ALLIANCE FOR AUTOMOTIVE INNOVATION

READING THE METER

August 20, 2020

Note: Reading The Meter will not publish the week of 8-24 but will return to regular publishing the first week in September

Contents

ALLIANCE FOR AUTOMOTIVE INNOVATION

Forecast Meter

Forecast Summary (Updated 8/20)

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)
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 8/20)

IHS Markit[iv]: "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."

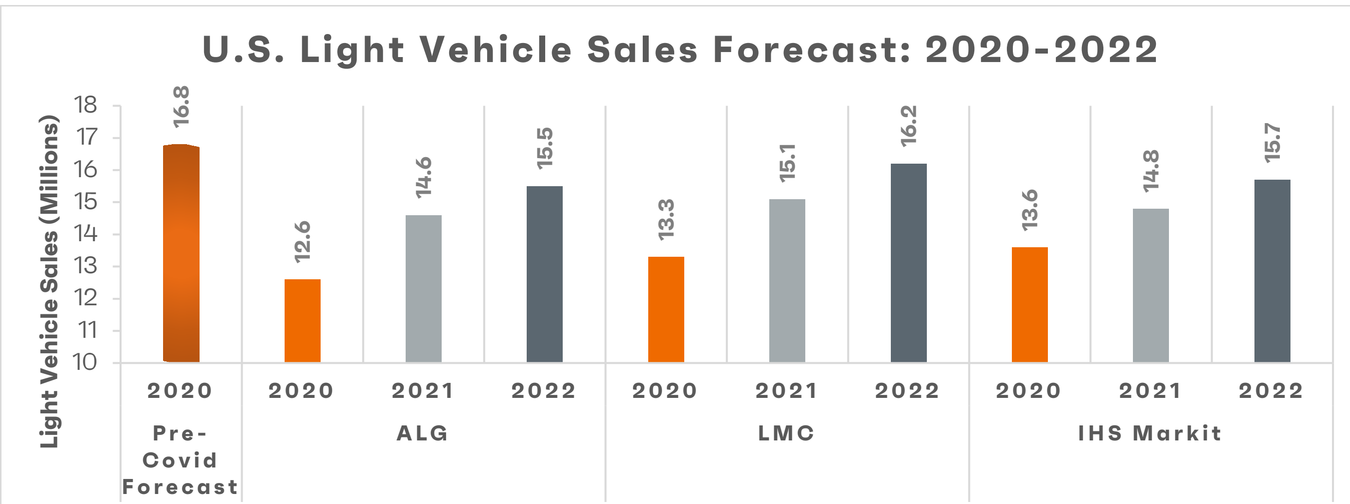
- "US light vehicle retail demand has proven more resilient in the near-term in spite of a very challenged US economic outlook. As a result, the US light vehicle sales outlook has been increased to 13.6 million units and 14.8 million units for 2020 and 2021, respectively."[v]

Wards Intelligence Outlook[vi]: "U.S. light-vehicle sales in July continued to show better-than-expected strength, with steady growth despite lean inventory and a pullback in incentives. Since bottoming out at an 8.7 million-unit seasonally adjusted annual rate in April, sales have continued to grow each month, with July finalized at 14.5 million, compared with 14.1 million forecasted for the month. July's SAAR was up from June's 13.1 million units and May's 12.2 million, though well below like-2019's 17.0 million.

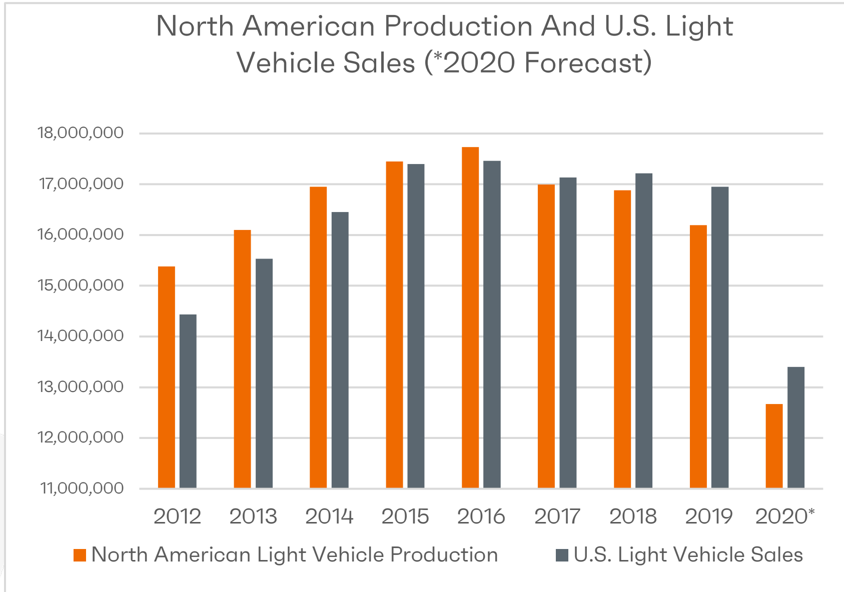
"If strong month-to-month growth continues, the market easily will be running above a 15 million-unit SAAR level for the remainder of the year. Although other factors, such as the health of the job market over the rest of the year and incentives, will influence demand, how high sales can go also is dependent on inventory levels."

"The picture for U.S. light-vehicle inventory improved in July to the extent the total remained even with June, when normally it falls - an average 6% over the past three years - as automakers begin summer production slowdowns for vacation and model-year changeovers. Therefore, assuming automakers maintain record incentive spending and other factors do not dramatically change, it is reasonable to expect August sales to closely match July's 14.5 million-unit seasonally adjusted annual rate. But considering the way they have continually outgunned expectations each month since April's rock-bottom Covid-19-induced 8.7 million-unit SAAR, the betting right now is they will go higher." [vii]

Wards Intelligence Outlook For The Year[viii]: "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[ix]: "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 Sportage 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[x]:

"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."

ALLIANCE FOR AUTOMOTIVE INNOVATION

Work Stoppage Meter

North American Assembly Facility Operating Status (Updated 7/22)

With the opening of the final plants in Mexico, automakers have resumed production at all plants across North America. The extent to which production has ramped up or employment has been reinstated is unknown. The summary chart assumes full employment for those plants that have reopened. We will continue to monitor the operational status of assembly facilities.

To view the most updated information on plant operating status, please click **here**.

North American Assembly Facilities (7-22-20)			
Country	**Metric**	**Number**	**Percent of totals**
U.S.	U.S. Employment	176,070	
	Closed 7/22/2020	-	0%
	Number of plants total	44	
	Number of plants Closed 7/22/2020	-	0%
Mexico	Mexico Employment	70,665	
	Closed 7/22/2020	-	0%
	Number of plants total	18	
	Number of plants Closed 7/22/2020	-	0%
Canada	Canada Employment	31,626	
	Closed 7/22/2020	-	0%
	Number of plants total	7	
	Number of plants Closed 7/22/2020	-	0%
North America	Total Employment	278,361	
	Closed 7/22/2020	-	0%
	Number of plants total	69	
	Number of plants Closed 7/22/2020	-	0%

Assumes full employment at open plants

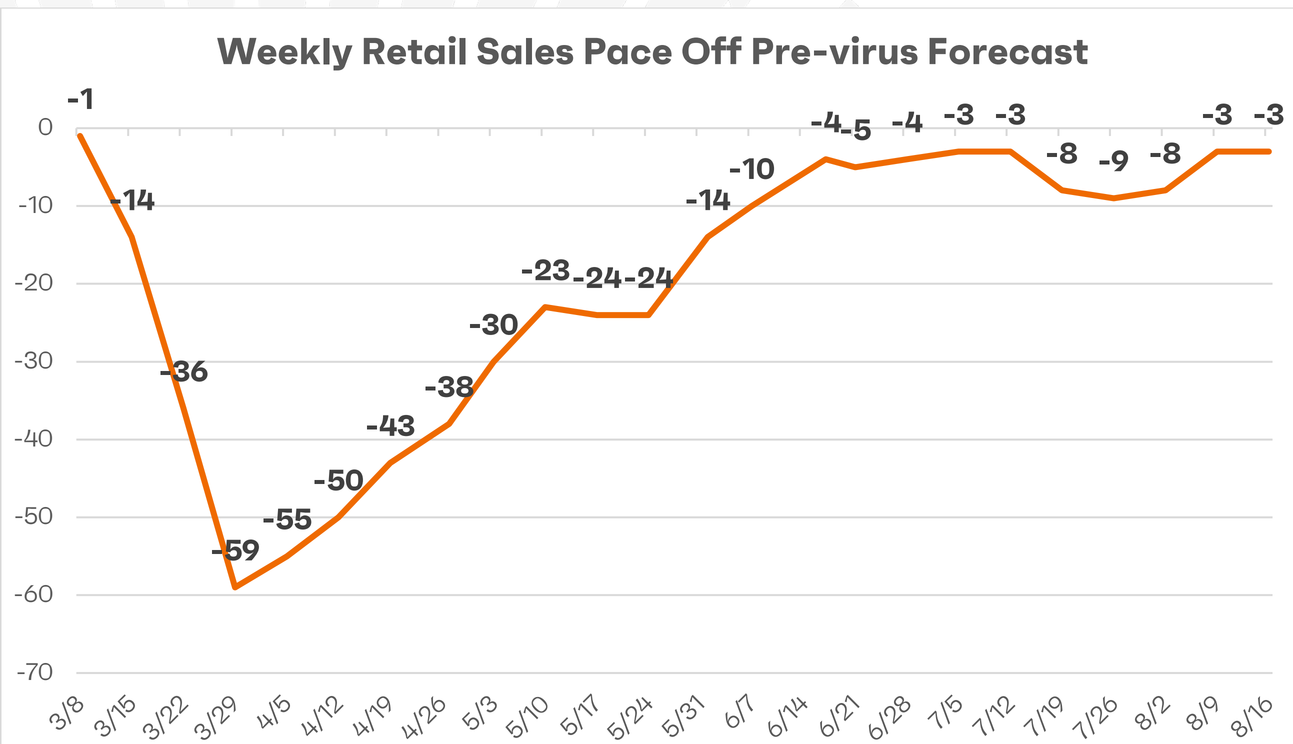
U.S. Light Vehicle Sales (Updated 8/20)

Weekly Sales [xi]

J.D. Power Weekly Update: "For the week ending August 16, retail sales were 3% below the pre-virus forecast. This was in-line with the prior week's result.

"Customer-facing transaction price dropped $89 from last week to $35,360. Average transaction prices fell week-over-week for both mainstream ($141) and premium ($549) nameplates. The decreases were partially offset by higher premium share of industry. The result for the current week ending August 16 was 7.0% above the same week in 2019.

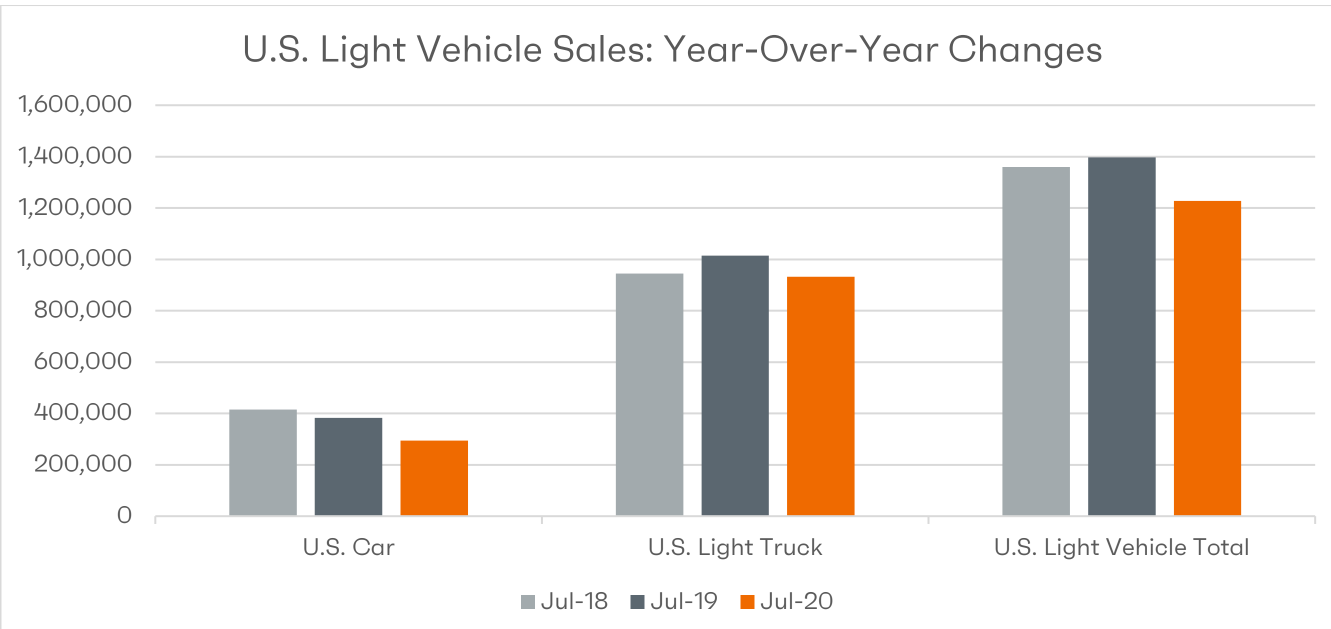
"Incentive spending per unit for the week ending August 16 rose $79 to $4,077 per unit. The increase was driven by higher spending on light duty pickups as well as an increase in the Small and Compact SUV segments. 84-month APR mix of all retail sales decreased 0.7ppts to 8.6%, while lease mix rose 1.9ppts to 27.0% in the week ending August 16. Lease mix was 2.3ppts lower vs. the same week last year."



Monthly Sales[xii]

Year over year, July light vehicle sales are down 12.1% from 2019. The segment trend continues to favor light trucks over cars, with trucks capturing more three-quarters of the market (76%), and gaining 3.4% market share over 2019, however the overall truck volume was down more than 81,000.

"U.S. light-vehicle sales in July continued to show better-than-expected strength, with steady growth despite lean inventory and a pullback in incentives. Since bottoming out at an 8.7 million-unit seasonally adjusted annual rate in April, sales have continued to grow each month, with July finalized at 14.5 million, compared with 14.1 million forecasted for the month. July's SAAR was up from June's 13.1 million units and May's 12.2 million, though well below like-2019's 17.0 million."[xiii]



Fleet Sales

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."

WardsIntelligence: "The fleet year-over-year comparison improved for the second consecutive month [July] but was still down a huge 60%."[xv]

J.D. Power[xvi]: "Fleet sales of 92,775 represents a decline of 72% (-237k units) from May 2019. This represents a mix of only 8.2% of total sales."

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

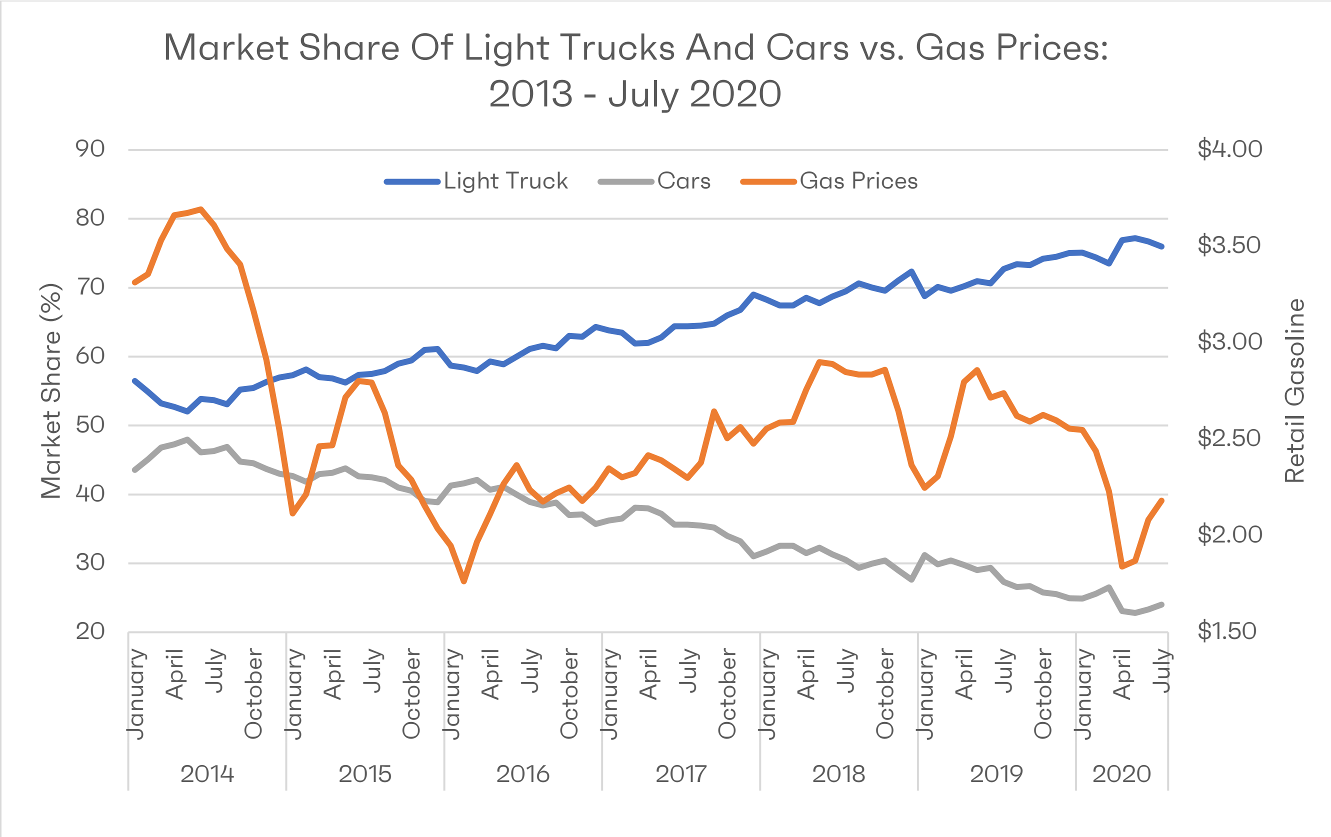
	Pessimistic Forecast	Optimistic Forecast	Pre-COVID Baseline Forecast
Retail Sales Forecast (million)	11.3	12.3	13.4
Fleet/Other Sales Forecast (million)	1.6	1.9	3.4
Total Sales Forecast (million)	12.9	14.2	16.8
Fleet Percent of Total Sales	12%	13%	20%
Retail Percent of Total Sales	88%	87%	80%
Fleet Loss 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 8/6)

Monthly Sales For July: Light trucks accounted for 76% of sales in July, a 3.4% gain in market share from a year ago.

Segment Breakdown: "The Pickup segment group, although entering the month with inventory down nearly 50% year-over-year, recorded sales – based on daily selling rates - down just 1.5% from like-2019. Sales penetration for pickups was a 15-year July high of 19.3%, well above like-2019's 17.9%. CUV, the largest segment group, posted July sales down 4.7%, with market share of 43.7% vs. same-month 2019's 41.9%. Rounding out trucks, sales in the SUV group fell 7.6% and Van was down 13.8%. Overall, light trucks were down 4.4% year-over-year in July, but accounted for 76.0% of the market, vs. 72.6% a year ago. Car deliveries were down 19.9%. All car segment groups were down double digits."[xvii]

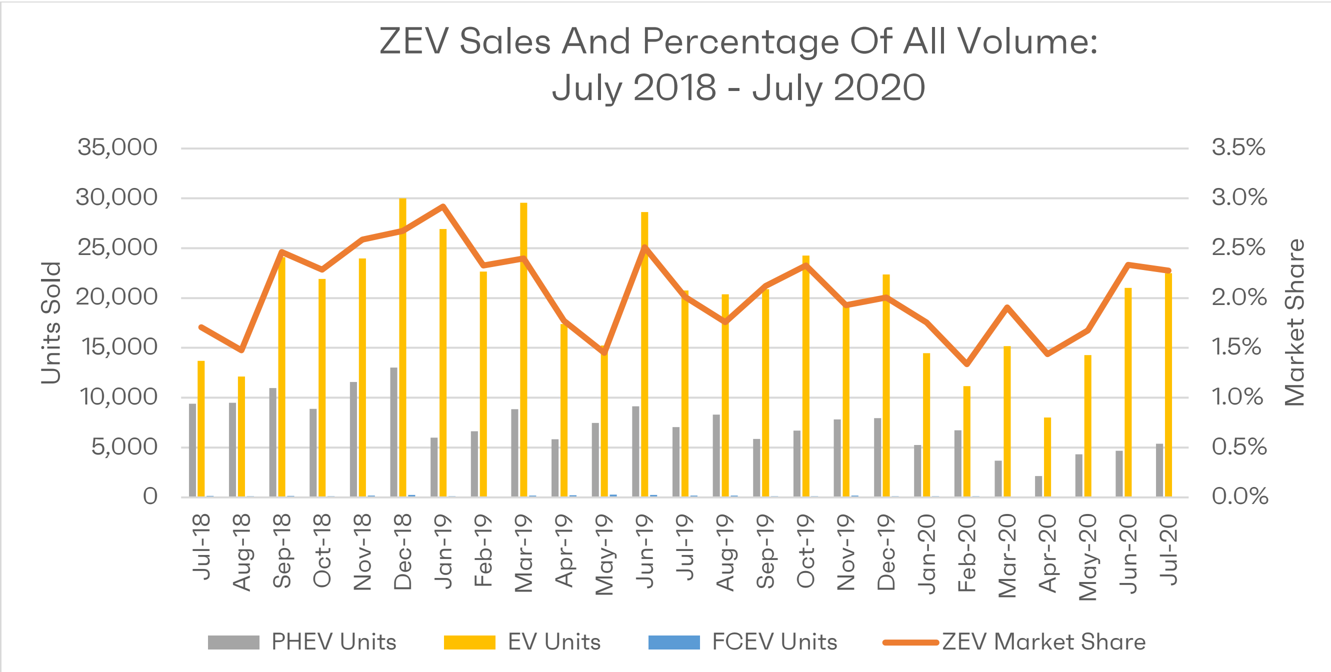
Historic Perspective: The upward trend in the popularity of light trucks over cars has been steady since 2013, when only 2% of annual market share separated the two segments[xviii] and gas was over $3.00[xix] a gallon. As fuel prices dropped below the $3.00 mark in mid-September 2014, light truck sales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



ZEV Powertrain Sales (Updated 8/20)

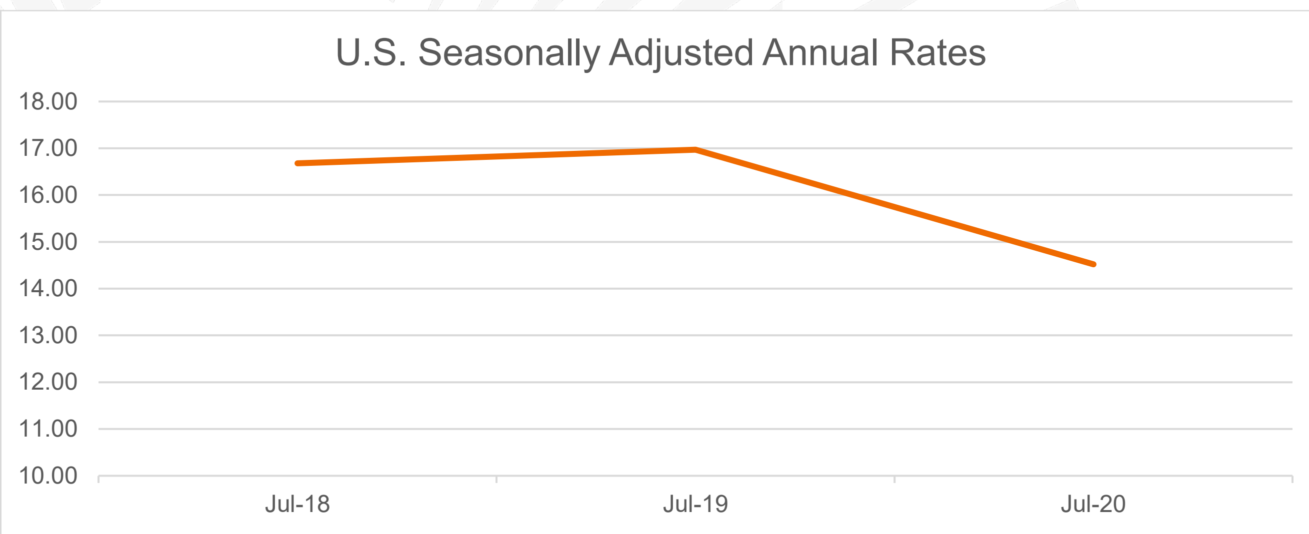
Sales of zero emission vehicles (BEV, PHEV, & Fuel Cell) accounted for only 2.3% of total vehicle sales in July 2020, down .3% from a year ago and unchanged from June 2020. Sales of battery electric vehicles led the way for ZEVs accounting for 1.83% of the total, up .1% from July 2019. Plug-in hybrids accounted for .4%, down .1% in market share, year-over-year.

IHS Markit[xxi]: "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 8/6)

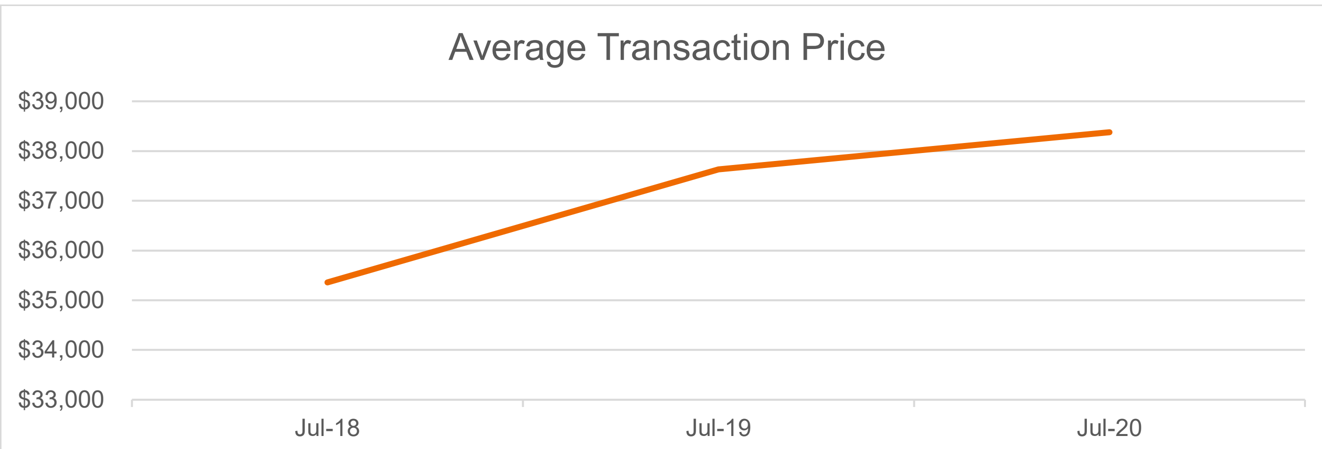
"Since bottoming out at an 8.7 million-unit seasonally adjusted annual rate in April, sales have continued to grow each month, with July finalized at 14.5 million, compared with 14.1 million forecasted for the month. July's SAAR was up from June's 13.1 million units and May's 12.2 million, though well below like-2019's 17.0 million. (Note: The Bureau of Economic Analysis last week released seasonal factors through June 2021, which included revisions back to January 2015. Thus, SAAR comparisons to past months might be different from previously published totals.)"[xxii]



Average Transaction Price (Updated 8/20)

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 $38,378 in July 2020. New-vehicle prices increased $749 (up 2%) from July 2019, while decreasing $473 (down 1.2%) from last month. "[xxiii]

Additional Insight From J.D. Power: "Customer-facing transaction price dropped $89 from last week to $35,360. Average transaction prices fell week-over-week for both mainstream ($141) and premium ($549) nameplates. The decreases were partially offset by higher premium share of industry. The result for the current week ending August 16 was 7.0% above the same week in 2019."[xxiv]



Auto Loan Financing (Updated 8/20)

Financing Remains Largely Unchanged: Rates for the week of August 19th remain near this year's lows, rising only slightly 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.[xxv]

WardsIntelligence: "Based on an initial estimate from ALG, incentive spending was a record level for July, but declined 6.5% from June, while average transaction prices were down less than 1%."[xxvi]

Additional Insight From J.D. Power: "Incentive spending per unit for the week ending August 16 rose $79 to $4,077 per unit. The increase was driven by higher spending on light duty pickups as well as an increase in the Small and Compact SUV segments. 84-month APR mix of all retail sales decreased 0.7ppts to 8.6%, while lease mix rose 1.9ppts to 27.0% in the week ending August 16. Lease mix was 2.3ppts lower vs. the same week last year."[xxvii]

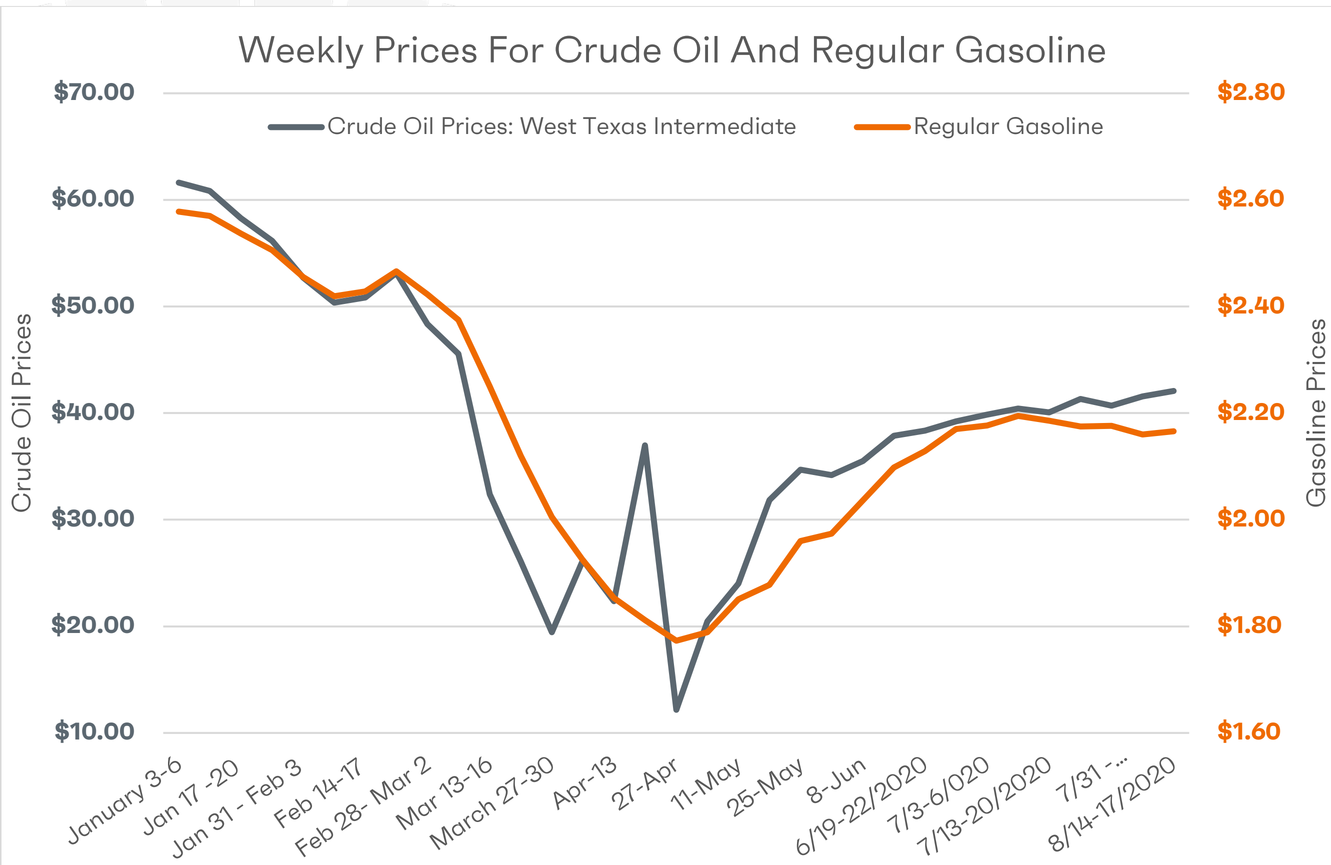
Auto Loan Financing			
Dates	60-month new car	48-month new car	36-month used car
8/19/2020	4.25%	4.25%	4.58%
8/12/2020	4.24%	4.24%	4.60%
8/5/2020	4.25%	4.25%	4.61%
7/29/2020	4.24%	4.24%	4.60%
7/22/2020	4.24%	4.24%	4.60%
7/15/2020	4.24%	4.24%	4.60%
7/8/2020	4.33%	4.31%	4.73%
7/1/2020	4.33%	4.33%	4.74%
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	0.01%	0.01%	-0.02%
Two Week Change	0.00%	0.00%	-0.03%
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 8/20)

EIA Outlook For Gasoline[xxviii]**:** “U.S. motor gasoline consumption in the forecast averages 8.3 million b/d in 2020, down 1.0 million b/d (10.3%) from 2019 consumption levels. The annual declines are largely the result of travel disruptions and COVID-19 mitigation efforts that occurred predominantly in the first half of 2020. In the second half of 2020, gasoline consumption is supported by a forecast increase in employment and is expected to rise from an average of 7.8 million b/d in the first half of 2020 to 8.8 million b/d in the second half of the year."

EIA Outlook For Crude Oil Production: "EIA estimates that annual U.S. crude oil production will average 11.6 million b/d in 2020, down 0.6 million b/d from 2019 as result of a drop in drilling activity and production curtailments related to low oil prices. This 2020 production decline would mark the first annual decline since 2016."

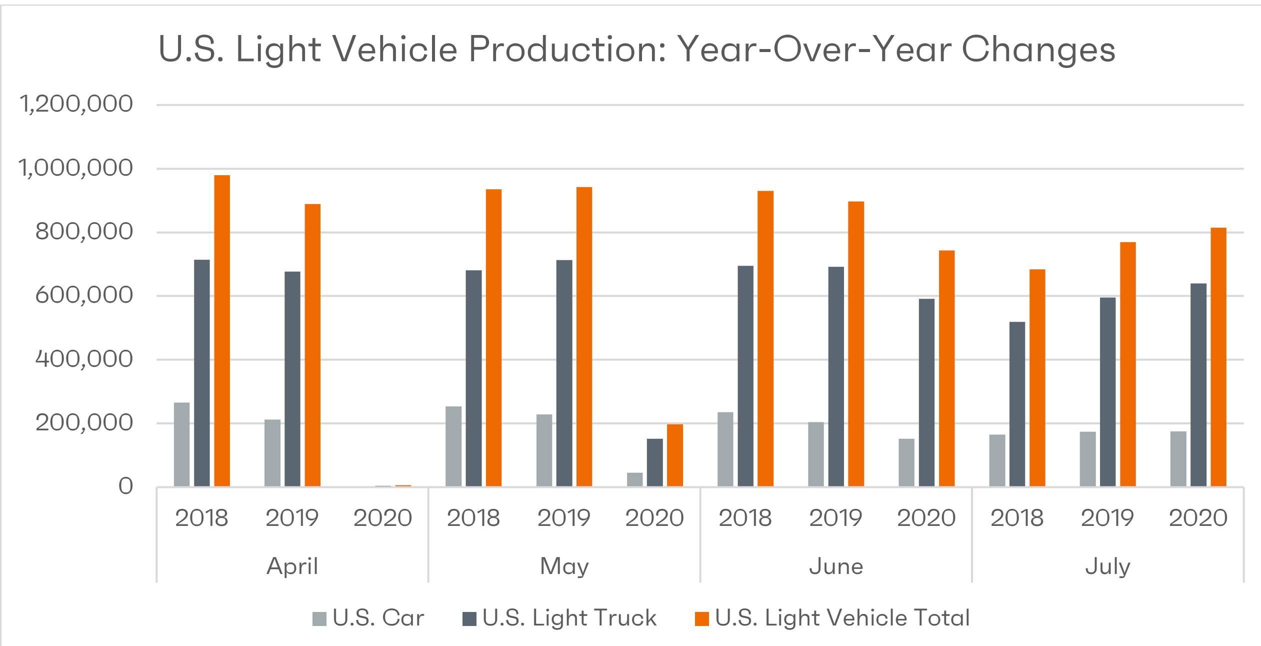
Oil And Gas Remain Low: Oil prices, as benchmarked at West Texas Intermediate, as well as gasoline prices, both continued their rebound of June and July into August and are mostly holding steady. For the week of August 14, oil held around $42 while gas was $2.17. This week's slight rise is the highest price for oil since the beginning of March. Compared to the start of the year, crude oil is down 32%, while gas prices are down 16%.[xxix]



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.



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U.S. Light Vehicle Inventory and Days' Supply (Updated 8/6)

July Inventory Update: "The picture for U.S. light-vehicle inventory improved in July to the extent the total remained even with June, when normally it falls - an average 6% over the past three years - as automakers begin summer production slowdowns for vacation and model-year changeovers.

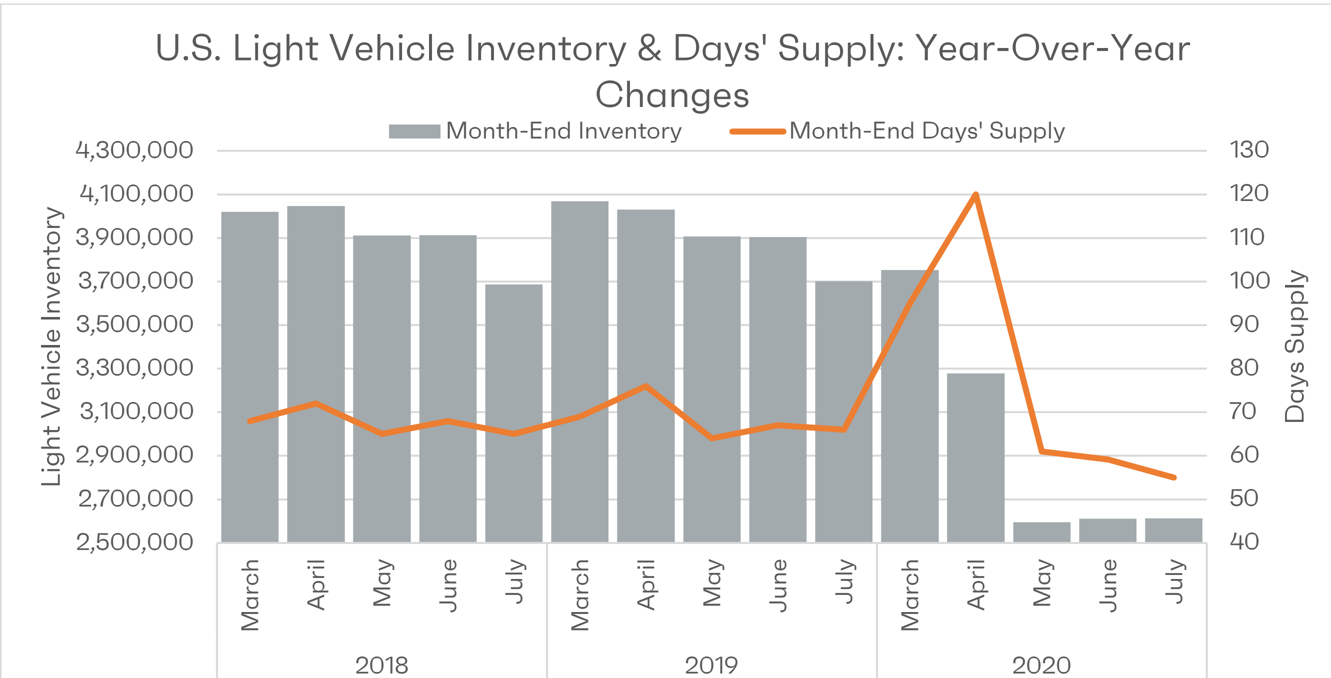
"July 31 inventory totaled 2.61 million units, flat with June, but 29.4% below like-2019. However, the year-over-year decline was a slight improvement on the 33% shortfalls of both May and June.

Inventory in July was last roughly at the same level in 2012 – 2.65 million units – and has been at basically an 8-year low since May. July's SAAR also was an 8-year low for the month."

"As a sign that inventory is lean in comparison with sales, July's 55 days' supply was the lowest for the month since 2011, and well below the 66 averaged over the past three years."

"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%."

"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. Due to headwinds in the economic outlook, there still is a good chance sales growth stalls at some point in the last five months of 2020."[xxxi]



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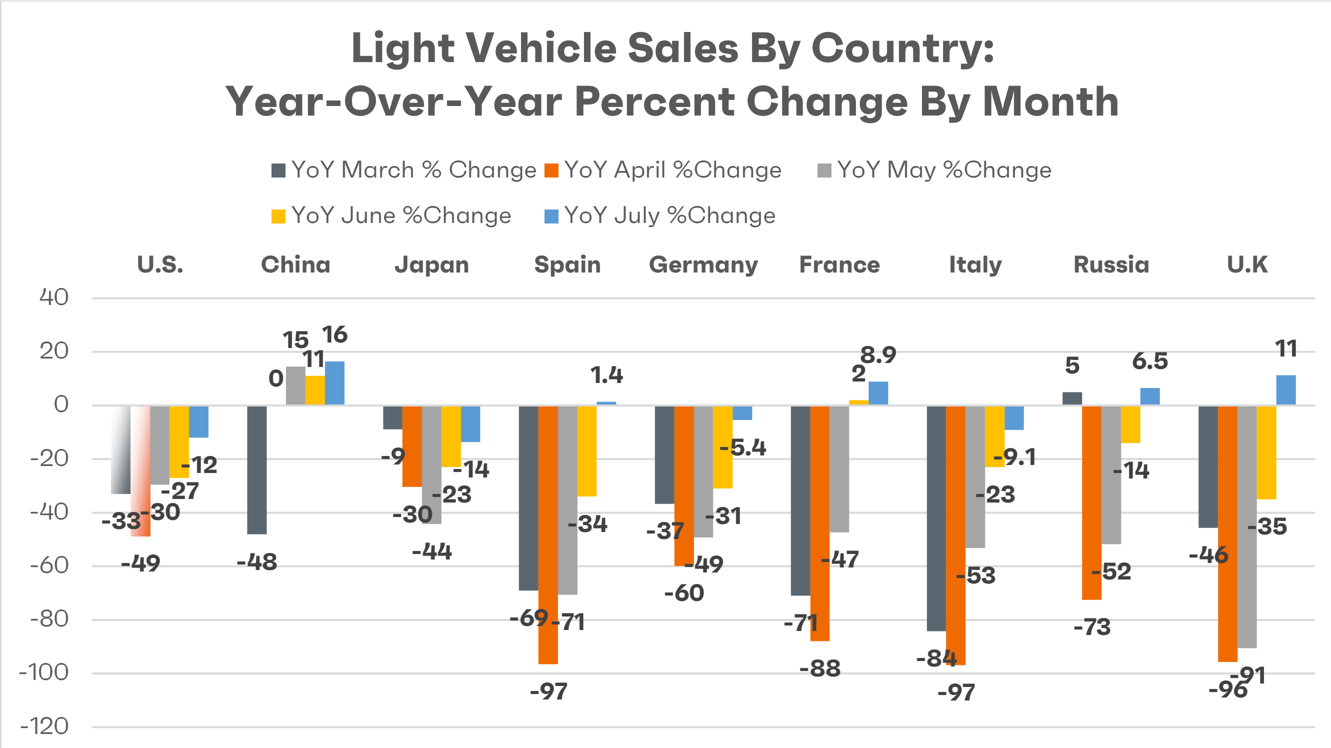
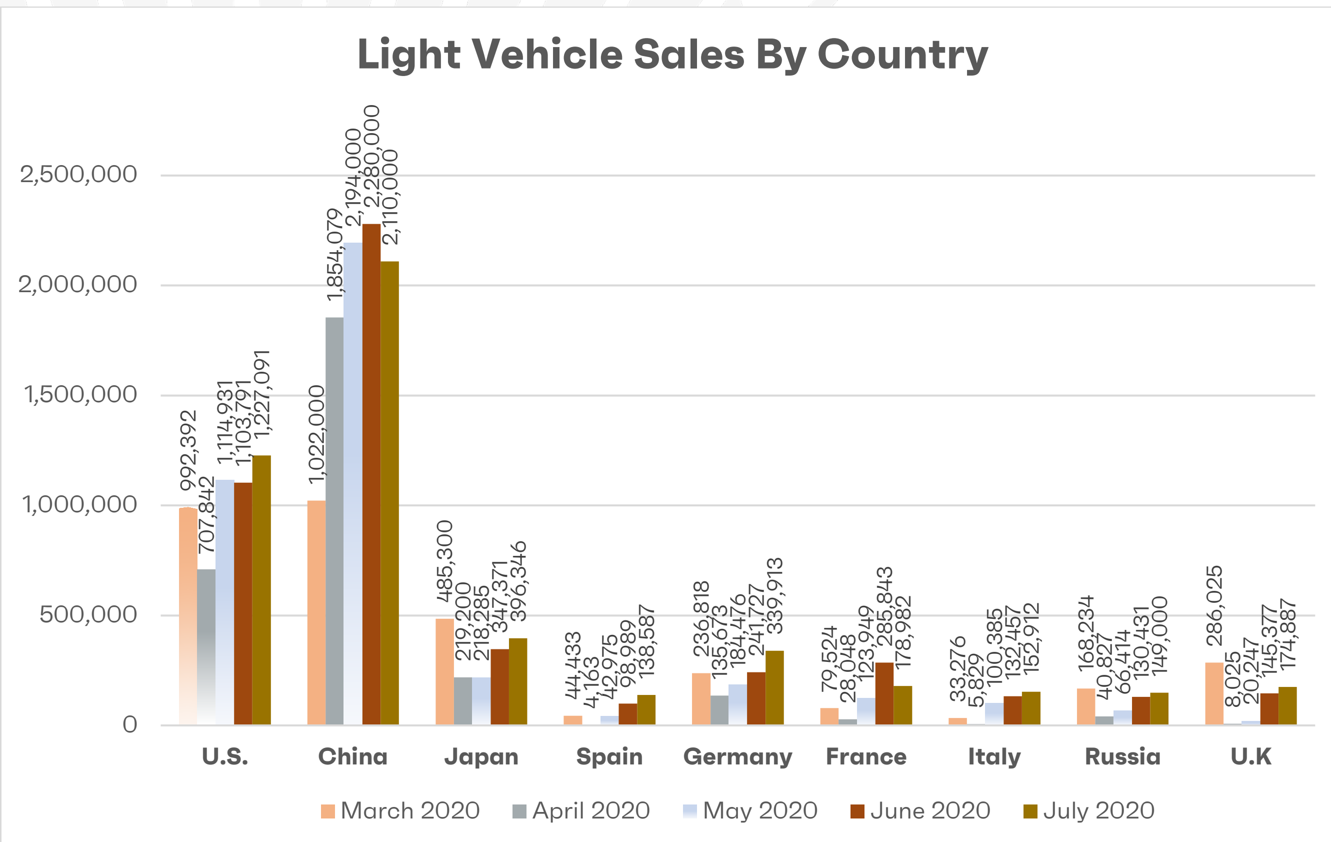
Global Meter (Updated 8/20)

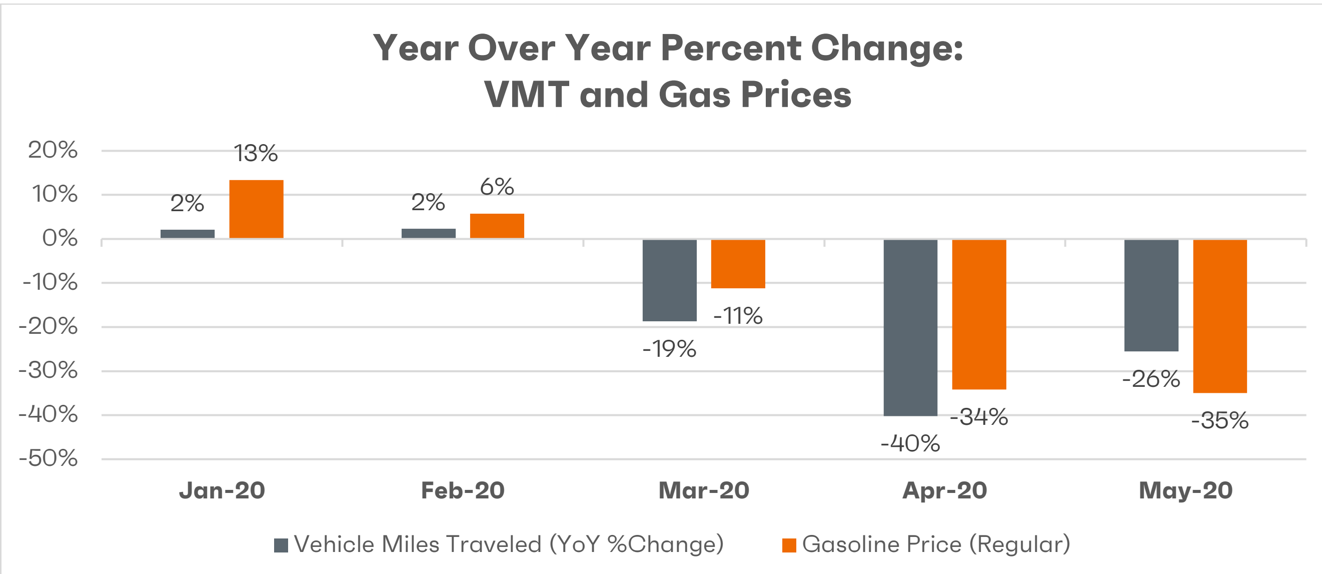
Sales in select countries around the globe, including year-over-year percent change by month as well as raw volume by month:


Light Vehicle Sales By Country:
Year-Over-Year Percent Change By Month
YoY March % Change
YoY April %Change
YoY May %Change
YoY June %Change
YoY July %Change
U.S.
China
Japan
Spain
Germany
France
Italy
Russia
U.K
40
20
0
-20
-40
-60
-80
-100
-120
-33 -49 -30 -27 -12
-48 0 15 11 16
-9 -30 -44 -23 -14
-69 -97 -71 -34 1.4
-37 -60 -49 -31 -5.4
-71 -88 -47 2 8.9
-84 -97 -53 -23 -9.1
5 -73 -52 -14 6.5
-46 -96 -91 -35 11


Light Vehicle Sales By Country
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
992,392 707,842 1,114,931 1,103,791 1,227,091
1,022,000 1,854,079 2,194,000 2,280,000 2,110,000
485,300 219,200 218,285 347,371 396,346
44,433 4,163 42,975 98,989 138,587
236,818 135,673 184,476 241,727 339,913
79,524 28,048 123,949 285,843 178,982
33,276 5,829 100,385 132,457 152,912
168,234 40,827 66,414 130,431 149,000
286,025 8,025 20,247 145,377 174,887
U.S.
China
Japan
Spain
Germany
France
Italy
Russia
U.K
March 2020
April 2020
May 2020
June 2020
July 2020

Travel Meter (Updated 7/8)

"U.S. motorists drove less in May year-over-year, according to the Department of Transportation. Travel on all public roads fell 25.5% in May from the same month last year. Travel totaled 213.2 billion miles in May."[xxxiii]



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[i] WardsIntelligence, "U.S. Light Vehicle Sales, March," 4/1/2020; WardsIntelligence, "U.S. Light vehicle Sales, April," 5/1/2020
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[iii] Haig Stoddard, "COVID-19's Toll on North America Vehicle Production in March, Q2," *WardsIntelligence*, 3/30/20
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