

READING THE METER

September 3, 2020

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Forecast Meter

Forecast Summary (Updated 9/3)

2020 Sales, ⁱ Extended Sales Forecast ⁱⁱ and Production Forecasts ⁱⁱⁱ		
	U.S. Sales & Forecasts	North American Production
March	992,392 (-33% YoY)	1.01 million units (-34% YoY)
April	707,852 (-48.7%YoY)	8,463 (-99.4% YoY)
May	1,114,931 (-29.5% YoY)	248,602 (-83% YoY)
June	1,103,791 (-24% YoY)	743,216 (-17% YoY)
July	1,227,091 (-12.1% YoY)	1,261,884 (+2.2% YoY)
August	1,325,144 (-19.1% YoY)	N/A
1st Quarter	3,476,512 (-12.7% YoY)	3.86M (-11.7% YoY)
2nd Quarter	2,948,410 (-33.3% YoY)	1.4M (-67.6% YoY)
3rd Quarter Estimate	13-14M SAAR (-20%-26% YoY)	3.62 (-12.2% YoY) / 9.13 through September (-29.2 YoY)
2020 Full Year Estimate	12.6-14.3M (-15%-26% YoY)	12.3M (-27% YoY)

U.S. Light Vehicle Sales Outlook (Updated 9/3)

Wards Intelligence Outlook^{iv}: “Currently, sales are forecast to total a 14.5 million-unit SAAR over the final four months of the year, ending 2020 at 13.9 million units. If sales cool off enough to finish the year at that level, the strain on dealer stocks should begin easing in September and end the year at a healthy level relative to demand.

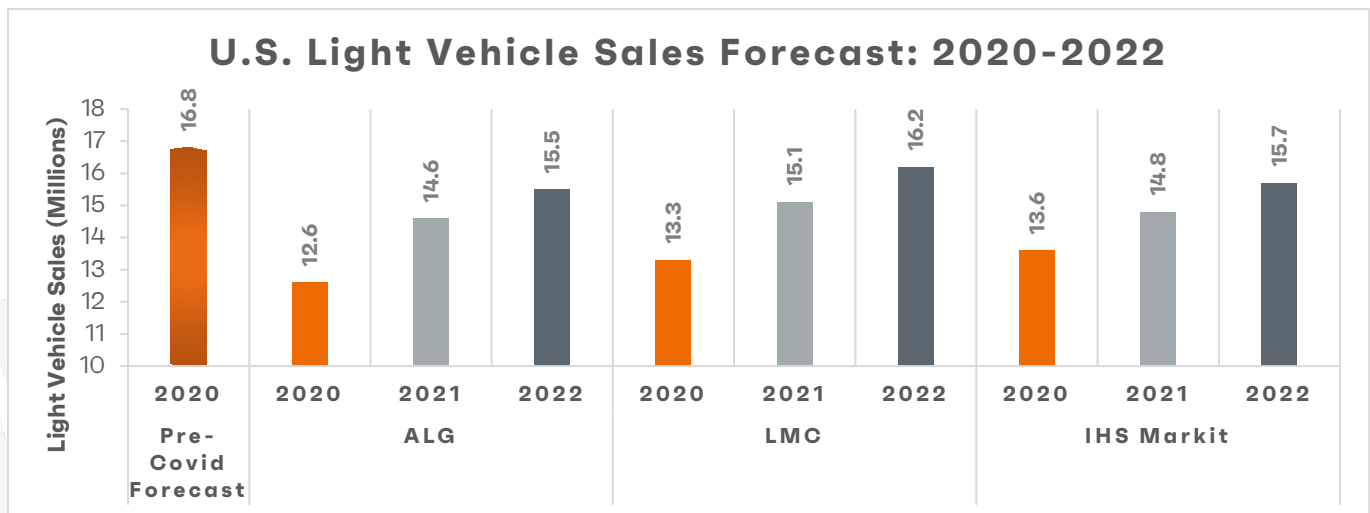
“Economic headwinds, as well as lean inventory in key segments, are largely why sales are forecast to run at an annualized rate below August’s results over the final four months of 2020. However, if dealers can manage to keep turning over 50% of their inventory, there is enough production in the pipeline for sales to run at August’s level, and possibly higher, for the remainder of the year. In August, there did not appear to be any weakening at the end of the month related to the recent decline in consumer confidence.”

IHS Markit^v: “Assuming there are no further major government lockdowns in 2020, which the IHS Markit baseline forecast does, US light-vehicle sales will drop to 13.6 million units in 2020, from 17 million in 2019, according to our August forecast. . . . IHS Markit expects the market’s sales recovery to be over years, with the US not seeing 17 million light-vehicle registrations annually again through 2025.”

- “US light vehicle retail demand has proven more resilient in the near-term in spite of a very challenged US economic outlook. As a result, the US light vehicle sales outlook has been increased to 13.6 million units and 14.8 million units for 2020 and 2021, respectively.”^{vi}

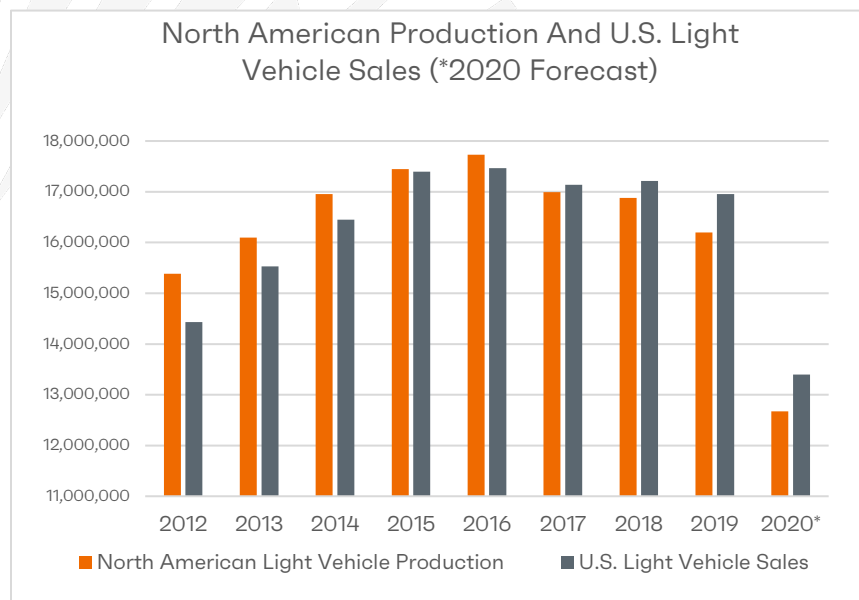
Wards Intelligence Forecast For 2020 and 2021^{vii}: “The forecast for U.S. light-vehicle sales in 2020 has been adjusted downward 100,000 units to 13.3 million, based on the latest from Wards Intelligence partner LMC Automotive. Related to tweaks to the economic outlook, the 2021 forecast also was

downgraded 100,000 units and stands at 15.1 million. The 2020 revision adjusts for anticipated short-term inventory shortages caused by a combination of slower production ramp-ups and better-than-expected sales since the impact of the virus started in mid-March that will further limit product availability through the end of the third quarter. Although projecting demand for the remainder of 2020 remains a fluid exercise, currently, based on seasonally adjusted annual rates, sales are not expected to begin strong sequential growth until the fourth quarter.”



North American Production Outlook (Updated 8/20)

IHS Markit^{viii}: “The outlook for North America light vehicle production was increased by 139,000 units [to 12,760,640] and 26,000 units [to 14,611,281] for 2020 and 2021, respectively (and increased by 224,000 units for 2022 [to 15,705,718]). In the near-term, production was bolstered based on stronger US sales expectations for the year and efforts to further restock depleted inventories. In the intermediate-term, stronger demand requirements and the launch of several new vehicles (including the expected onshoring of the Kia



Sporage and Subaru XV Crosstrek) bolster the outlook. Production in the region continues to ramp-up amid increasing COVID-19 cases throughout the US South and West. Despite a variety of struggles, production in July 2020 totaled 1.27 million units, 43,000 units higher than expected while also 84,000 units higher than a year ago. The robust performance in July is the result of most manufacturers

reducing or eliminating summer shutdown plans that typically occur in the month. Inventory levels are expected to steadily increase over the coming months, yet the August 2020 forecast now reflects a slowdown in production deferred to 1Q-2021 as the industry moves from the restart phase to one of re-alignment to a new lower demand environment.”

North America Production^{ix}:

“With North America production almost back to full speed in July – in part thanks to several cancellations of typical summer shutdowns – inventory of domestically made vehicles improved slightly. However, even though an improvement on June’s 37.4% year-over-year decline, July’s North America-built total of 2.00 million units still was down a whopping 31.5%.

Thus, inventory of domestically produced vehicles could still be a damper on demand growth. Exacerbating that could be July’s drain on import stocks. Imports, due to relatively greater availability over the past three months, have been helping prop the market with long-time high market share. But thanks to comparatively strong sales, import inventory went from being flat with the same year-ago period in April to a 21.4% year-over-year downturn in July.

“For the rest of 2020, with production ramping up to year-ago levels, there will be enough inventory to support 15 million-unit SAARs for most of the year – but only if the industry can maintain sky-high turnover rates in some segments.”

Market Meter

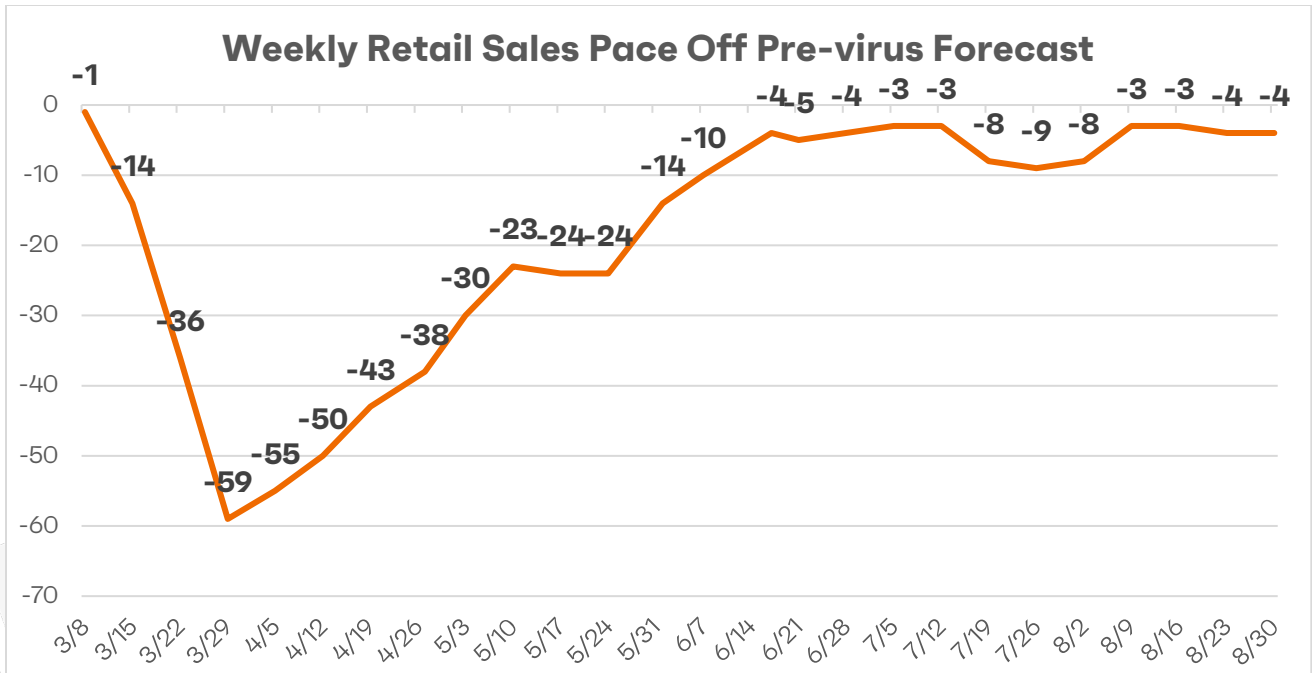
U.S. Light Vehicle Sales (Updated 9/3)

Weekly Sales^x

J.D. Power Weekly Update: “For the week ending August 30, retail sales were 4% below the pre-virus forecast. This was in-line with the prior week’s result.

“Customer-facing transaction price rose by \$103 from last week to \$35,486. A decline in premium nameplate transaction price (-\$887) was more than offset by higher premium nameplate share of industry. The average CFTP of the current week ending August 30 was 6.3% above the same week in 2019.

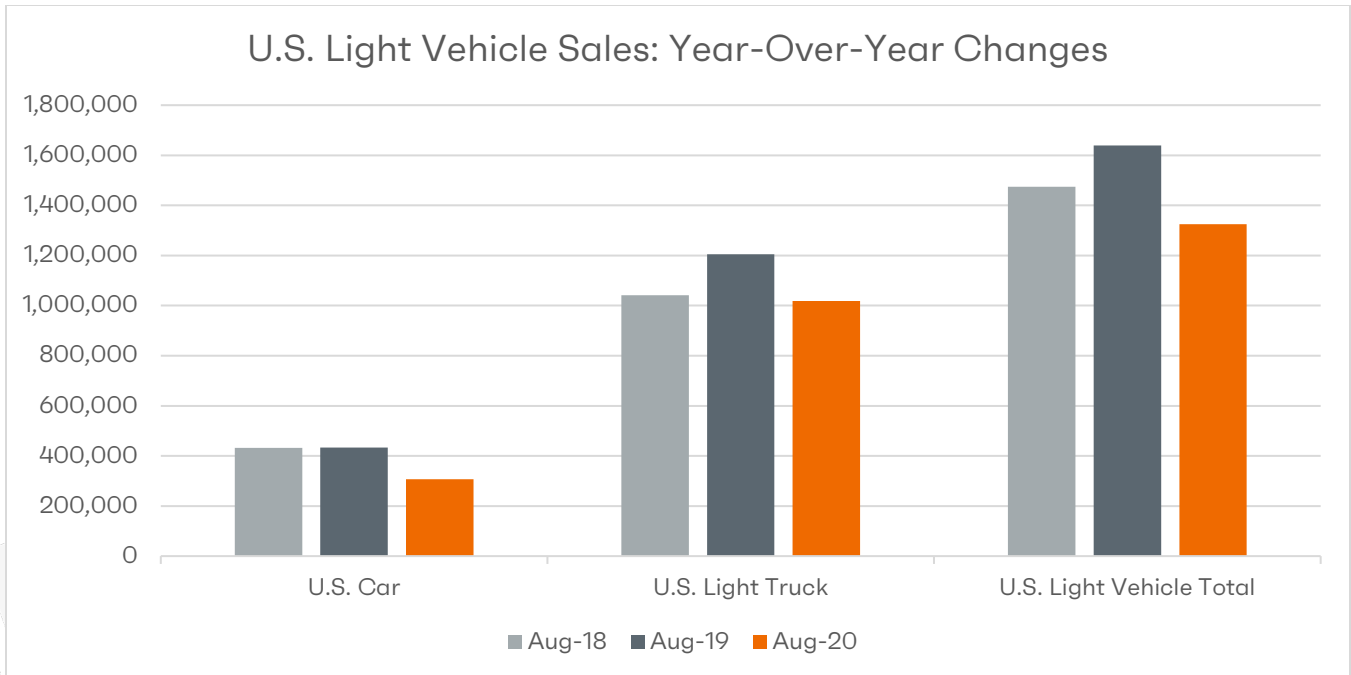
“Incentive spending rose \$18 to \$4,146 per unit last week. The increase was driven by higher premium share of industry, which more than offset a \$27 drop in average mainstream incentives spending. 84-month APR mix of all retail sales decreased 0.5ppts to 8.2%, down 13.6ppts from the COVID-19 peak in late March. Lease mix rose 1.3ppts to 28% but was still 2.9ppts below the same week last year.”



Monthly Sales^{xi}

Year over year, August light vehicle sales are down 19.1% from 2019. The segment trend continues to favor light trucks over cars, with trucks capturing more three-quarters of the market (76.8%), and gaining 3.3% market share over 2019, however the overall truck volume was down more than 186,000.

“U.S. light-vehicle sales totaled a 15.2 million-unit seasonally adjusted annual rate in August, the highest since February’s pre-pandemic 16.8 million. Sales have risen each month since April’s rock-bottom 8.7 million-unit SAAR. The question now is will demand continue to grow in the face of more headlines of job losses and lower consumer confidence, as well as still-strained dealer inventory. Sales volume in August totaled 1.325 million units, equal to half the inventory the month started with, and the first time since 2011, when the industry was gaining momentum coming out of the last recession, that the sales/inventory ratio was that high – the August ratio over the past three years averaged 38%.”^{xii}



Fleet Sales

Wards Intelligence^{xiii}: “Based on Wards Intelligence and LMC Automotive data, fleet deliveries in August fell an estimated 32% year-over-year but significantly improved on the average 66% downturns during the April-July period.”

IHS Markit^{xiv}: “Automakers have also reported shifting some of the production they had planned for rental car fleets to retail cars, following the canceled order and as production resumed in June. In making that change, automakers may be able to soften the impact of lost rental fleet orders over the course of the year. . . . Two other factors which IHS Markit expects could be impacting compact and mid-size car sales are the disappearance of service jobs in the first half and canceled rental-fleet orders. As compact and mid-size cars are less expensive than utility vehicles, the lack of buying power from this group could be having an impact on passenger car registrations, particularly at the low end. While not all rental-fleet orders were for cars, the loss of orders from major rental-car companies from Hertz to Avis had impact on first half as well. Those canceled orders coincided with production shutdown as well, and as production resumed, automakers in some cases shifted planned production from rental-car fleet vehicles to vehicles configured for retail. Benefits from that change would be seen in the second half, however.”

J.D. Power^{xv}: The baseline forecast from J.D. Power called for 13.4 million in retail sales and 3.4 million in fleet/other sales. With the revised forecast of 12.9-14.2 in total sales, fleet sales fall to a range from 1.6 million to 1.9 million, a decline of 44%-53% from the baseline.

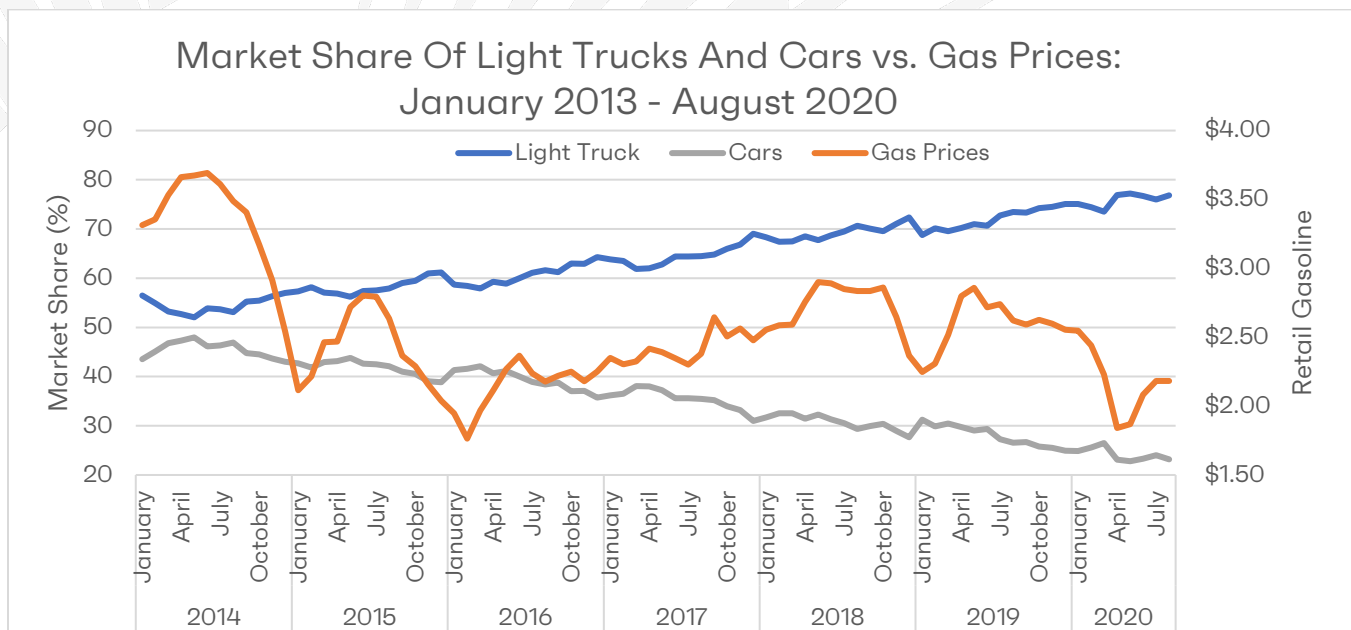
J.D. Power Retail and Fleet Sales Forecast

	Pessimistic Forecast	Optimistic Forecast	Pre-COVID Baseline Forecast
Retail Sales Forecast (million)	11.3	12.3	13.4
Fleet/Other Sales Forecast (million)	1.6	1.9	3.4
Total Sales Forecast (million)	12.9	14.2	16.8
Fleet Percent of Total Sales	12%	13%	20%
Retail Percent of Total Sales	88%	87%	80%
Fleet Loss From Baseline of 3.4 (million)	-1.8	-1.5	-
Fleet Loss as % Baseline Fleet Sales	-53%	-44%	-
Fleet Loss as % Total Sales	-14.0%	-10.6%	-

Segments vs. Gas Prices (Updated 9/3)

Monthly Sales For August: Light trucks accounted for 76.8% of sales in August, a 3.3% gain in market share from a year ago. Compared to 2019, sales of cars are down more than 126,000, but up more than 12,000 over July 2020. Likewise, sales are off nearly 187,000 from August 2019, but up more than 76,000 over July 2020.

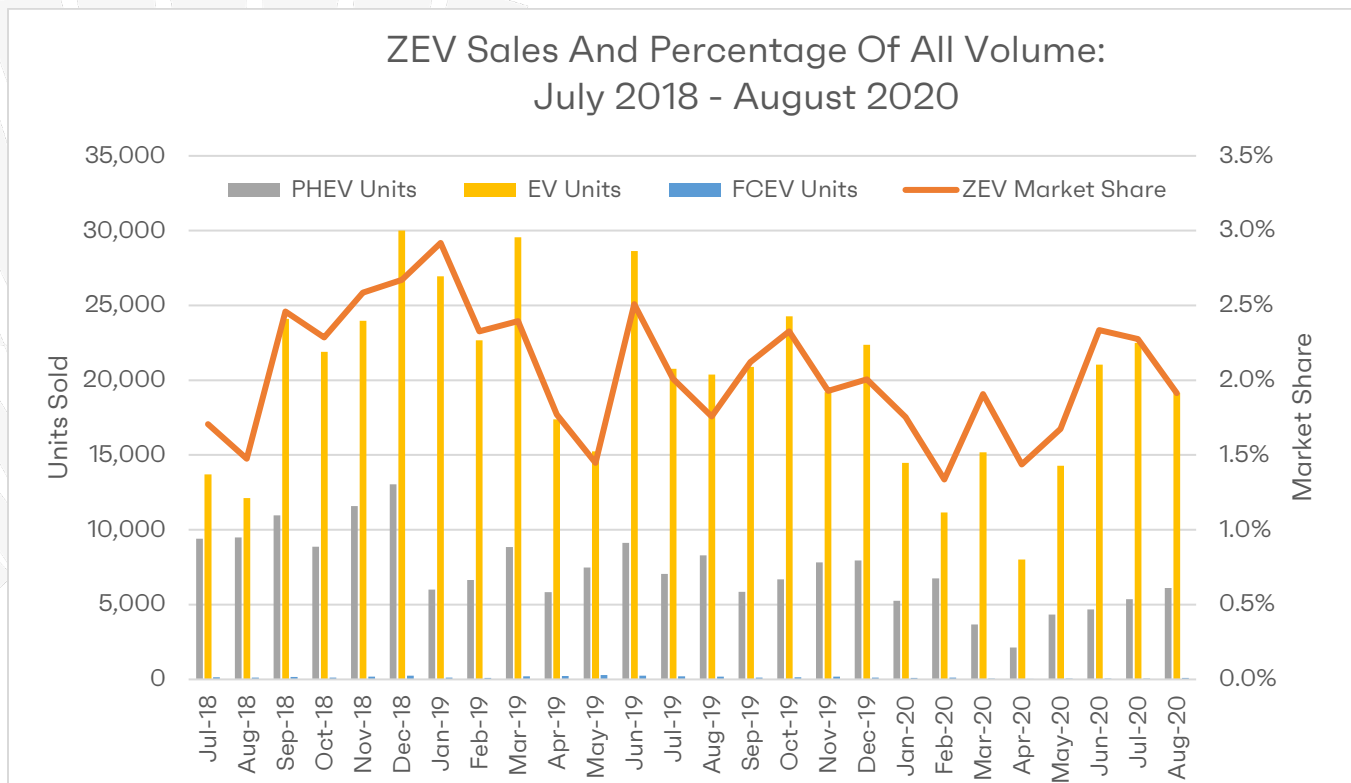
Historic Perspective: The upward trend in the popularity of light trucks over cars has been steady since 2013, when only 2% of annual market share separated the two segments^{xvi} and gas was over \$3.00^{xvii} a gallon. As fuel prices dropped below the \$3.00 mark in mid-September 2014, light truck sales began to take off – and never looked back. Gas prices since have averaged only \$2.47 a gallon (through August 2020) and when combined with increased fuel economy for light trucks, an increase of 4 mpg since 2013^{xviii}, the perfect conditions existed to continue fueling light truck market growth.



ZEV Powertrain Sales (Updated 9/3)

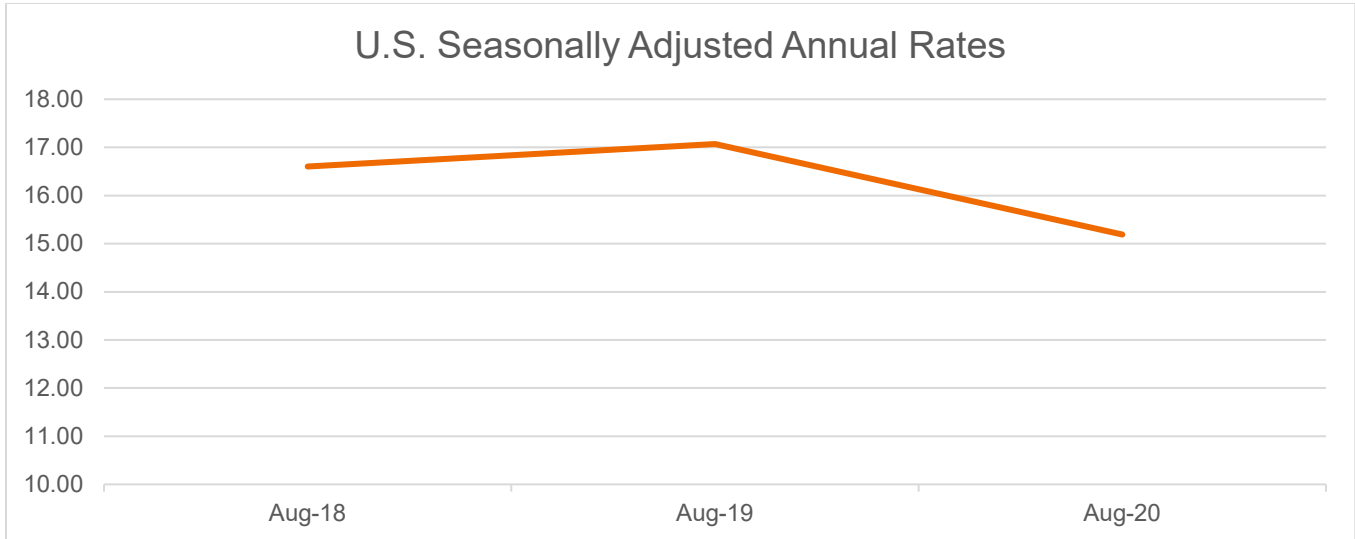
Sales of zero emission vehicles (BEV, PHEV, & Fuel Cell) accounted for only 1.9% of total vehicle sales in August 2020, up .2% from a year ago and down .4% from July 2020. Sales of battery electric vehicles led the way for ZEVs accounting for 1.45% of the total, up .2% from August 2019. Plug-in hybrids accounted for .46%, mostly unchanged from a year ago.

IHS Markit^{xix}: “In the first half of 2020, electric vehicles (EVs) continued to gain market share in the US, while the share of plug-in hybrid EVs (PHEVs) continued to fall. In the first half, 1.50 percent of US registrations were EVs, up from 1.35 percent a year earlier. Hybrid electric vehicles (HEV) saw their share improve from 2.97 percent in the first half of 2019 to 3.13 percent in the first half of 2020, while PHEVs saw their share drop from 0.53 percent to 0.39 percent over the same period. Non-electrified powertrains continue to both dominate the landscape but see their share slightly eroded. In the first half of 2020, their share fell to 95.0 percent, from 95.2 percent in the year-earlier period.”



Seasonally Adjusted Annual Rates (Updated 9/3)

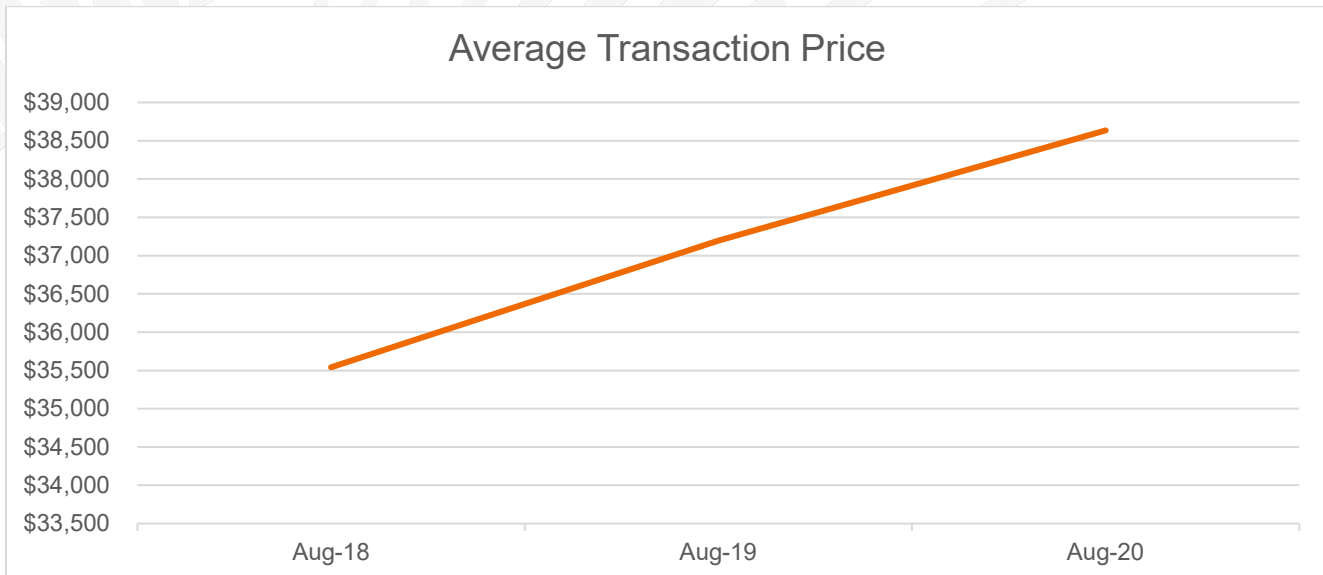
“U.S. light-vehicle sales totaled a 15.2 million-unit seasonally adjusted annual rate in August, the highest since February’s pre-pandemic 16.8 million. Sales have risen each month since April’s rock-bottom 8.7 million-unit SAAR. . . . Currently, sales are forecast to total a 14.5 million-unit SAAR over the final four months of the year, ending 2020 at 13.9 million units.”^{xx}



Average Transaction Price (Updated 9/3)

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 \$38,635 in August 2020. New-vehicle prices increased \$1,442 (up 3.9%) from August 2019, while raising \$72 (up 0.2%) from last month.”^{xxi}

Additional Insight From J.D. Power: “Customer-facing transaction price rose by \$103 from last week to \$35,486. A decline in premium nameplate transaction price (-\$887) was more than offset by higher premium nameplate share of industry. The average CFTP of the current week ending August 30 was 6.3% above the same week in 2019.”^{xxii}



Auto Loan Financing (Updated 9/3)

Financing Remains Largely Unchanged: Rates for the week of August 26th remain near this year’s lows, rising and unchanged from last week. Since dropping in mid-July to the lowest rates all year, rates have remained largely unchanged. Since the beginning of the year, rates are down .35% and down .41% from a year ago.^{xxiii}

Additional Insight From J.D. Power: “Incentive spending rose \$18 to \$4,146 per unit last week. The increase was driven by higher premium share of industry, which more than offset a \$27 drop in average mainstream incentives spending. 84-month APR mix of all retail sales decreased 0.5ppts to 8.2%, down 13.6ppts from the COVID-19 peak in late March.”^{xxiv}

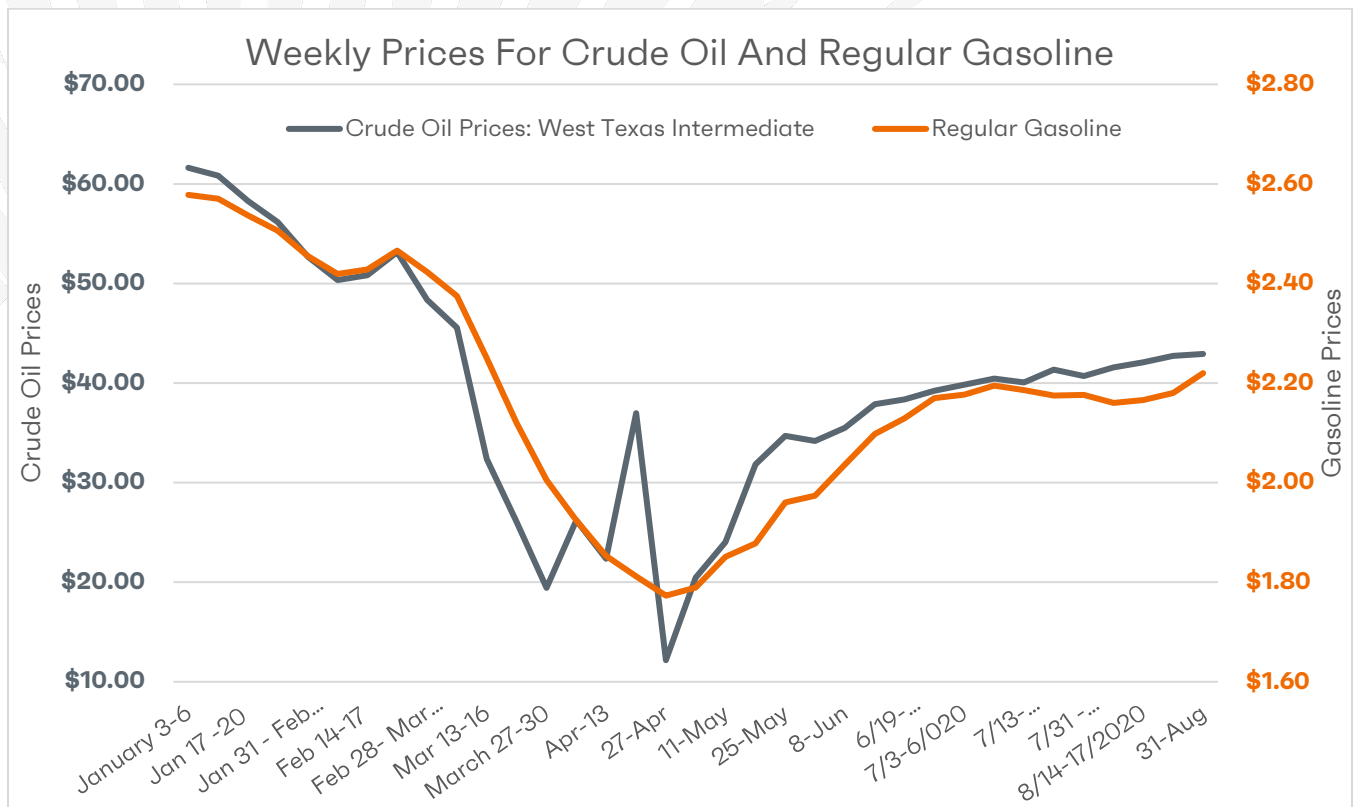
Auto Loan Financing				
Dates	60-month new car	48-month new car	36-month used car	
8/26/2020	4.25%	4.25%	4.58%	
8/19/2020	4.25%	4.25%	4.58%	
8/12/2020	4.24%	4.24%	4.60%	
8/5/2020	4.25%	4.25%	4.61%	
7/15-29/2020	4.24%	4.24%	4.60%	
7/8/2020	4.33%	4.31%	4.73%	
7/1/2020	4.33%	4.33%	4.74%	
6/24/2020	4.33%	4.33%	4.73%	
6/17/2020	4.32%	4.30%	4.72%	
6/10/2020	4.34%	4.38%	4.76%	
6/3/2020	4.35%	4.32%	4.73%	
5/27/2020	4.35%	4.32%	4.73%	
5/20/2020	4.36%	4.33%	4.74%	
5/13/2020	4.36%	4.34%	4.74%	
4/8 - 5/6/2020	4.37%	4.35%	4.75%	
4/1/2020	4.42%	4.39%	4.89%	
3/25/2020	4.42%	4.38%	4.90%	
3/18/2020	4.43%	4.39%	4.91%	
3/11/2020	4.46%	4.42%	4.95%	
3/4/2020	4.49%	4.45%	4.98%	
2/26/2020	4.56%	4.51%	5.02%	
1/2/2020	4.60%	4.55%	5.10%	
8/7/2019	4.66%	4.60%	5.17%	
One Week Change	0.00%	0.00%	0.00%	
Two Week Change	0.01%	0.01%	-0.02%	
Change since 1/3/20	-0.35%	-0.30%	-0.52%	
One Year Change	-0.41%	-0.35%	-0.59%	

Crude Oil and Gas Prices (Updated 9/3)

EIA Outlook For Gasoline^{xxv}: “Gasoline consumption, production, and inventory levels moved toward pre-COVID-19 levels in July. . . . EIA estimates that July 2020 gasoline consumption was 8.7 million barrels per day (b/d), an increase of 0.2 million b/d (2%) from June 2020 and a decrease of 0.8 million b/d (9%) from July 2019. July 2020 gasoline consumption was 9% lower than the month’s five-year (2015–19) average but marked a modest return toward normal levels when compared with June 2020, which was 12% lower than its five-year average, and April 2020, which bottomed out at 37% lower than its five-year average”

EIA Outlook For Production^{xxvi}: “EIA estimates July production closer to its five-year average. July 2020 gasoline production was 12% lower than the month’s five-year average, but June was 15% lower than its five-year average and April troughed at 36% lower than its five-year average. Inventories of total gasoline in July decreased 3.9 million barrels (2%) from June to 248 million barrels. As consumption, production, and inventories have moved closer to their five-year averages, U.S. average retail gasoline prices have stabilized.”

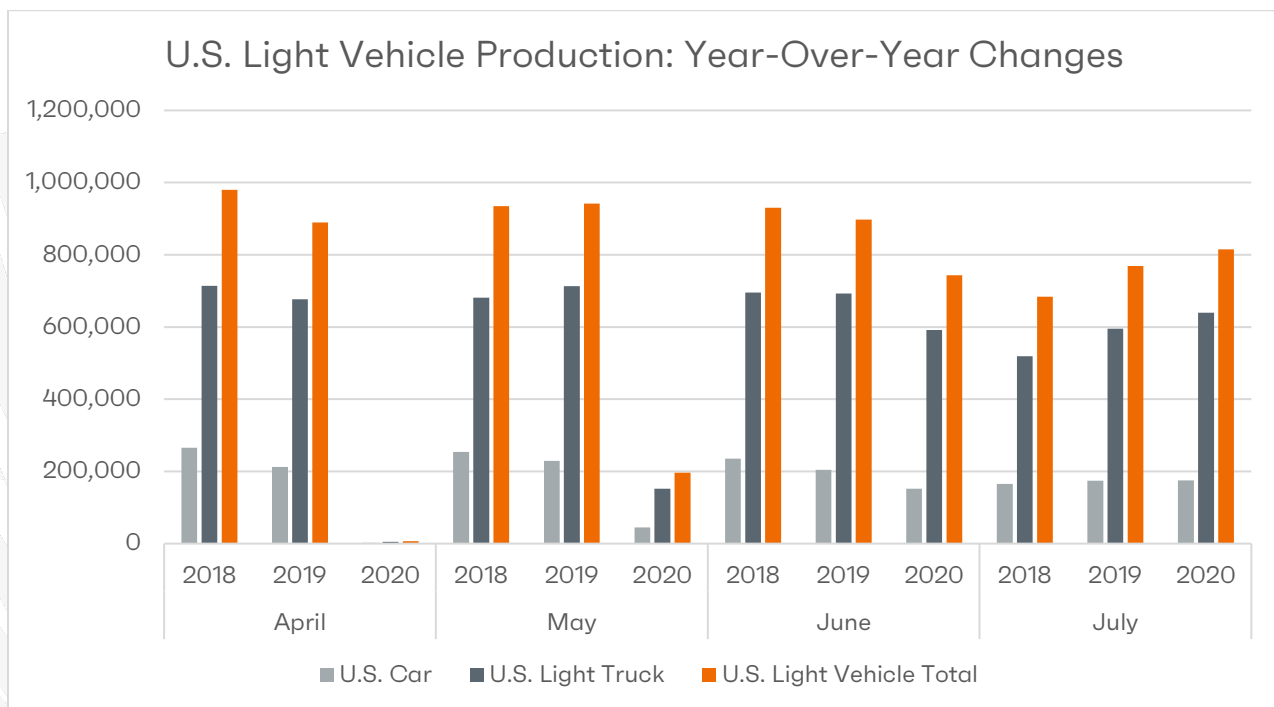
Oil And Gas Remain Low: Oil prices, as benchmarked at West Texas Intermediate, as well as gasoline prices, both continued their rebound of June and July through August and are mostly holding steady. For the week of August 31, oil was up to nearly \$43 while gas was \$2.22. This week’s slight rises are the highest price for oil and gas since the beginning of March. Compared to the start of the year, crude oil is down 30%, while gas prices are down 14%.^{xxvii}



Production Meter

U.S. Light Vehicle Production (Updated 8/20)

North American automakers built 1,261,884 vehicles in July, a 2.2% increase from the same month in 2019. U.S. production increased 45,502 year-over-year, with the light vehicle segment seeing the bulk of the increase, accounting for just over 44,000 of the increase in vehicles. This is a 6% increase in total vehicles over last July, and a 7% increase for light trucks. In total, car production in the U.S. was 175,297 units in July, a 1% increase from July 2019, while light truck production was 639,630 units.

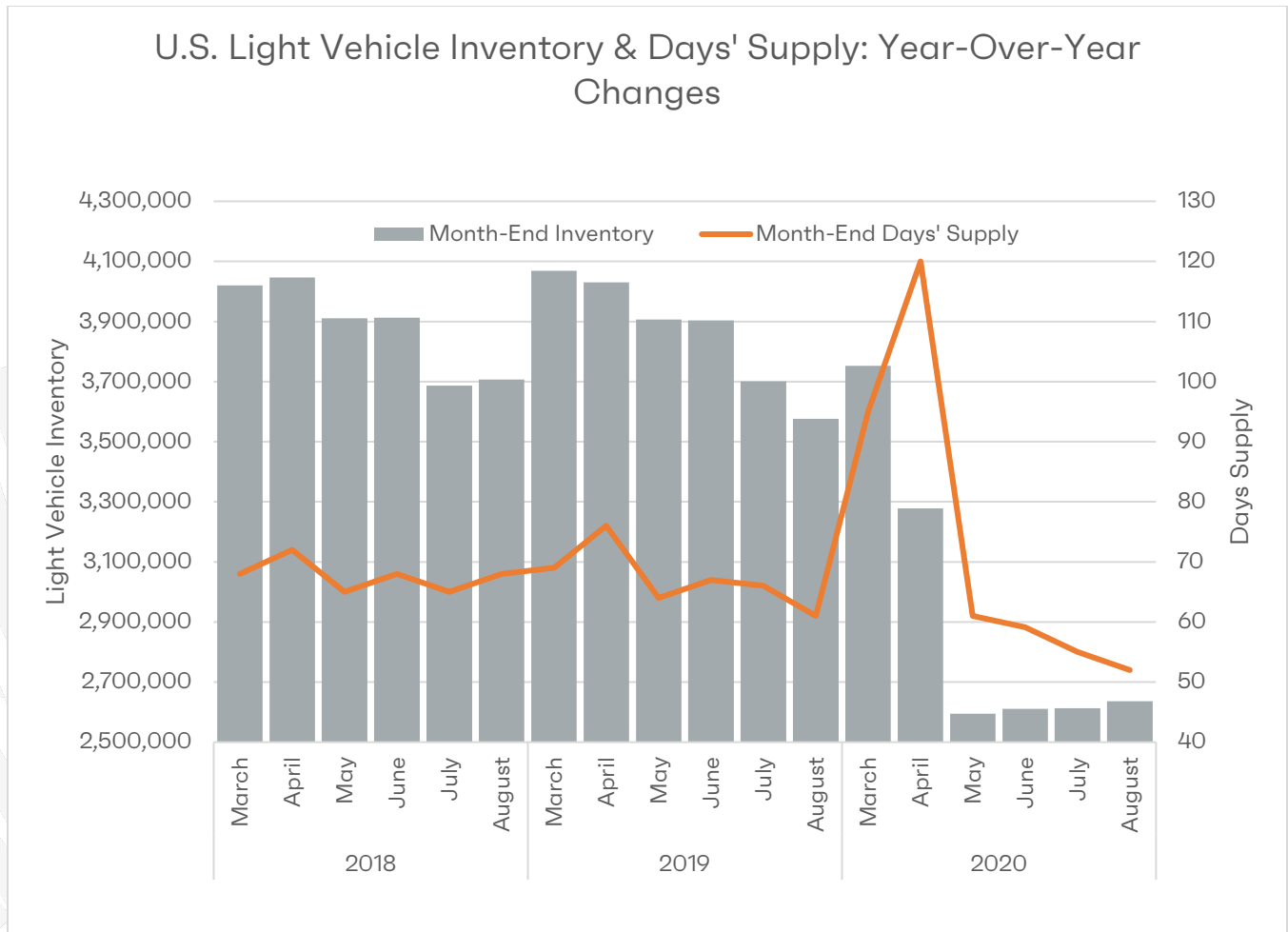


U.S. Light Vehicle Inventory and Days' Supply (Updated 9/3)

August Inventory Update: “The pandemic-induced inventory shortage improved in August for the second straight month by remaining relatively flat with the prior period and not declining as it typically does during the first two months of the third quarter when manufacturers schedule most of the year’s model changeover and vacation downtime.

“However, inventory remained at a 9-year low, totaling 2.64 million units on Aug. 31, 26.3% below like-2019. Showing how lean inventory is in relation to demand, Aug. 31 days’ supply of 52 also was a 9-year low, falling from July’s (also 9-year low) 55 and like-2019’s 61.

“If the sales outlook for the rest of 2020 holds relatively firm, the inventory picture will start to improve. Wards Intelligence projects inventory will rise to 3.1 million units by the end of the year, only nudging it up to an 8-year low, but well-balanced with LMC’s sales forecast for 2021 of 15.2 million units.

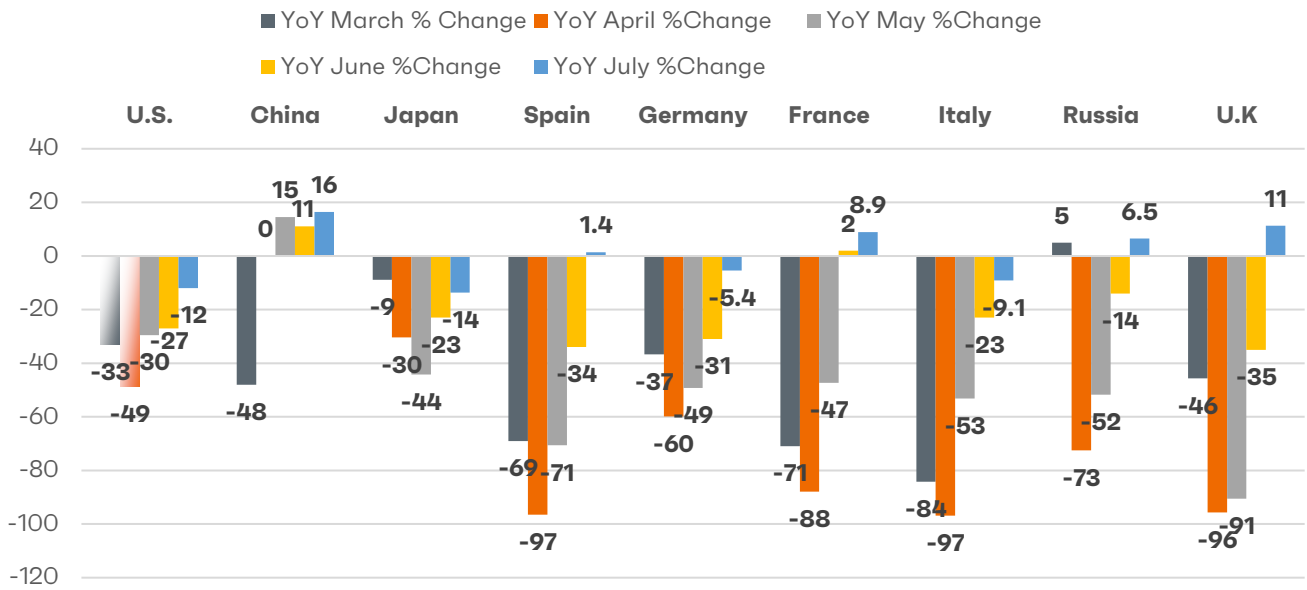


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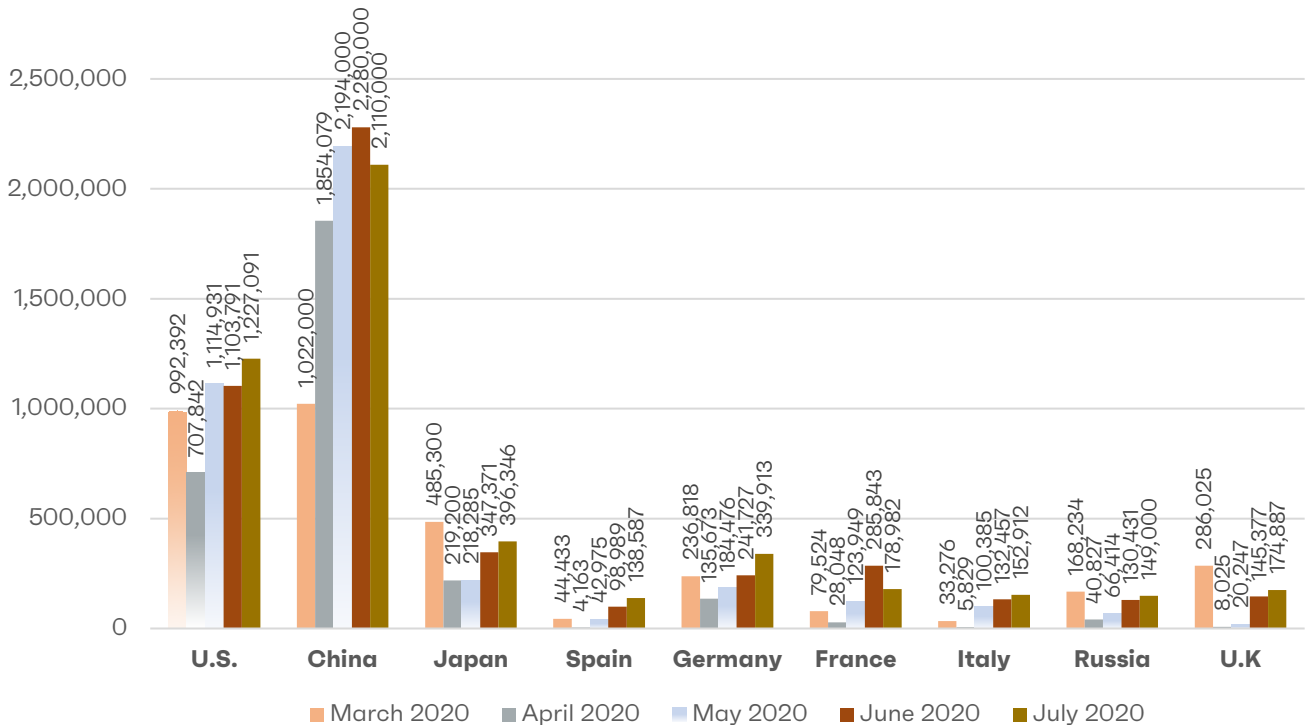
Global Meter (Updated 8/20)

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

Light Vehicle Sales By Country: Year-Over-Year Percent Change By Month



Light Vehicle Sales By Country



Recovery Meter (New)

North American Assembly Facility Operating Status (Updated 9/3)

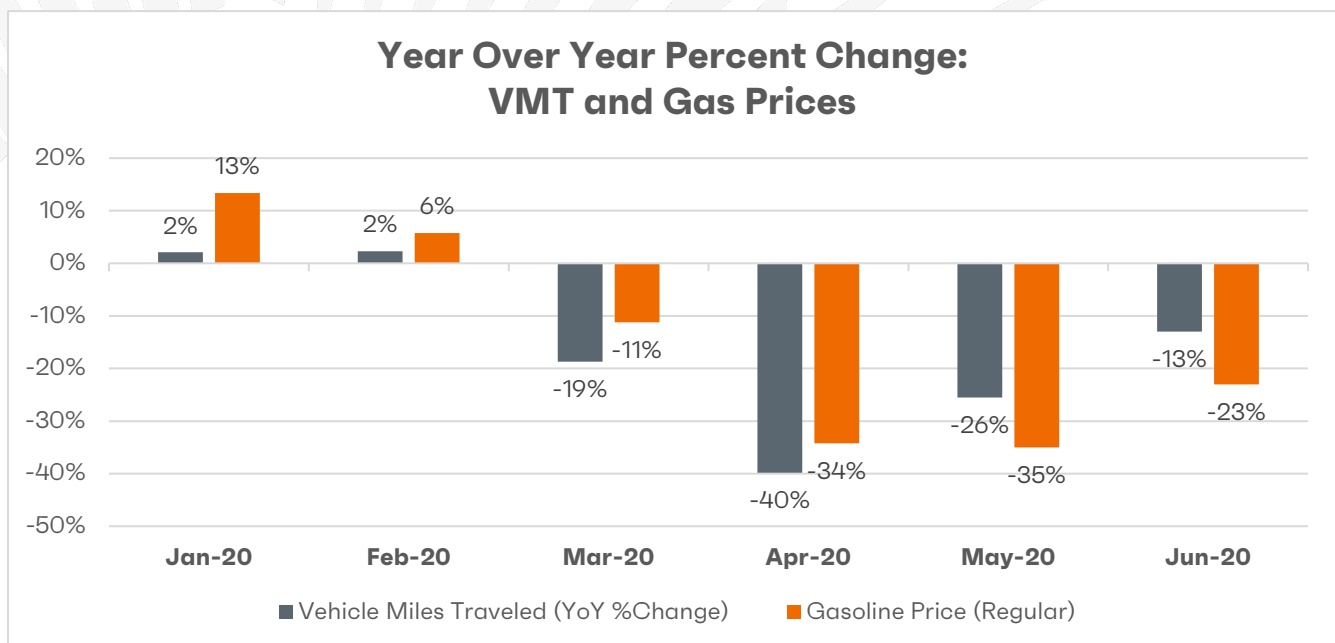
After all automotive manufacturing was shut down for the first time since World War II for roughly eight weeks, automakers have resumed production at all plants across North America. The extent to which production has ramped up or employment has been reinstated continues to fluctuate due to the impacts of COVID-19. We will continue to monitor the operational status of assembly facilities.

To view information on plant operating status during the shutdown, please click [here](#).

Roadway Travel (Updated 9/3)

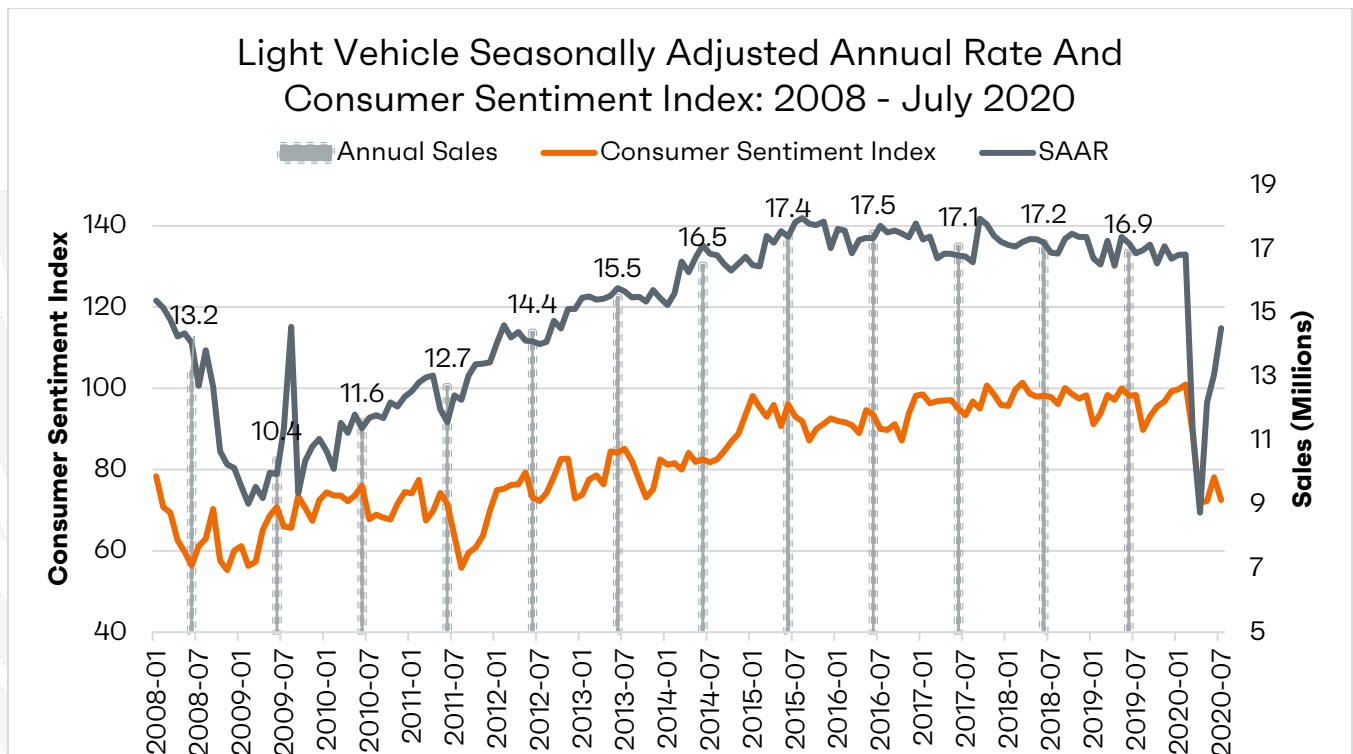
According to the U.S. Department of Transportation, vehicle miles traveled have increased month-to-month since April, but are still down 13 percent:

- “Travel on all roads and streets changed by -13.0% (-36.5 billion vehicle miles) for June 2020 as compared with June 2019. Travel for the month is estimated to be 244.7 billion vehicle miles.
- “The seasonally adjusted vehicle miles traveled for June 2020 is 231.3 billion miles, a -14.5% (-39.2 billion vehicle miles) decline from June 2019. It also represents 15.6% increase (31.3 billion vehicle miles) compared with May 2020.
- “Cumulative Travel for 2020 changed by -16.6% (-264.2 billion vehicle miles). The cumulative estimate for the year is 1,331.2 billion vehicle miles of travel.”^{xxx}



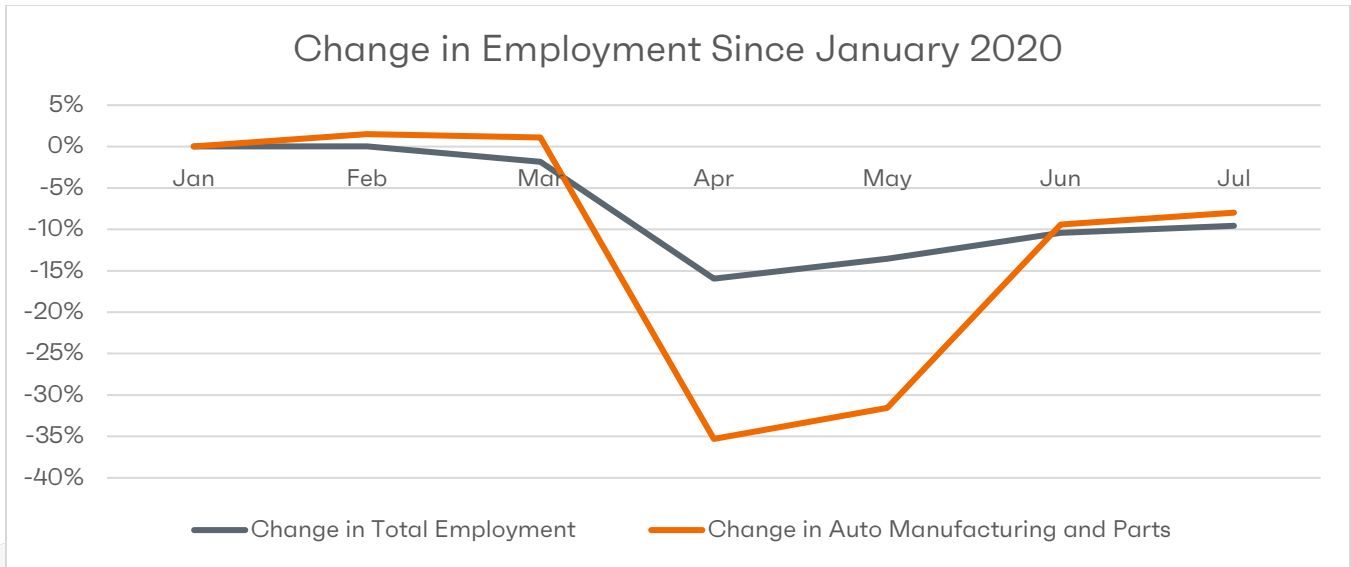
Consumer Confidence and Sales (New 9/3)

At the start of the year, consumer sentiment, as measured by the University of Michigan, was registering a 100 on their index, but since then, confidence has fallen more than a quarter to 72.5^{xxxi}. While the March low of 71 is not far off from where the index sits currently, it is still much higher than it was during the depths of the recession in 2008. While new vehicle sales have recovered despite wavering consumer confidence, the rest of the year could see sales stall against consumer sentiment headwinds.



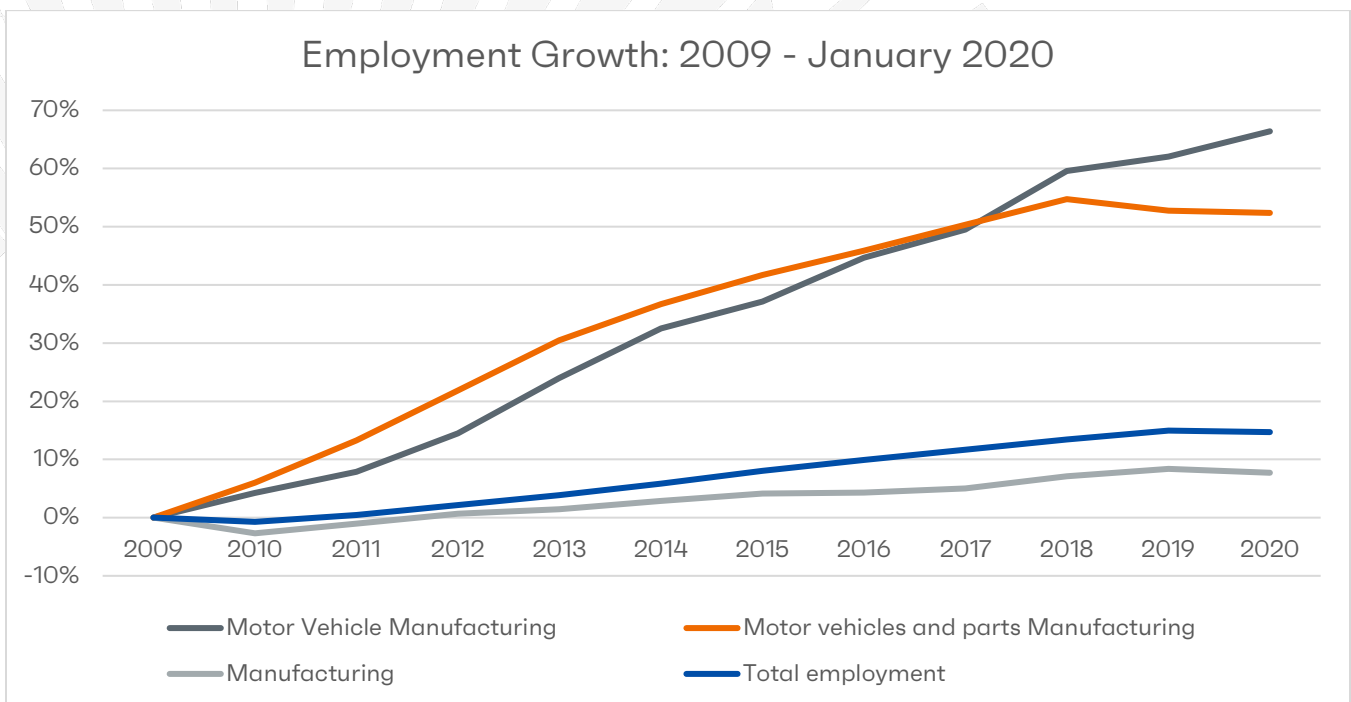
Employment (New 9/3)

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 80,000 employees, constituting an 8 percent loss since January.^{xxxii}



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^{xxxiii}.

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.



- ⁱ WardsIntelligence, “U.S. Light Vehicle Sales, March,” 4/1/2020; WardsIntelligence, “U.S. Light vehicle Sales, April,” 5/1/2020
- ⁱⁱ 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
- ⁱⁱⁱ Haig Stoddard, “COVID-19’s Toll on North America Vehicle Production in March, Q2,” *WardsIntelligence*, 3/30/20
- ^{iv} Haig Stoddard, “U.S. Light-Vehicle Sales Rise to 6-Month High in August,” *WardsIntelligence*, 9/1/2020
- ^v IHS Markit, “[IHS Markit Analysis: US Registration Data Show Market Share Improvement for Pick-up Trucks, Decline for Compact Cars in H1](#),” 8/17/20
- ^{vi} IHS Markit, email, “IHS Markit Monthly Automotive Update - August 2020,” 8/14/2020
- ^{vii} Haig Stoddard, “Covid-19: Revised Outlook for U.S. Light-Vehicle Sales in 2020, 2021,” *WardsIntelligence*, 5/27/2020
- ^{viii} IHS Markit, email, “IHS Markit Monthly Automotive Update - August 2020,” 8/14/2020
- ^{ix} Haig Stoddard, “U.S. Light-Vehicle Inventory Remains Flat in July,” *WardsIntelligence*, 8/4/2020
- ^x J.D. Power, “[Auto Industry Impact Report: August 30, 2020](#),” 9/2/2020
- ^{xi} WardsIntelligence, “U.S. Light Vehicle Sales, July 2020,” 8/3/20; WardsIntelligence, “U.S. Light Vehicle Sales, July 2018, 8/1/18
- ^{xii} Haig Stoddard, “U.S. Light-Vehicle Sales Rise to 6-Month High in August,” *WardsIntelligence*, 9/1/2020
- ^{xiii} Haig Stoddard, “U.S. Light-Vehicle Sales Rise to 6-Month High in August,” *WardsIntelligence*, 9/1/2020
- ^{xiv} IHS Markit, “[IHS Markit Analysis: US Registration Data Show Market Share Improvement for Pick-up Trucks, Decline for Compact Cars in H1](#),” 8/17/20
- ^{xv} J.D. Power, “J.D. Power Auto Industry Impact Report,” 6/4/2020
- ^{xvi} WardsIntelligence, U.S. Light Vehicle Sales, January 2013 – December 2019
- ^{xvii} U.S. Energy Information Administration, Weekly Retail Gasoline and Diesel Prices, Regular price per gallon, including taxes
- ^{xviii} WardsIntelligence, Fuel Economy Index, December 2013 & 2019
- ^{xix} IHS Markit, “[IHS Markit Analysis: US Registration Data Show Market Share Improvement for Pick-up Trucks, Decline for Compact Cars in H1](#),” 8/17/20
- ^{xx} Haig Stoddard, “U.S. Light-Vehicle Sales Rise to 6-Month High in August,” *WardsIntelligence*, 9/1/2020
- ^{xxi} Kelley Blue Book, Press Release, “Average New-Vehicle Prices Jump Nearly 4% Year-Over-Year in August 2020, According to Kelley Blue Book,” 9/1/2020; Kelley Blue Book, Press Release, “Small SUV Average Transaction Prices Weaken, Despite Year-Over-Year Sales Growth; Expect Further Discounts, According to Kelley Blue Book,” 9/4/18
- ^{xxii} J.D. Power, “[Auto Industry Impact Report: August 30, 2020](#),” 9/2/2020
- ^{xxiii} Bankrate, “[Current Car Loan Interest Rates](#),” Accessed 8/20/20; Internet Archive, Bankrate, “Current Car Loan Interest Rates, cached image from 8/8/19
- ^{xxiv} J.D. Power, “[Auto Industry Impact Report: August 30, 2020](#),” 9/2/2020
- ^{xxv} EIA, “[Short-Term Energy Outlook](#),” 9/2/2020
- ^{xxvi} EIA, “[Short-Term Energy Outlook](#),” 9/2/2020
- ^{xxvii} U.S. Energy Information Administration, Regular Gasoline, https://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_nus_m.htm, Accessed 9/2/20; U.S. Energy Information Administration, Daily Cushing, OK WTI Spot Price, <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=RWTC&f=W>, Accessed 9/2/20; YCharts, https://ycharts.com/indicators/wti_crude_oil_spot_price, Accessed 5/20/20
- ^{xxviii} WardsIntelligence, “North America Production, June 2018,” 7/20/18; WardsIntelligence, “North America Production, June 2020,” 7/21/20; WardsIntelligence, “North America Production, July 2018,” 8/20/18; WardsIntelligence, “North America Production, July 2020,” 8/20/2020
- ^{xxix} WardsIntelligence, “U.S. Light Vehicle Inventory, March 2020,” 4/2/2020; WardsIntelligence, “U.S. Light Vehicle Inventory, April 2018,” 5/3/18; WardsIntelligence, “U.S. Light Vehicle Inventory, May 2020,” 5/21/2020; WardsIntelligence, “U.S. Light Vehicle Inventory, May 2018,” 6/5/18; WardsIntelligence, “U.S. Light Vehicle Inventory, June 2020,” 7/2/20; WardsIntelligence, “U.S. Light Vehicle Inventory, June 2018,” 7/5/18; WardsIntelligence, “U.S. Light Vehicle Inventory, July 2020,” 8/4/20; WardsIntelligence, “U.S. Light Vehicle Inventory, July 2018,” 8/2/18
- ^{xxx} Department of Transportation, Federal Highway Administration, https://www.fhwa.dot.gov/policyinformation/travel_monitoring/20juntvt/, Accessed 9/2/2020
- ^{xxxi} University of Michigan Consume Sentiment Index, <https://fred.stlouisfed.org/series/UMCSENT>, Accessed 9/2/2020
- ^{xxxii} Bureau of Labor Statistics, Current Employment Statistics, Accessed 9/2/2020
- ^{xxxiii} Jerry Hirsch, “[Auto Industry Has Soared Since 2010, Leading Economic Recovery](#),” *Los Angeles Times*, 1/3/14