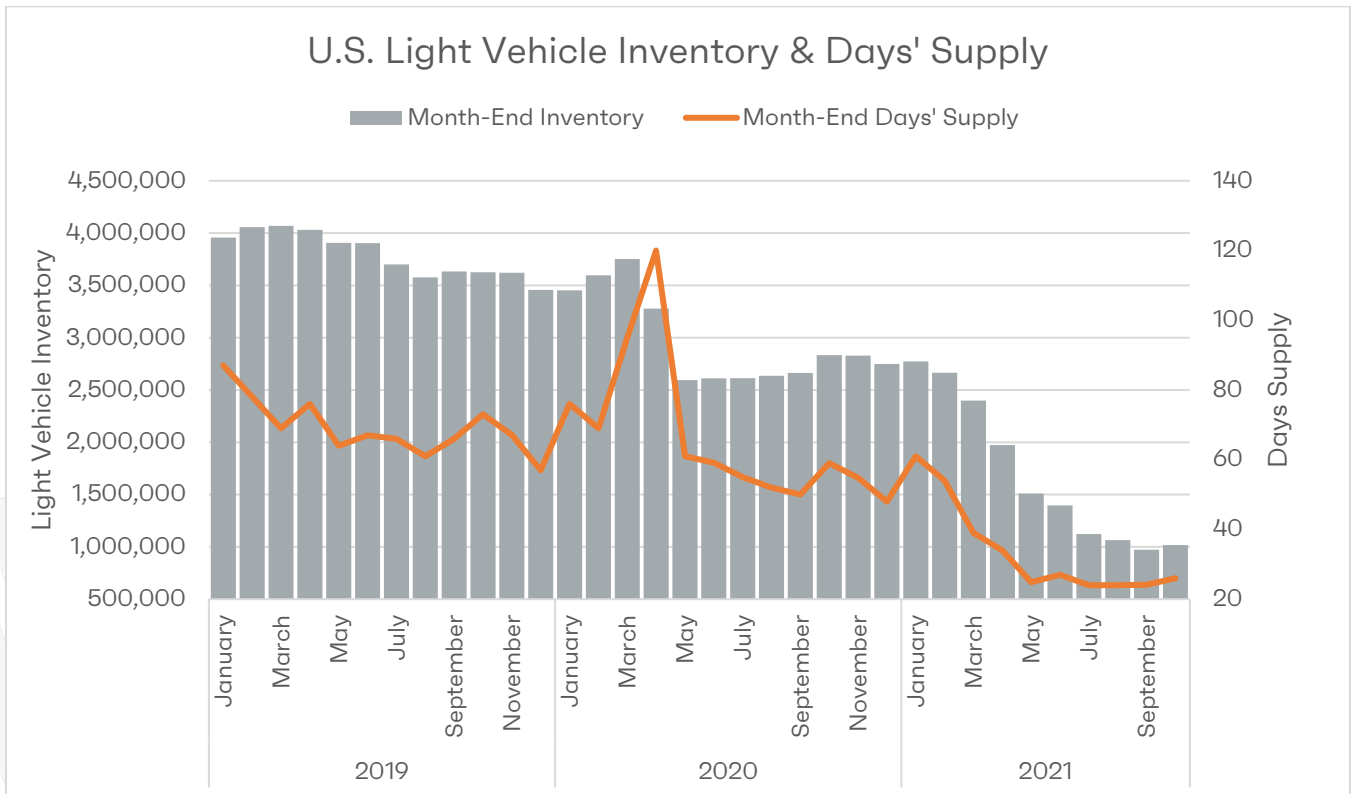
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U.S. Light Vehicle Inventory and Days' Supply (Updated 11/5)

WardsIntelligence Inventory Update (10/6)²⁸: “Oct. 31 inventory, up 4.6% from September, marked the first sequential increase after eight consecutive declines. Inventory, which remains at historic lows and well below the levels most manufacturers currently desire to meet demand, totaled 1.02 million units heading into November, up from the prior month’s 973,000 units, and 64.0% below like-2020’s 2.83 million. Days’ supply increased to 26 from September’s 24 and was well below October 2020’s 58 and the historically typical range for the month of between 70 and 75....”

“Inventory is expected to increase again this month from the prior month but decline in December. It’s typical for inventory to fall from November to December because of the lengthy holiday shutdowns scheduled at most plants. That, combined with demand at year’s end usually rising from November, will conspire to cut inventory in December, even if supply-chain disruptions continue to ease.

“Oct. 31 inventory of North America-built vehicles rose 8.0% from September to 824,811 units, 62.4% below like-2020. Days’ supply rose to 27 from the prior month’s 25 but was well below same-month 2020’s 58. Import inventory declined 7.9% month-to-month to 192,227 units in October and was 69.7% below like-2020. Days’ supply increased to 23 from the prior month’s 21 but was below October 2020’s 60.”



Global Meter

Global Light Vehicle Production Outlook (Updated 11/11)

“With the semiconductor shortage causing the brunt of the losses, ongoing cuts due to global supply-chain disruptions have brought down the outlook for global light-vehicle production in 2021 close to the level of pandemic-impacted 2020. By region, the major areas of Europe and North America are heading toward year-over-year declines in 2021, while production-leader China, though forecast for an increase, is ending the year with a resurgence in losses related to the semiconductor shortage. The 2020 global production total of 74.6 million units was a 10-year low - barely edging out 2010’s 74.4 million - and a whopping 15.9% drop from 2019’s 88.7 million. Based on the current forecast from Wards Intelligence’s partner LMC Automotive, the production losses in 2021 mostly are from supply-chain disruptions rooted in the pandemic, with the semiconductor shortage alone cutting an estimated 10 million units from what should have been a double-digit bounce-back from last year’s debacle.

“Production in 2021 is forecast to total 75.4 million units, just 1.1% above 2020. Furthermore, production in 2022, though forecast to rise 11.6% year-over-year to 84.1 million units, still will remain below pre-Covid 2019’s total. Longer term, production is forecast to rise above 2019’s level in 2023 to 93.2 million units and record a new all-time high in 2024 of 99.7 million.

“Production in China, as well as the rest of the Asia-Pacific, is forecast to grow in 2021 from 2020. While the AP-less-China region is pegged for a solid 4.7% increase, China is on the books for a slight gain of 0.4%. Related mostly to a rise in Covid-19 cases, LMC projects production losses in China from the semiconductor shortage at 830,000 units in the fourth quarter, more than twice the Q3 losses of 350,000 and over 40% of its total losses in 2021 of 1.93 million.”²⁹

Global Light Vehicle Sales Outlook (Updated 11/5)

Wards Intelligence Outlook: “World vehicle sales in September declined 20.4% year-over-year to 6.43 million. September marked the third consecutive month of losses as the ongoing global chip shortage continues to strain the auto industry.

“All regions reported losses for the month, with Europe facing the biggest drop at 24.6% to 1.36 million, compared to 2020’s 1.80 million. The region’s market share slightly dropped to 21.1% from year-ago’s 22.3%. Spain (-17.7%), France (-19.5%) and Russia (-22.0%) saw declines in vehicle sales for September. The downturn was even sharper for Germany (-24.9%), Italy (-30.5%) and the U.K. (-34.9%).

“Year-to-date vehicle sales for Europe were up 9.9% to 12.87 million.

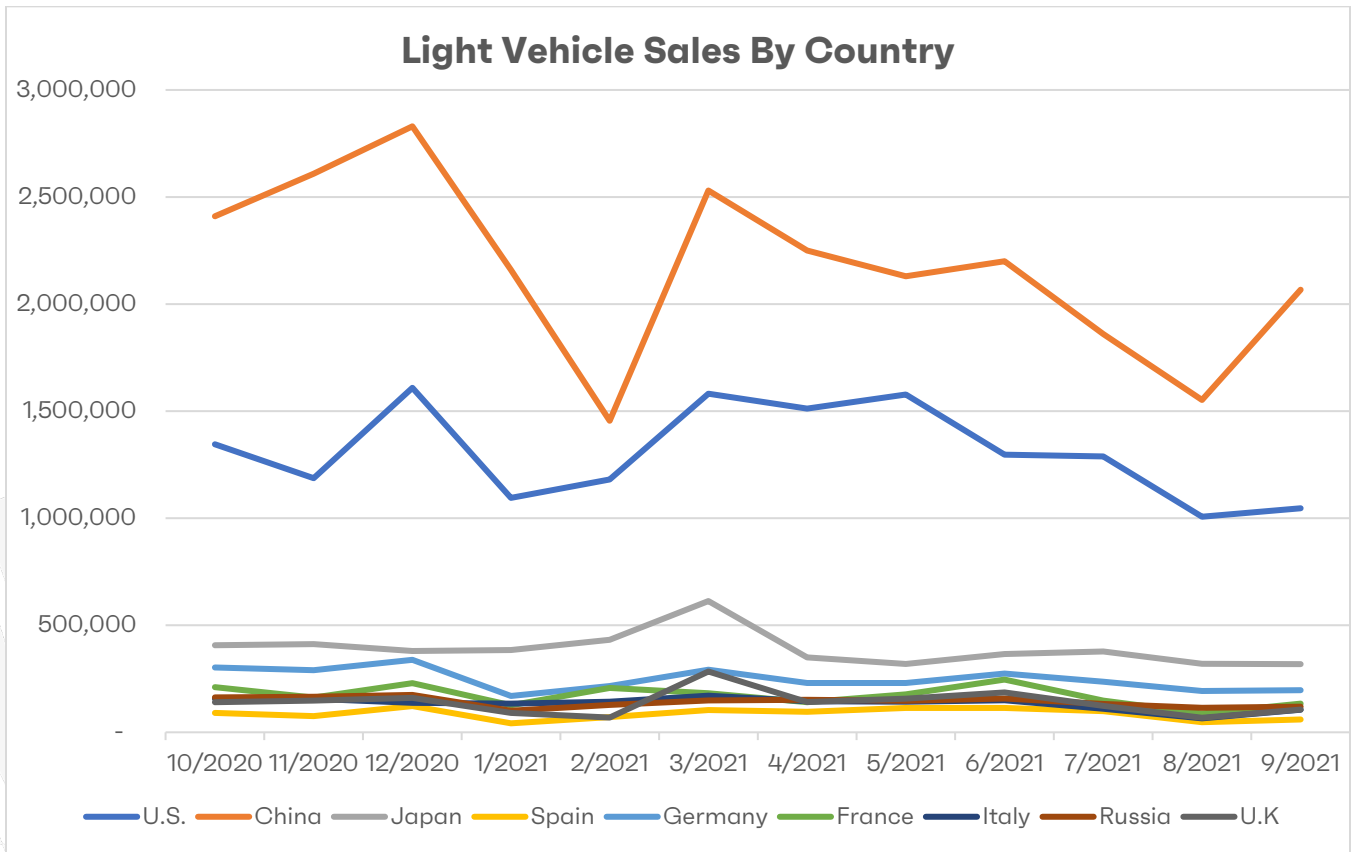
“Vehicle sales in North America experienced a 22.3% year-over-year decline to 1.28 million in September. All countries reported losses, with the U.S. facing the biggest drop at 24.4% to 1.04 million deliveries, mainly caused from the supply-chain disruptions. Canada fell 15.1% to 153,000, while Mexico saw a modest decline of 1.0% to 79,000 deliveries. The region’s 9-month total was up 13.4% to 14.13 million. The situation was similar for Asia Pacific as regional sales shrank 20.1% to 3.22 million compared to last year’s 4.03 million.

“September marked the fifth consecutive month of losses for China, as vehicle sales fell 19.3% to 2.15 million compared to last year’s 2.67 million. Year-to-date deliveries improved 8.6% to 19.37 million.

“Japan (-32.2%, estimated), South Korea (-20.8%, estimated) and Thailand (-19.1%, estimated) experienced declines in September. Monthly vehicle sales registrations also shrank for India (-36.6%) to 223,000 units. The picture was different in Australia (+20.8%) and New Zealand (+51.5%), as both countries experienced gains in September with 83,000 and 17,000 deliveries, respectively.

“In South America regional vehicle sales fell 13.4% to 271,000. The drop was driven from monthly losses in Brazil (-25.3%) as most countries saw modest improvements. Chile (+33.6%), Colombia (+23.8) and Uruguay (+25.2%) reported year-over-year gains for September, while sales in Argentina were down 10.3%.”³⁰

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

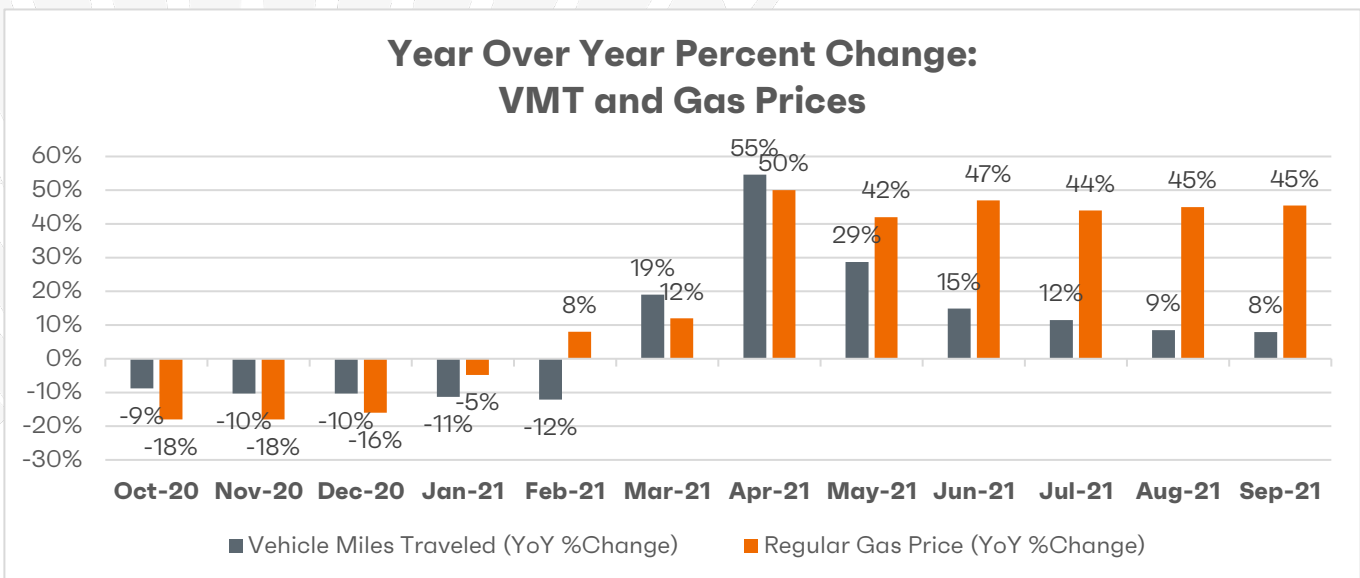


Recovery Meter

Roadway Travel (Updated 11/18)

According to the U.S. Department of Transportation, seasonally-adjusted vehicle miles traveled in September rose 7.9% from the same time a year ago. The cumulative travel estimate for 2021 is 2,335 billion vehicle miles.³¹

- Travel on all roads and streets changed by 7.9% (19.5 billion vehicle miles) for September 2021 as compared with September 2020. Travel for the month is estimated to be 266.7 billion vehicle miles.
- The seasonally adjusted vehicle miles traveled for September 2021 is 265.4 billion miles, a +7.7% (+19 billion vehicle miles) increase over September 2020. It also represents a 1.5% increase (3.9 billion vehicle miles)
- Cumulative Travel for 2021 changed by 11.7% (244.0 billion vehicle miles). The cumulative estimate for the year is 2,335.6 billion vehicle miles of travel.



Economic News (Updated 11/11)

Manufacturing Added 60,000 Jobs In October. “Jobs growth in manufacturing leaped in October as motor vehicles and parts manufacturers hired almost as many people as all other manufacturing sectors combined. According to the latest employment report from the Department of Labor, manufacturing added 60,000 jobs last month. The nonfarm economy added 531,000 jobs overall and the national unemployment rate edged down to 4.6% from 4.8%.”³²

- **“Motor Vehicles And Parts Production Added 27,700 Jobs Alone Last Month, Making Up Almost Half Of All Manufacturing Jobs Created In October And About 70% Of The 41,000 New Posts Filled In Durable Goods Production.”³³**

For October, The ISM Fell To A 16-Month Low To 60.8% From 61.1 In September. “U.S. manufacturing activity slowed in October as a measure of new orders dropped to a 16-month low and factories continued to experience delays with deliveries of raw materials. The Institute for Supply Management (ISM) said on Monday its index of national factory activity slipped to a reading of 60.8 last month from 61.1 in September.³⁴

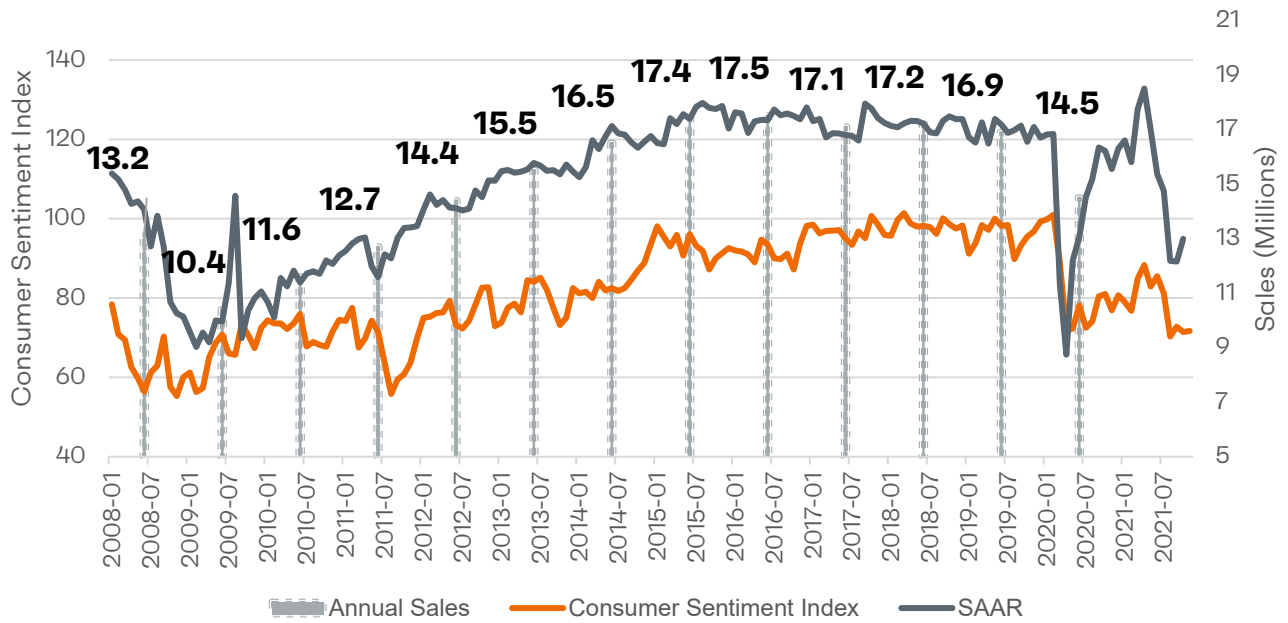
The Index Of Prices For Raw Materials Accelerated To 85.7. “The survey’s measure of prices paid by manufacturers accelerated to 85.7 from a reading of 81.2 in September.”

Consumer Confidence and Sales (Updated 11/11)

“Consumer sentiment remained virtually unchanged from its mid month reading, gaining just 0.3 Index points, and just 0.1 Index points above the average in the past two months, and only 0.1 Index points below the April 2020 low. The positive impact of higher income expectations and the receding coronavirus has been offset by higher rates of inflation and falling confidence in government economic policies. Consumers not only anticipated the highest year-ahead inflation rate since 2008 in the October survey, consumers also expressed greater uncertainty about the year-ahead inflation rate than anytime in nearly forty years (see the chart). Note that this was the first major spike in inflation uncertainty recorded outside of a recession. Even uncertainty about the long-term inflation rate was the highest in more than a decade. Declining living standards due to inflation were spontaneously mentioned by one-of-every five households, concentrated among older and poorer households.

The patterns of consumers' reactions to recent rises in inflation represent the preconditions that can promote an escalating inflation rate during the year ahead. Consumers' recognition of high and rising prices is near universal, so too is their desire to reestablish spending for a more traditional holiday season. People understand that the origin of inflation has been in the upheavals in supply lines and labor markets. The acceptance of higher prices was caused by swollen savings due to the record pandemic cash incentives as well as by Biden's new social support programs. The declining resistance to price hikes among buyers will be joined by less resistance among sellers to hiking prices that will be justified by higher materials and labor costs. These reactions promote an accelerating inflation rate until a tipping point is reached when consumers' incomes can no longer keep pace with escalating inflation. In the past inflationary era, one recession was insufficient to realign expectations; it required a series of boom-bust cycles, until the Fed's Volcker finally defeated inflation by raising interest rates to record levels.”³⁵

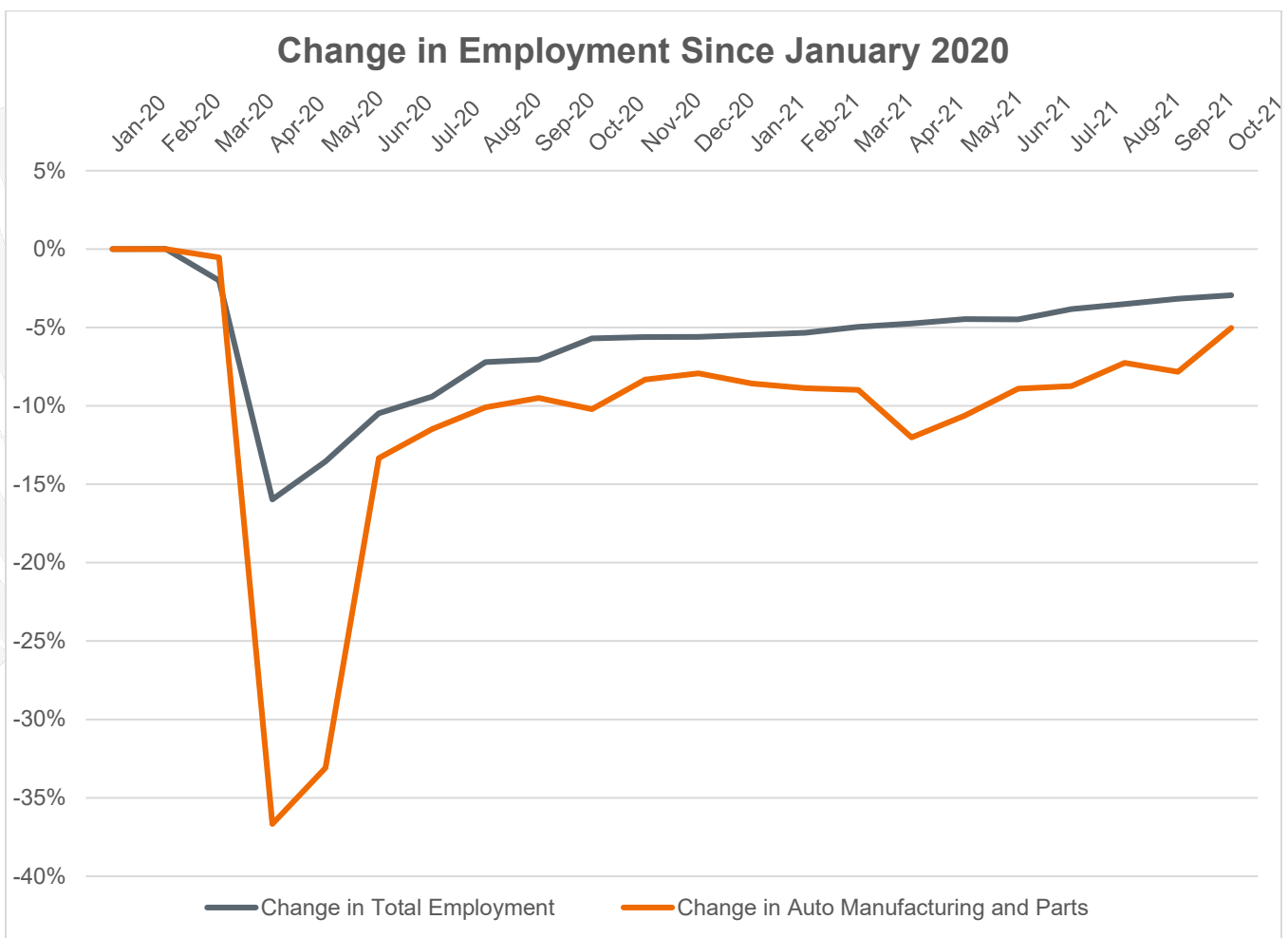
Light Vehicle Sales And Consumer Sentiment Index: 2008 - October 2021



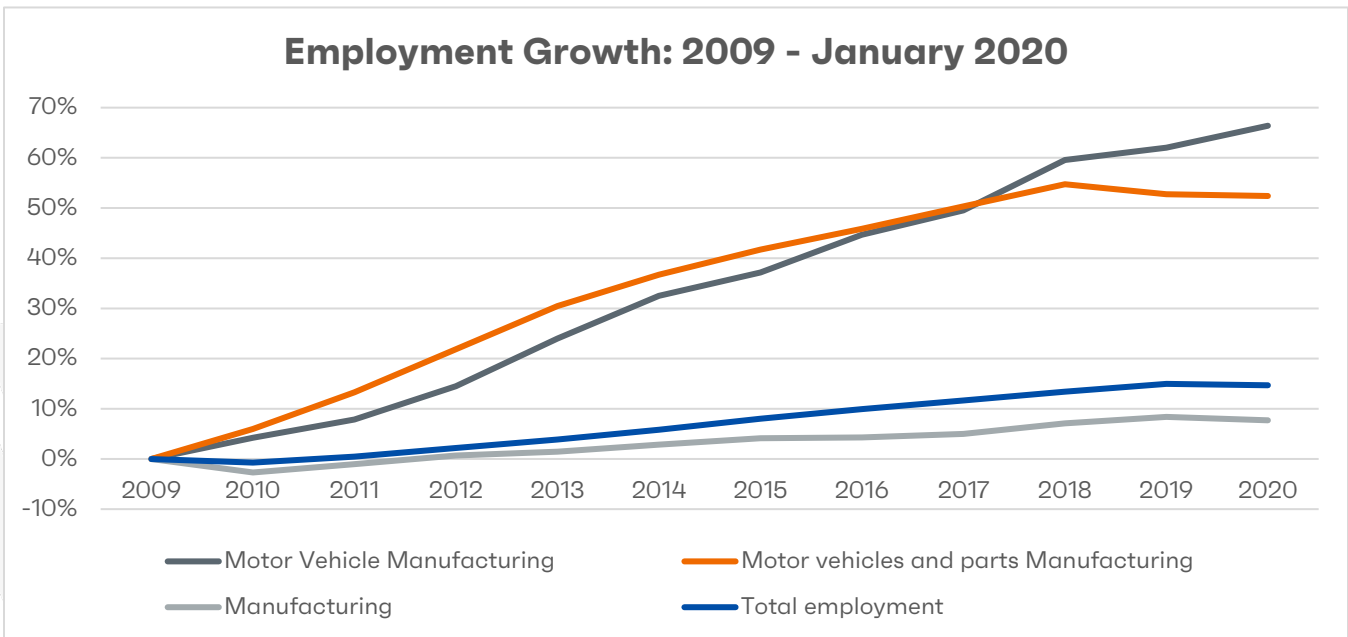
Employment (Updated 11/11)

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 36,500 jobs since January 2020.³⁶

- **Motor Vehicle And Parts Manufacturing Gained 27,700 Jobs In October.**³⁷



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.³⁸ 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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