

READING THE METER

*A look inside a cleaner, safer,
smarter auto industry.*



ALLIANCE FOR AUTOMOTIVE INNOVATION

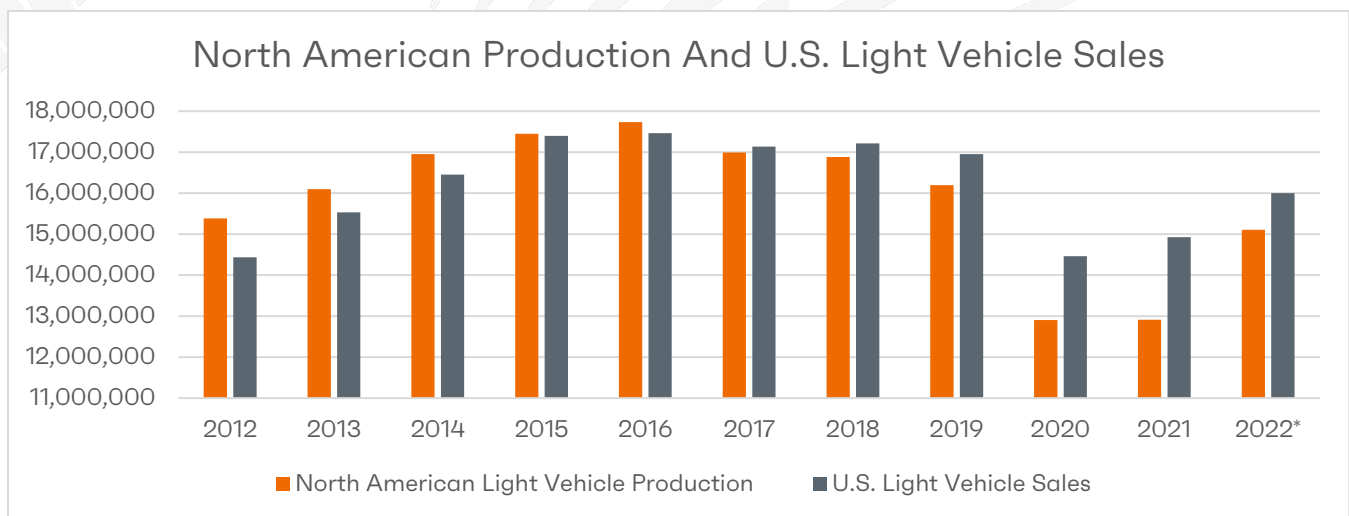
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Forecast Meter

Sales & Production Summary and Forecast (Updated 3/3)

2021-2022 Sales, ¹ Extended Sales Forecast ² and Production Forecasts ³		
	U.S. Sales & Forecasts	North American Production
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	1,001,351, (-20% YoY)	1,168,245 (-9% YoY)
December '21	1,194,313 (-22.9% YoY)	1,029,501 (-13.8% YoY)
January '22	991,156 (-10% YoY)	1,111,390 (-4% YoY) (forecast)
February '22	1,052,524 (-11.8% YoY)	
1st Quarter '22	14.8 million-unit SAAR (forecast)	3,584,445 (-0.4% YoY) (forecast)
2021 Full Year	14,926,933 (+3.1% YoY)	8,899,632 (+4% YoY)
2022 Full Year Estimate	16 million units (+7% YoY)	15,107,419 (+17% YoY)



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

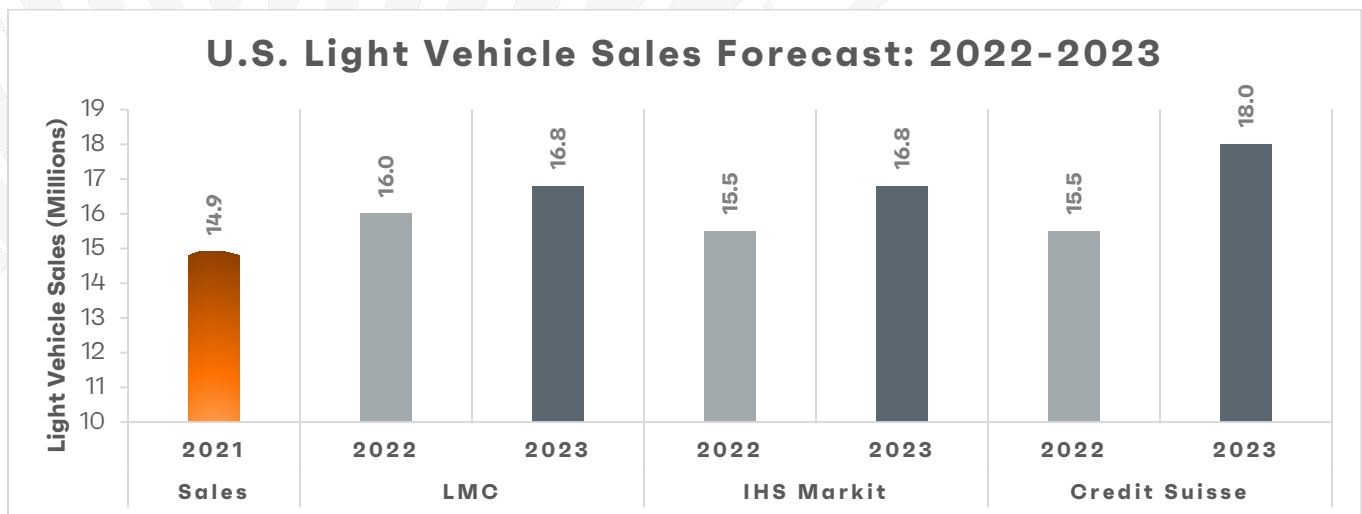
Wards Intelligence February Outlook (3/3)⁴: “U.S. light-vehicle inventory at the end of February was relatively flat with January, which puts a damper on the sales outlook for March.

“Inventory typically rises from January to February, and the diversion from the seasonal trend can be pegged to the ongoing chaos in the supply chain – a situation that generally is improving but could worsen due to Russia’s invasion of Ukraine.

“A first pass signals March light-vehicle sales equal to a 14.0 million-unit seasonally adjusted annual rate, the same as February’s revised total, but well below January’s 15.0 million. That would put the quarter at 14.3 million units, which would be an any-quarter high since Q2-2021’s 16.9 million, but somewhat a disappointment after January’s start.

“Whether the March SAAR hits higher or lower than the initial outlook, volume will increase from February. March’s SAAR would have to fall to 11.2 million units for volume to not top February’s 1.05 million.

“U.S. light-vehicle sales are forecast to rise steadily through the end of the year, with Q4 running above a 16-million-unit SAAR. However, there is increased risk to the calendar-year 2022 forecast of 15.9 million units.”



North American Production & Inventory Outlook (Updated 3/3)

Wards Intelligence Inventory Outlook (3/3)⁵: “Based on expected production for the U.S., and the initial sales outlook, inventory should rise slightly in March, although current geo-political tensions could put a damper on that possibility.”

Wards Intelligence Production Outlook (3/3)⁶: “As has been the case since last spring, the uncertainty around the flow of microchips continues to destabilize production plans. Even though manufacturers are accounting for known chip shortages in their production schedules, unexpected disruptions in the supply chain seem to pop up every month, further cutting output below capacity.

“North America plants, which source close to 80% of the vehicles sold in the U.S., built 77,800 fewer vehicles than expected in January, and estimated output for February has been cut 51,500 units – nearly all of that attributed to unexpected disruptions to the supply chain.

“Furthermore, the Russia-Ukraine conflict could add more unexpected disruptions to the March outlook, although it’s more likely in Q2 before it significantly impacts the U.S. light-vehicle market – if it does.”

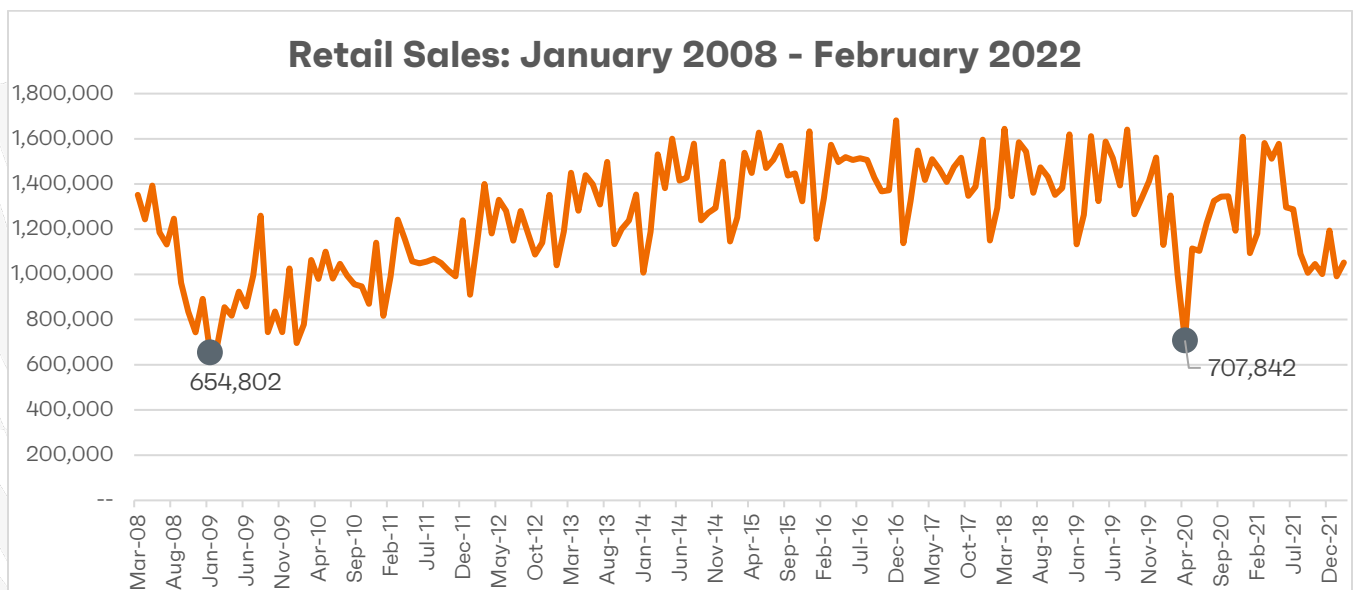
IHS Markit North American Outlook 2022 (2/24)⁷: “The outlook for North America light vehicle production was increased by 26,000 units and by 34,000 units for 2022 and 2023, respectively (and increased by 23,000 units for 2024). The February 2022 forecast update for North America reflects increased volatility in the very near-term. The recent Canadian trucker blockade at the US/Canada border has created additional headwinds. As a result of recent events and ongoing supply chain pressures, we have reduced Q1-2022 production by 87,000 units, yet we also expect to make-up that lost production through the balance of the year, resulting in the overall modest upgrade for full year volumes. A scenarios-based approach is recommended to help guide the assessment of upside potential and downside risk, particularly in the extreme near-term. Production in 2023 was revised modestly higher by 0.2% to total 17.2 million units as the industry is expected to start the process of moving beyond the current limitations and shift towards restocking heavily depleted inventory levels.”

Market Meter

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

Monthly Sales (Updated 3/3)

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.



February Sales (Updated 3/3)

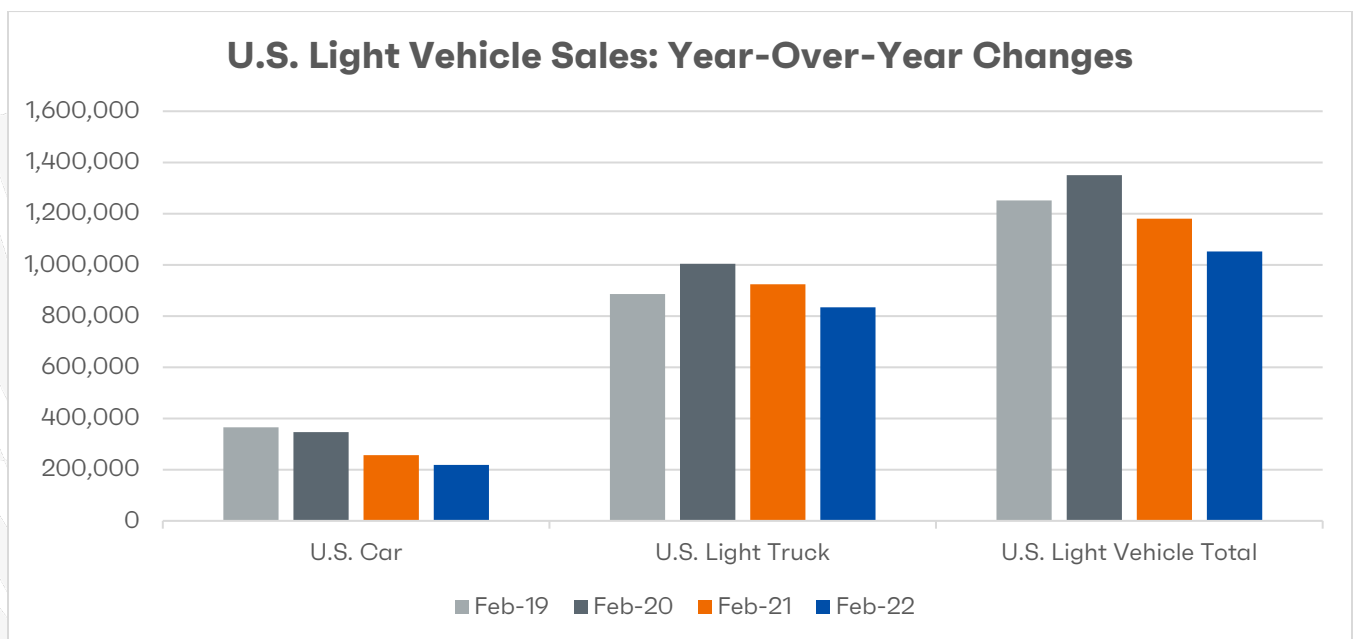
WardsIntelligence[®]: “With sales finishing relatively close to expectations, Russia’s invasion of Ukraine in its early days had little impact on U.S. light-vehicle sales in February.

“Sales were dampened slightly due to unplanned production slowdowns at some automakers, seemingly rooted in unexpected disruptions in the flow of semiconductors. Also, temporary blockades at the U.S.-Canada border by truckers protesting vaccine mandates halted parts shipments to several plants in Ontario and in the U.S. during the month. Thus, to a small degree, both occurrences further exacerbated the negative impact of already-depleted inventory levels.

“February’s seasonally adjusted annual rate of 14.1 million units, though a decline from January’s 7-month-high 15.0 million and far below like-2021’s 15.9 million, was enough to keep first-quarter 2022 on a trajectory to finish above both Q4-2021’s 12.8 million and Q3-2021’s 13.4 million.

The combined January-February SAAR of 14.5 million units has Q1 heading to the highest quarterly total since Q2-2021's 16.9 million. Still, the 2-month SAAR is well below the 17 million-plus units the industry likely would be running at if automakers had enough inventory and is far short of year-ago's 16.3 million.

"February's raw volume totaled 1.05 million units for a daily selling rate of 43,855, 11.8% below like-2021's 49,741 but a 6.2% gain from January's 41,728 – all three periods had 24 selling days. A volume increase from January is a normal seasonal pattern in the U.S., though (pre-Covid) the gain is usually more than twice this year's rise."



Fleet Sales (Updated 3/3)

TrueCar⁹: "Fleet sales for February 2022 are expected to be up 3% from a year ago and up 30% from January 2022 when adjusted for the same number of selling days."

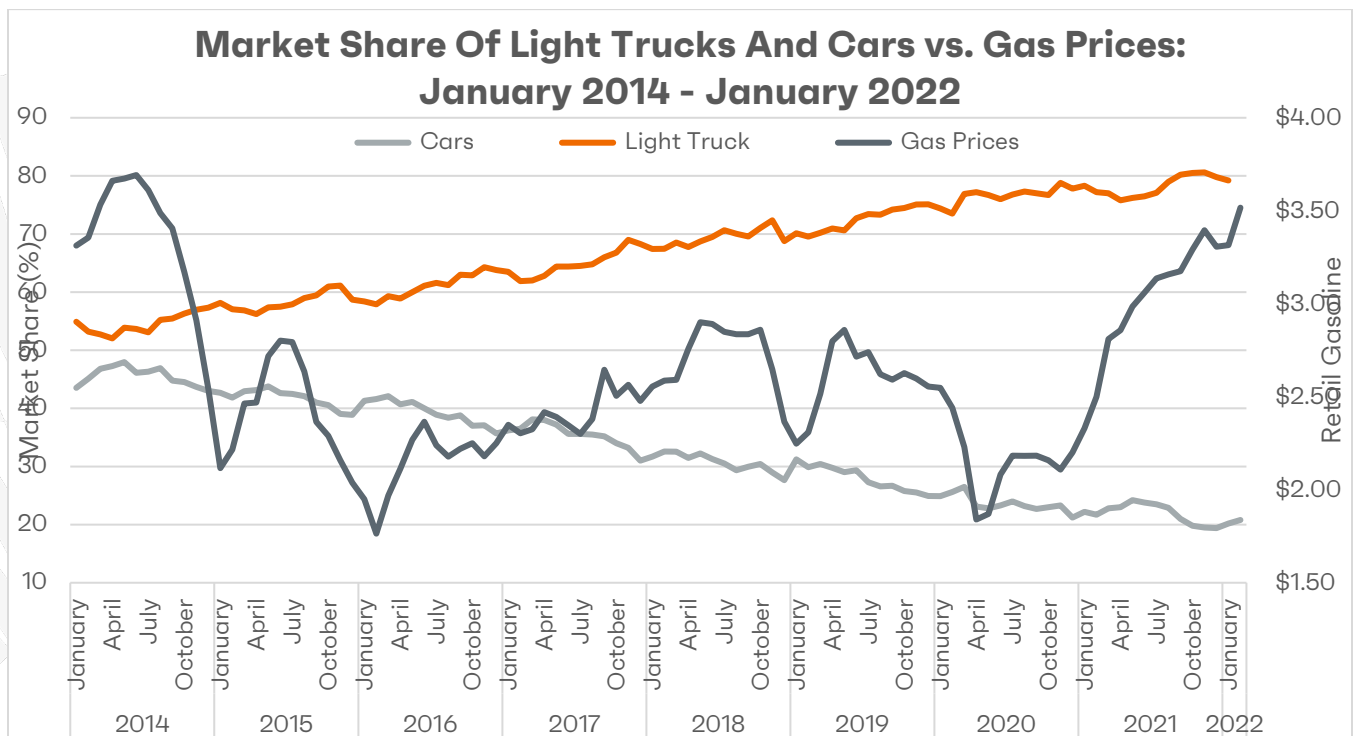
J.D. Power¹⁰: "Fleet sales are expected to total 135,100 units in February, down 36.2% from February 2021 on a selling day adjusted basis. Fleet volume is expected to account for 13% of total light-vehicle sales, down from 18% a year ago."

Segments vs. Gas Prices (Updated 3/3)

Monthly Sales For September: Light trucks accounted for 79.2% of sales in February, a 0.9 pp increase in market share from a year ago. Compared to the same period in 2021, sales of cars are

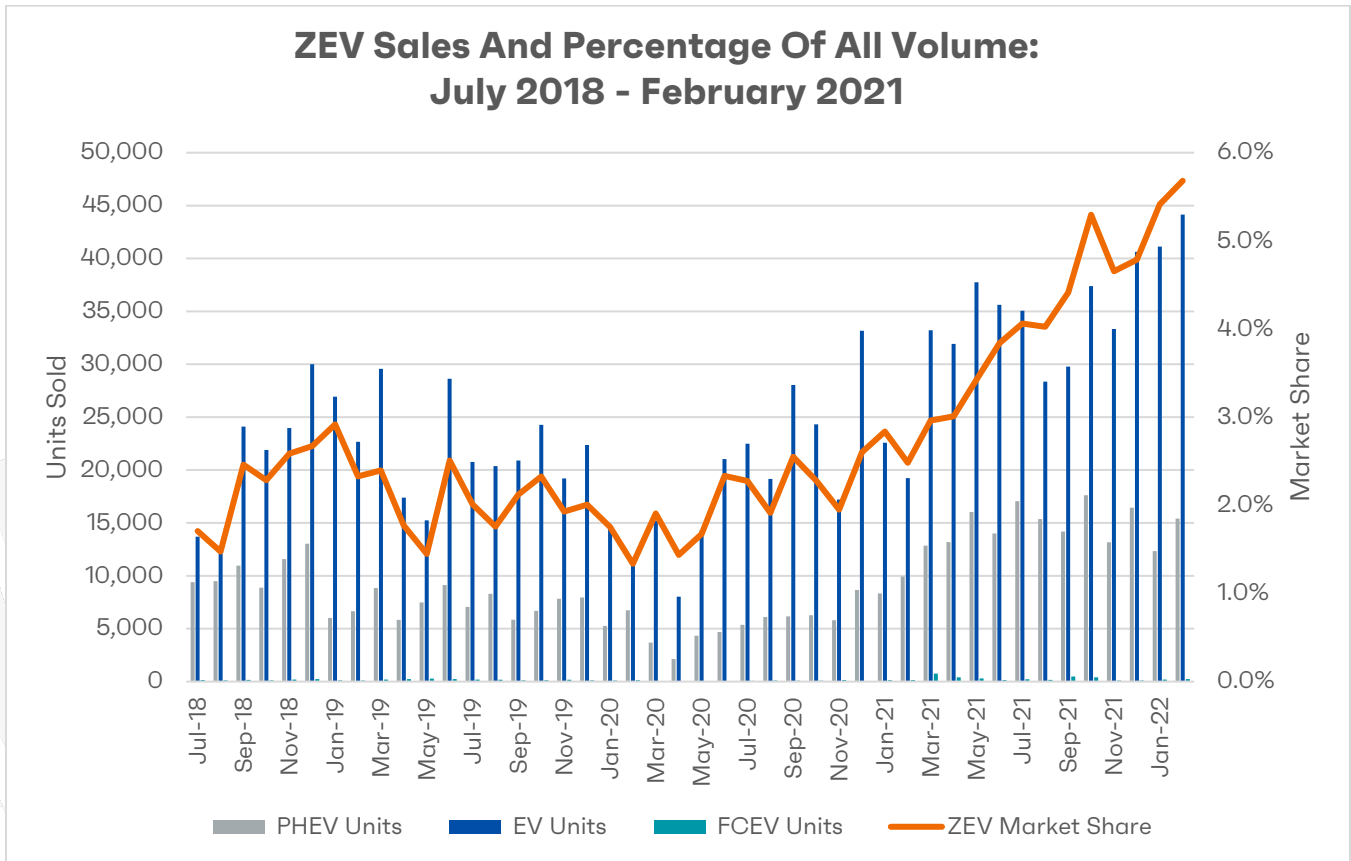
down more than 37,000, and down more than 146,000 from January 2019, when cars comprised 29% of the market as opposed to the 20.8% of the market passenger cars have now.

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 segments¹¹ and gas was over \$3.00¹² 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 \$2.61 a gallon (through January 2022) 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.¹³



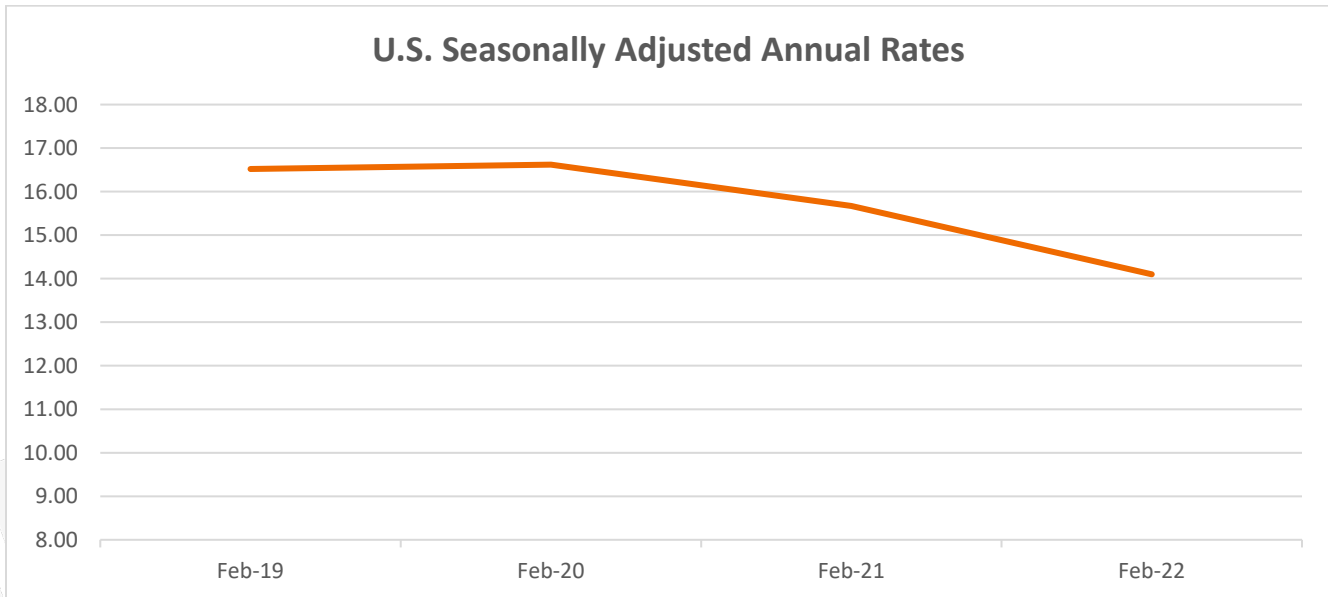
ZEV Powertrain Sales (Updated 3/3)

Sales of zero emission vehicles (BEV, PHEV, & Fuel Cell) accounted for 5.7% of total vehicle sales in February 2022 (59,795 units, the highest volume ever), up 3.2 pp from a year ago and up 0.3 pp from January 2022. Sales of battery electric vehicles led the way for ZEVs, accounting for 4.19% of total sales, up 2.56 pp from February 2021. Plug-in hybrids accounted for 1.46%, 0.62 pp higher than the same time last year.¹⁴



Seasonally Adjusted Annual Rates (Updated 3/3)

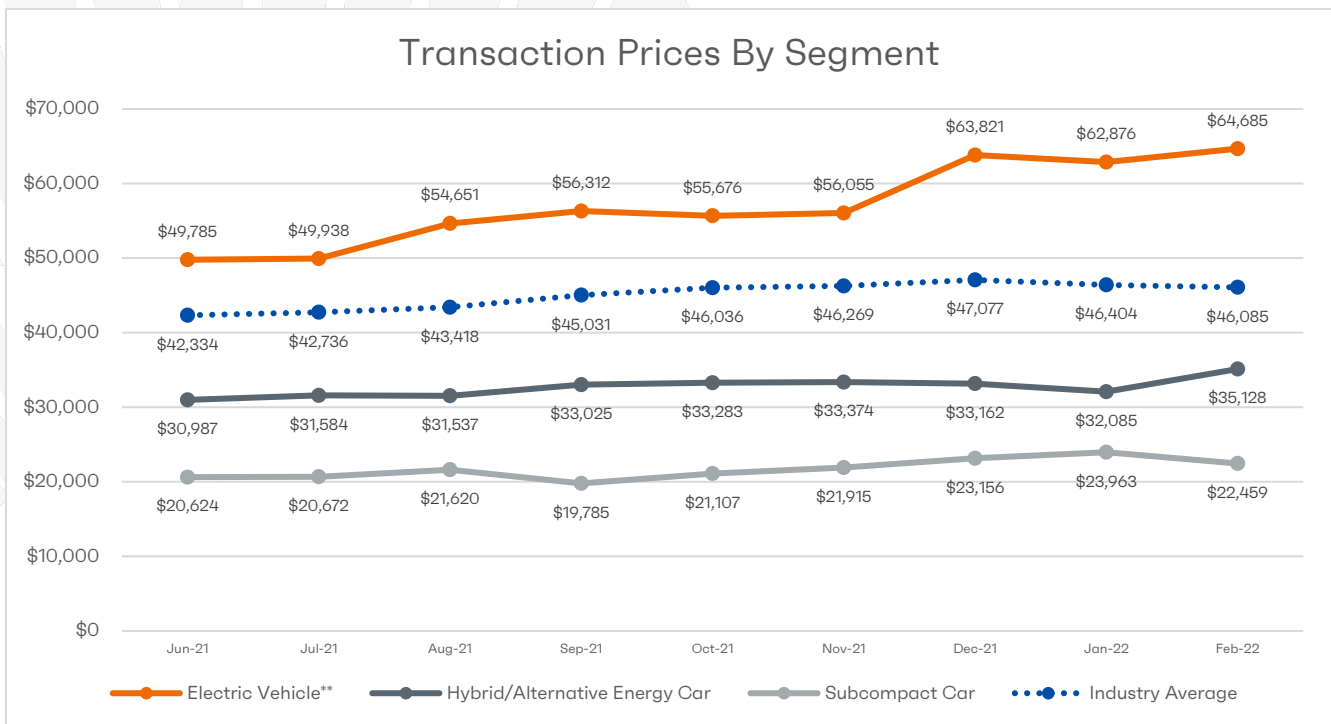
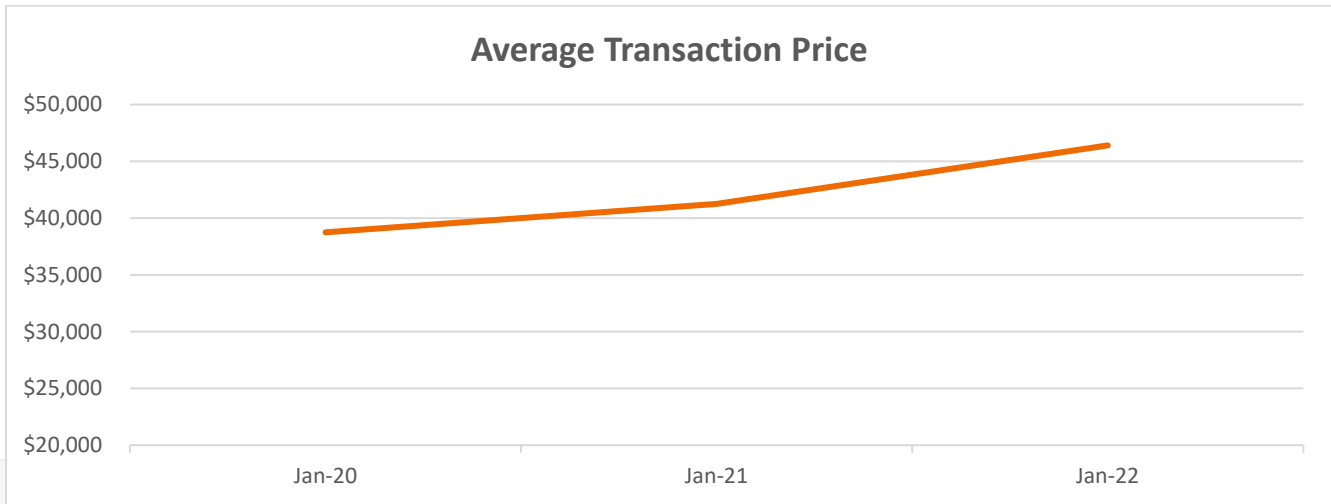
WardsIntelligence: “February’s seasonally adjusted annual rate of 14.1 million units, though a decline from January’s 7-month-high 15.0 million and far below like-2021’s 15.9 million, was enough to keep first-quarter 2022 on a trajectory to finish above both Q4-2021’s 12.8 million and Q3-2021’s 13.4 million. The combined January-February SAAR of 14.5 million units has Q1 heading to the highest quarterly total since Q2-2021’s 16.9 million. Still, the 2-month SAAR is well below the 17 million-plus units the industry likely would be running at if automakers had enough inventory and is far short of year-ago’s 16.3 million.”¹⁵



Average Transaction Price (Updated 3/10)

J.D. Power (Updated 3/3)¹⁶: “New-vehicle prices continue to maintain record levels as average transaction prices are expected to reach a February record of \$44,460, an 18.5% increase from a year ago. Supply shortages are continuing to constrain incentive offers from manufacturers. For February, incentive spend per vehicle expressed as a percentage of the average vehicle MSRP is trending toward a record low of 2.8%, down 5.0 percentage points from February 2021 and the second consecutive month below 3.0%. From an absolute value standpoint, average manufacturer incentive spend per vehicle is on pace to reach \$1,246, a decrease of \$2,143 from a year ago.

Kelley Blue Book (February): “New-vehicle average transaction prices (ATPs) decreased to \$46,085 in February 2022 after reaching a record high in December 2021, according to new data released by Kelley Blue Book, a Cox Automotive company. Prices fell 0.5% (\$253) month over month due to fewer luxury vehicles being sold in February, but prices remain elevated compared to one year ago, up 11.4% (\$4,719) from February 2021.”¹⁷

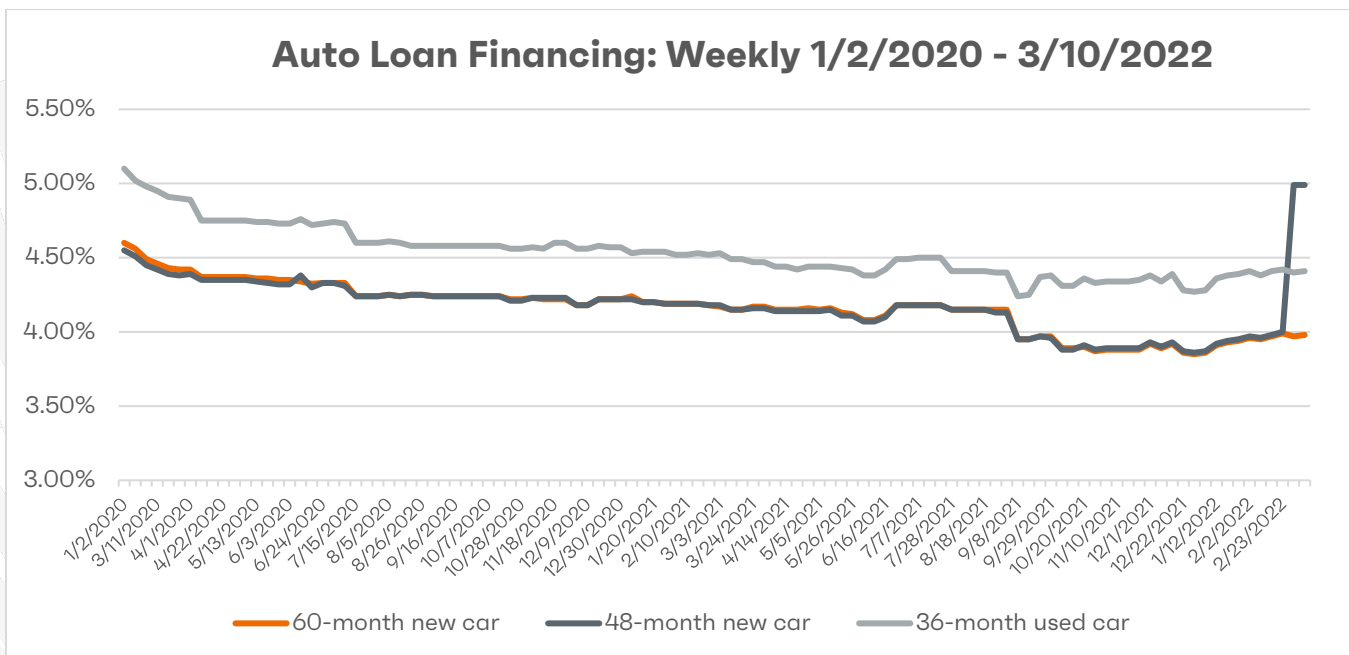


**Due to reporting errors with Tesla Motors, the Electric Vehicle ATP is likely higher than Kelley Blue Book estimates.

Auto Loan Financing (Updated 3/10)

Interest Rates Rise Slightly: Interest rates for new cars rose 0.01 pp and now stand at 3.98%. Rates also rose 0.01 pp on the 36-month used car loan and now stand at 4.40%. The 48-month new car loan remained at 4.99. Since the beginning of 2020, 60-month rates are down 0.62 pp, and down 0.17 pp since the same time a year ago.¹⁸

Dates	60-month new car	48-month new car	36-month used car
1/2/2020	4.60%	4.55%	5.10%
3/10/2021	4.15%	4.15%	4.49%
3/2/2022	3.97%	4.99%	4.40%
3/10/2022	3.98%	4.99%	4.41%
One Week Change	0.01%	0.00%	0.01%
Two Week Change	-0.01%	0.99%	-0.01%
Change since 1/3/20	-0.62%	0.44%	-0.69%
One Year Change	-0.17%	0.84%	-0.08%



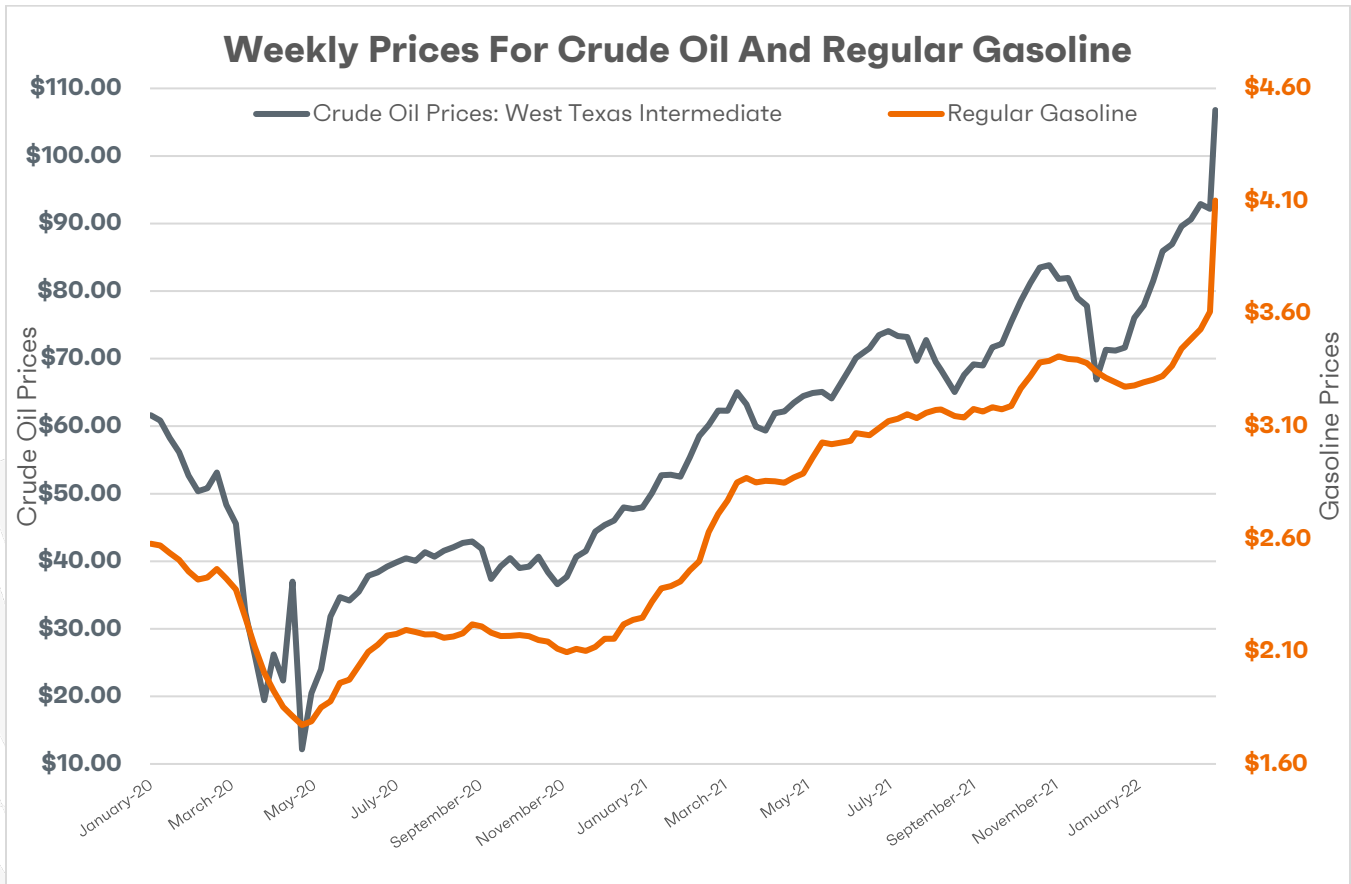
Crude Oil and Gas Prices (Updated 3/10)

EIA Outlook For Gasoline (3/8)¹⁹: “U.S. regular gasoline retail prices averaged \$3.52 per gallon (gal) in February, up 20 cents/gal from January and up \$1.02/gal from February 2021. Retail diesel prices averaged \$4.03/gal in February—the highest average price (not adjusted for inflation) for any month since March 2013. Product prices have risen compared with year-ago levels because of rising crude oil prices and high refining margins. We expect crude oil price increases will push the U.S. average gasoline price to \$4.10/gal on average in 2Q22, which would be the first time that gasoline prices (not adjusted for inflation) have reached at least \$4/gal in any month since July 2008. We expect diesel prices will average \$4.43/gal during 2Q22. Gasoline and diesel prices are closely tied to crude oil prices. We forecast gasoline prices will average \$3.71/gal in 2H22, and we forecast diesel prices will average \$4.04/gal over the same period. However, actual prices could be significantly affected by the same factors that affect crude oil prices.”

EIA Outlook For Oil (3/8)²⁰: “Brent crude oil spot prices averaged \$97 per barrel (b) in February, an \$11/b increase from January. Daily spot prices for Brent closed at almost \$124/b in the first week of March as the further invasion of Ukraine by Russia and subsequent sanctions on Russia and other actions created significant market uncertainties about the potential for oil supply disruptions. These events are occurring against a backdrop of low oil inventories and persistent upward oil price pressures. Global oil inventories have fallen steadily since mid-2020, and inventory draws averaged 1.8 million barrels per day (b/d) from the third quarter of 2020 (3Q20) through the end of 2021. We estimate that oil inventories fell further in the first two months of 2022 and that commercial inventories in the OECD ended February at 2.64 billion barrels, which is the lowest level since mid-2014.

We expect the Brent price will average \$117/b in March, \$116/b in 2Q22, and \$102/b in the second half of 2022 (2H22). We expect the average price to fall to \$89/b in 2023. However, this price forecast is highly uncertain. Actual price outcomes will be dependent on the degree to which existing sanctions imposed on Russia, any potential future sanctions, and independent corporate actions affect Russia’s oil production or the sale of Russia’s oil in the global market. In addition, the degree to which other oil producers respond to current oil prices, as well as the effects macroeconomic developments might have on global oil demand, will be important for oil price formation in the coming months. Although we reduced Russia’s oil production in our forecast, we still expect that global oil inventories will build at an average rate of 0.5 million b/d from 2Q22 through the end of 2023, which we expect will put downward pressure on crude oil prices. However, if production disruptions—in Russia or elsewhere—are more than we forecast, resulting crude oil prices would be higher than our forecast.

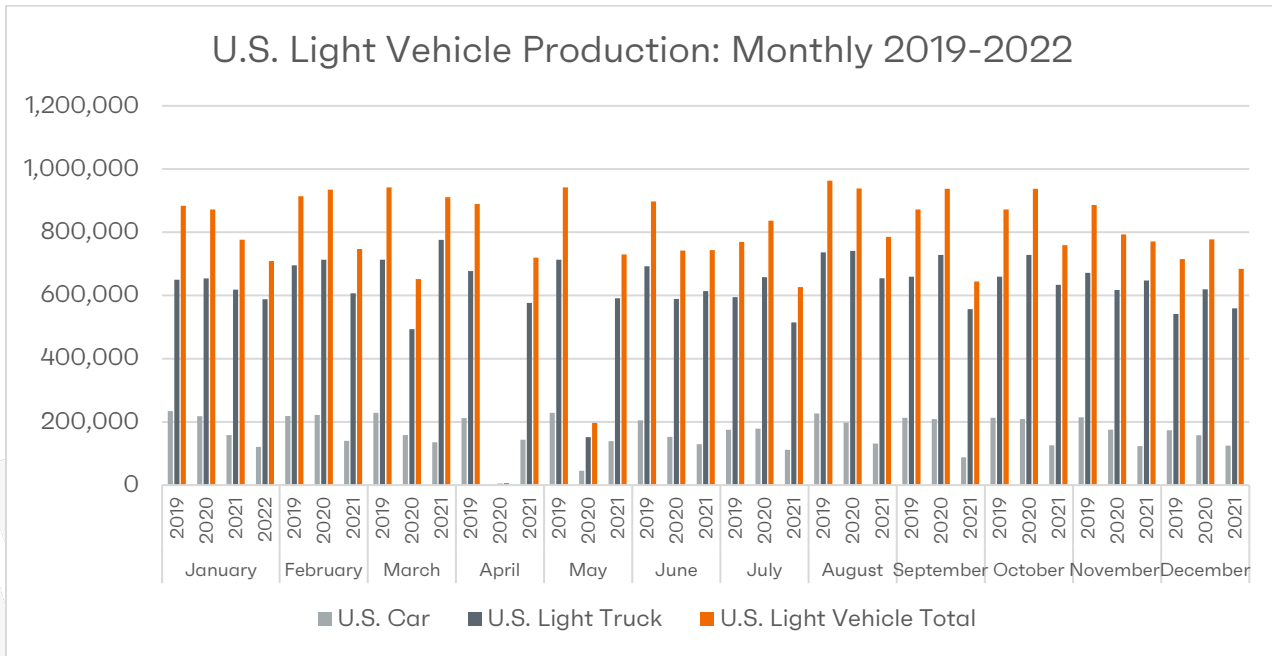
Gas And Oil Continues To Rise: Oil prices, as benchmarked at West Texas Intermediate, jumped \$14 to \$106.80 a barrel. Since election day 2020, oil prices have climbed \$70 a barrel. Gas prices rose nearly \$0.50 to \$4.10, the highest level since 2008 and just shy of the record. Gas is 59% higher than the beginning of 2020.²¹



Production Meter

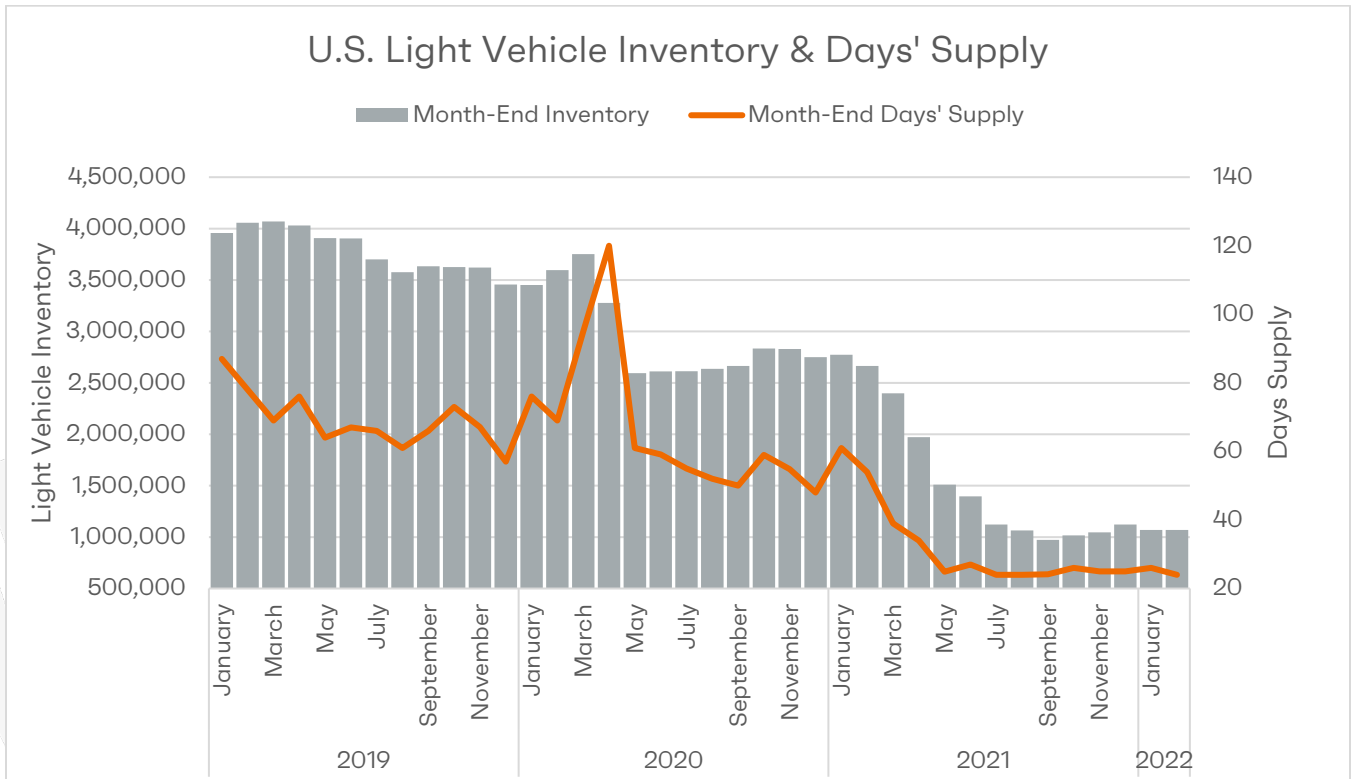
U.S. Light Vehicle Production (Updated 2/24)

U.S. Light vehicle production for January 2022 increased month-over-month by 3.6 percent, totaling 708,976 (120,779 cars, 588,197 light trucks), year-over-year, production is down 8.9% from 2021. ²²



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

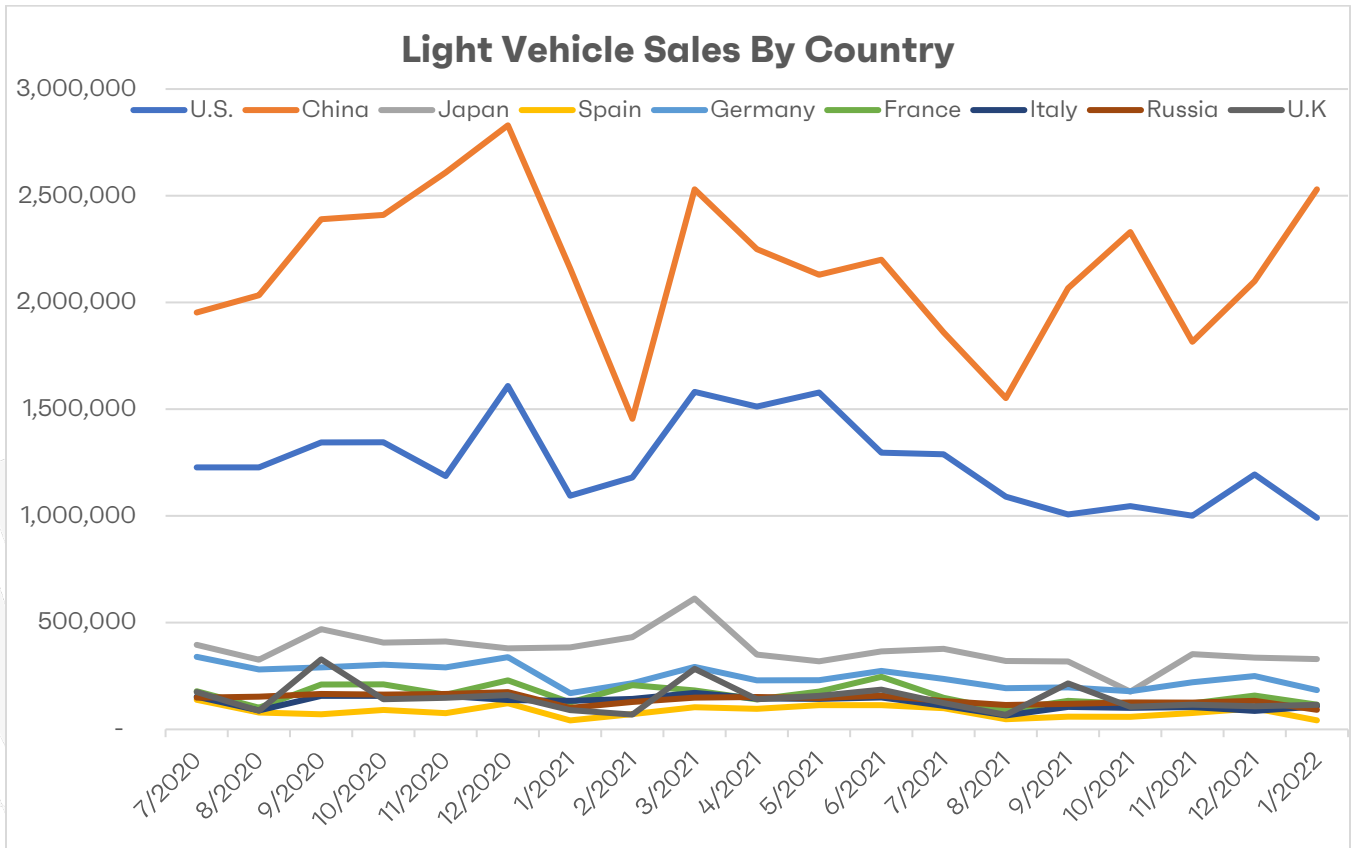
WardsIntelligence Inventory Update (3/3)²³: “U.S. light-vehicle inventory at the end of February was relatively flat with January, which puts a damper on the sales outlook for March. Inventory typically rises from January to February, and the diversion from the seasonal trend can be pegged to the ongoing chaos in the supply chain – a situation that generally is improving but could worsen due to Russia’s invasion of Ukraine. . . . Inventory ended February at 1.07 million units, 60% below like-2021. Days’ supply was 24, a slight decline from January’s 26, but well below same-month 2021’s 54. Pre-Covid, or prior to 2020, February’s days’ supply typically averaged 73. Based on expected production for the U.S., and the initial sales outlook, inventory should rise slightly in March, although current geopolitical tensions could put a damper on that possibility.”



Global Meter

Global Light Vehicle Sales (Updated 3/3)

Wards Intelligence²⁴: “Kicking off the new year on a disappointing note, global vehicle sales totaled 6.85 million in January, 3.8% behind like-2021’s 7.12 million. Whereas last year the global microchip shortage hadn’t taken full effect, and sales had begun to recover from the initial hit of the pandemic, January 2022 faced both spiking COVID cases as well as ongoing inventory issues. . . . Though 2022 got off to a rough start in January, the rest of the year holds hope for a recuperation from the past two years’ setbacks.”



Global Light Vehicle Production (Updated 2/24)

Wards Intelligence Outlook (1/12)²⁵: “The Omicron variant of the Covid-19 virus potentially could put a damper on prospects, but it appears the impact on global light-vehicle production from the semiconductor shortage has peaked, with the outlook for 2022 improving since November’s forecast. Wards Intelligence partner LMC Automotive is forecasting global light-vehicle output of 85.8 million units in 2022, 12.5% above 2021’s anemic 76.2 million and even higher than 2020’s 74.6 million, the year the pandemic first hit in full force. Although still including some year-end estimates, the 2021 total is an increase from 75.8 million units forecast for the period in the prior update and reflects a cut in estimated production losses caused by the semiconductor shortage of 600,000 units to 9.4 million. The 2021 total is just 2.2% above 2020.

“The 2022 forecast also is an improvement from the 84.9 million units expected for 2022 in the prior revision and accounts for an estimated loss of 4.0 million units due to the lack of semiconductors. “Global output is forecast to rise 8.9% in 2023 to 93.4 million units, followed by a 6.3% increase to 99.3 million in 2024, which also will beat the all-time high set in 2017 of 95.1 million.”

IHS Markit Forecast (2/24)²⁶: “The global auto industry continues to manage through supply chain challenges and evolving COVID-19 case counts. While semiconductor supply remains a lingering constraint for many automakers, the latest COVID-19 Omicron wave appears to be plateauing in several markets. As a result, recovery signals remain somewhat mixed, yet there has been some recent bias toward the upside in several markets. We continue to monitor conditions for signs of more holistic resurgence in supply chain activity and resulting vehicle production. The February 2022 forecast update reflects noteworthy increases across markets, to varying degrees, as the industry navigates COVID-19 infection rates and supply chain challenges. In the extreme near-term, upgrades are particularly focused on Greater China and Europe, among other regions. Given the ongoing uncertainties on the ground and assorted variables involved, a scenarios-based approach to planning is advised to help navigate dynamic market conditions. The more noteworthy regional adjustments with the latest forecast update are detailed below:

“Europe: The outlook for Europe light vehicle production was increased by 210,000 units and reduced by 1,000 units for 2022 and 2023, respectively (and reduced by 4,000 units for 2024). Europe production has demonstrated recent relative resilience as late 2021 actual results came in ahead of expectations and that pace has carried into early 2022 as the availability of semiconductors has improved in the near-term. As a result, we have increased Q1-2022 production by around 48,000 units, reflecting continued sequential improvement over Q4-2021. Further, as chip availability improves in the second half of the year, we have boosted our H2-2022 outlook by 151,000 units. We continue to monitor the state of the supply chain, particularly for semiconductors, for signs that conditions are improving (or deteriorating). The outlook for Europe production in the mid-term remained largely unchanged with the February forecast update.

“Greater China: The outlook for Greater China light vehicle production was increased by 491,000 units and by 48,000 units for 2022 and 2023, respectively (and reduced by 66,000 units for 2024). After a strong performance in November, mainland China light vehicle production outperformed our expectations in December, totaling 2.85 million units with year-over-year growth of 6.6%. Neither semiconductor shortages nor electric power outages had much impact on recent performance. In addition, production at the close of 2021 was further supported by the completion of partially-built vehicles from earlier periods due to component shortages. Total light vehicle production in mainland China for 2021 climbed 5.3% relative to 2020, achieving 24.6 million units. Coming off a strong showing in 2021, the New Energy Vehicle market is expected to retain its momentum given policy incentives and solid demand fundamentals. Nevertheless, when considering the industry in total, semiconductor capacity remains a bottleneck, particularly for NEV and intelligent vehicle offerings. Also, stagnated domestic consumption and potential risks in the financial sector raise more uncertainties for the market. Notwithstanding those challenges, overall light vehicle production for Greater China in 2022 is expected to total 25.2 million units, reflecting a year-on-year increase of 1.5%, an improvement relative to our January forecast.

“Japan/Korea: Full-year 2022 Japan production volume was increased by 96,000 units relative to the January forecast. While Q1-2022 production was reduced sharply due primarily to COVID and

semiconductor shortage impacts, particularly at Toyota, the second half of the year was upgraded more substantially on expected improved availability of semiconductors in the global market. As a result, total 2022 production was incrementally upgraded by 1.2% relative to the prior forecast. Japan production volumes in the 2023-2025 timeframe were upgraded by 0.5% per year as we expect to see more stable recovery trends after the semiconductor shortage situation is resolved. Full-year 2022 South Korea production was increased by 90,000 units relative to the previous forecast as lead time for semiconductors, especially MCUs, is expected to improve in the near-term due to better allocation for automotive and some increase in available capacity. However, the positive effect will be finite as the demand for chips per vehicle continues to rise, so significant changes were not made in 2023 and 2024. In the long term, there were no significant changes relative to the previous forecast other than minor timing change effects.

“North America: The outlook for North America light vehicle production was increased by 26,000 units and by 34,000 units for 2022 and 2023, respectively (and increased by 23,000 units for 2024). The February 2022 forecast update for North America reflects increased volatility in the very near-term. The recent Canadian trucker blockade at the US/Canada border has created additional headwinds. As a result of recent events and ongoing supply chain pressures, we have reduced Q1-2022 production by 87,000 units, yet we also expect to make-up that lost production through the balance of the year, resulting in the overall modest upgrade for full year volumes. A scenarios-based approach is recommended to help guide the assessment of upside potential and downside risk, particularly in the extreme near-term. Production in 2023 was revised modestly higher by 0.2% to total 17.2 million units as the industry is expected to start the process of moving beyond the current limitations and shift towards restocking heavily depleted inventory levels.

“South America: The outlook for South America light vehicle production was increased by 32,000 units and by 40,000 units for 2022 and 2023, respectively (and increased by 42,000 units for 2024). The upgrade in production for 2022 was driven by an improved outlook for Argentina as the country continues to be less affected (relative to Brazil) by semiconductor shortages. Further, signs of improved semiconductor availability, particularly in the second half of 2022, have contributed to automakers bolstering their production plans. The outlook for 2023 and 2024 was upgraded rather modestly and was similarly the result of improved expectations around production performance in Argentina, particularly regarding stronger prospects for Toyota in the country.

“South Asia: The outlook for South Asia light vehicle production was increased by 175,000 units and by 2,000 units for 2022 and 2023, respectively (and reduced by 69,000 units for 2024). The near-term outlook for the region was upgraded due primarily to additional relief regarding the semiconductor situation in India. Further, automakers in the country have de-contented vehicles in order to reduce semiconductor reliance. Notwithstanding recent chip supply improvements in India, the industry remains vulnerable to lingering supply chain uncertainties. The near-term production outlook for the ASEAN market was upgraded for 2022 due to stronger production support in the first quarter as chip manufacturer’s back-end processes in Malaysia have improved since late 2021. However, the outlook for the remaining quarters of 2022 was largely maintained given ongoing constrained chip supply and

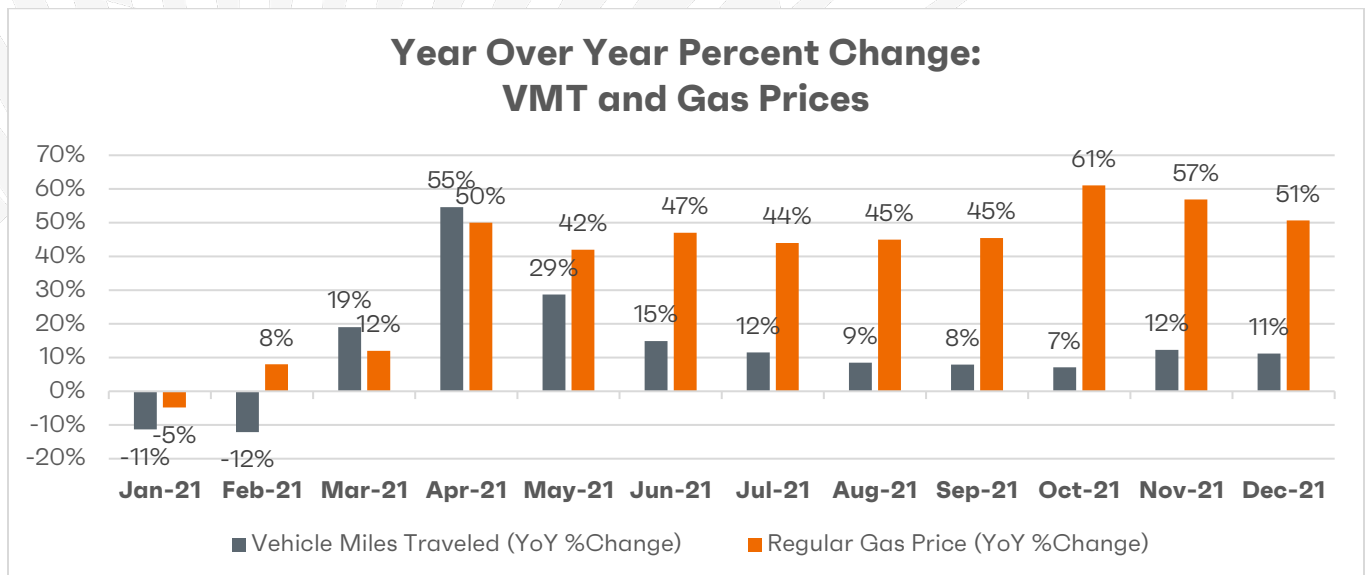
robust global requirements. Across the market, efforts are being made to ramp-up production where possible to compensate for prior production losses due to component shortages and COVID-19 restrictions. However, these efforts will continue to be governed by the ongoing status of supply chain challenges as well as COVID conditions throughout the region.

Recovery Meter

Roadway Travel (Updated 2/24)

According to the U.S. Department of Transportation, seasonally-adjusted vehicle miles traveled in December rose 10.7% from the same time a year ago. The cumulative travel estimate for 2021 is 3,228.8 billion vehicle miles.²⁷

- Travel on all roads and streets changed by +11.2% (+26.9 billion vehicle miles) for December 2021 as compared with December 2020. Travel for the month is estimated to be 268.4 billion vehicle miles.
- The seasonally adjusted vehicle miles traveled for December 2021 is 278.3 billion miles, a 10.7% (26.9 billion vehicle miles) change over December 2020. It also represents a -0.4% change (-1.1 billion vehicle miles) compared with November 2021
- Cumulative Travel for 2021 changed by +11.2% (+325.2 billion vehicle miles). The cumulative estimate for the year is 3,228.8 billion vehicle miles of travel.



Economic News (Updated 3/10)

Manufacturing Gained 36,000 Jobs In February, While Motor Vehicles And Parts Manufacturing Lost 18,000. “Manufacturing added 36,000 jobs last month, with the majority in durable goods, according to a breakdown by industry issued today by the U.S. Bureau of Labor Statistics. The gains were held back by a decline of 18,000 jobs in motor vehicles and parts. The auto industry has experienced temporary plant shutdowns stemming from a global shortage of semiconductors. Vehicle production is down because of the shortage.”²⁸

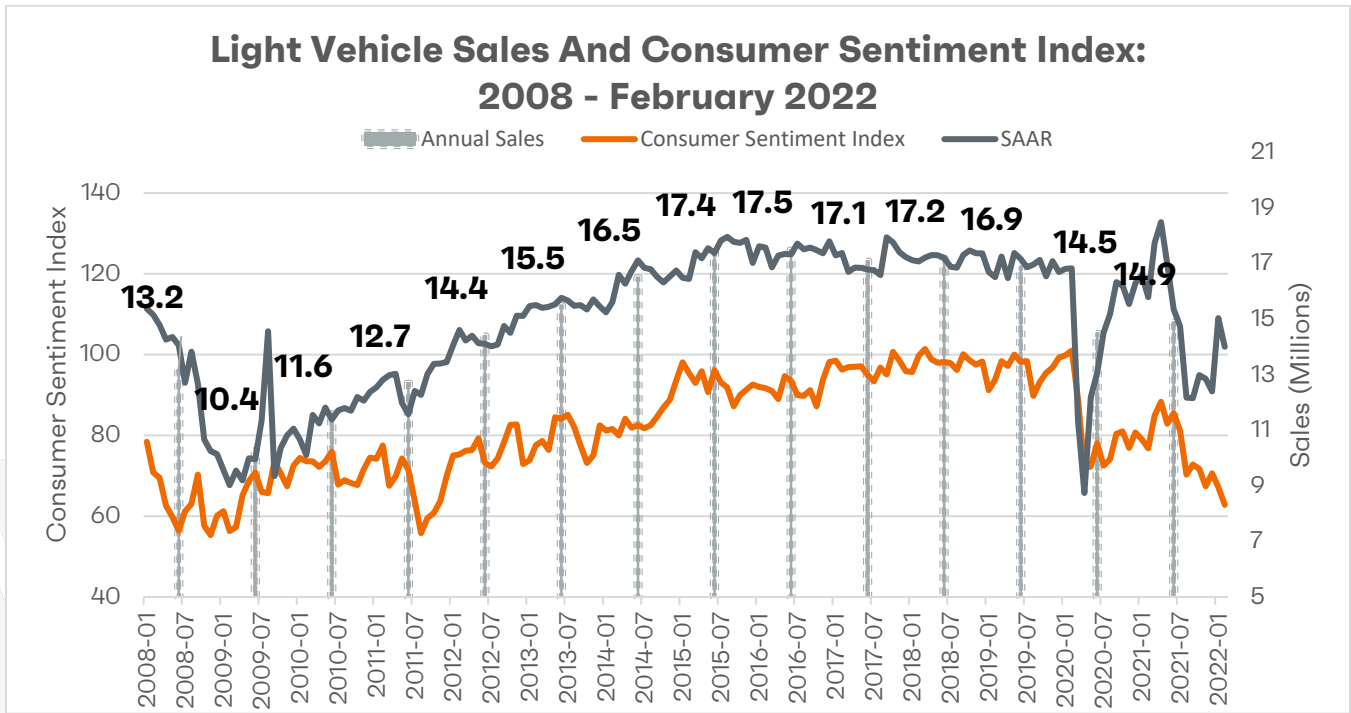
The ISM Index Rose To 58.6 In February. “Expansion in the manufacturing economy improved in February with contributions from new orders and production, the Institute for Supply Management said today. The Tempe, Ariz.-based group’s manufacturing index, known as the PMI accelerated to 58.6 percent last month, up from 57.6 percent in January.”²⁹

The Consumer Price Index Increased 7.9%, A Forty-Year High; Vehicle Costs Showed Signs Of Easing. “The consumer price index, which measures a wide-ranging basket of goods and services, increased 7.9% over the past 12 months, a fresh 40-year high for the closely followed gauge, according to the Labor Department’s Bureau of Labor Statistics. The February acceleration was the fastest pace since January 1982, back when the U.S. economy confronted the twin threat of higher inflation and reduced economic growth. On a month-over-month basis, the CPI gain was 0.8%. Economists surveyed by Dow Jones had expected headline inflation to increase 7.8% for the year and 0.7% for the month. . . . Vehicle costs have been a powerful inflationary force but showed signs of easing in February. Used car and truck prices actually declined 0.2%, their first negative showing since September 2021, but are still up 41.2% over the past year. New car prices rose 0.3% for the month and 12.4% over the 12-month period.”³⁰

“Material inflation/headwinds risks from conflict broad in range as to variety and severity: Although material cost headwinds were expected in 2022, the Russia/Ukraine conflict will likely further exacerbate those headwinds. As of now, we see primary materials/input headwinds related to: aluminum, precious metals palladium/platinum, nickel, resins/oil, steel, and semiconductors. Should spot prices hold, we could see materials adding ~\$400-500 of incremental cost per ICE vehicle (vs. year-end levels), and ~\$1,100-1,200 of incremental content for EVs. For context, for Ford/GM the typical variable profit per vehicle in NA is currently likely ~\$9-10k.”³¹

Consumer Confidence and Sales (Updated 3/3)

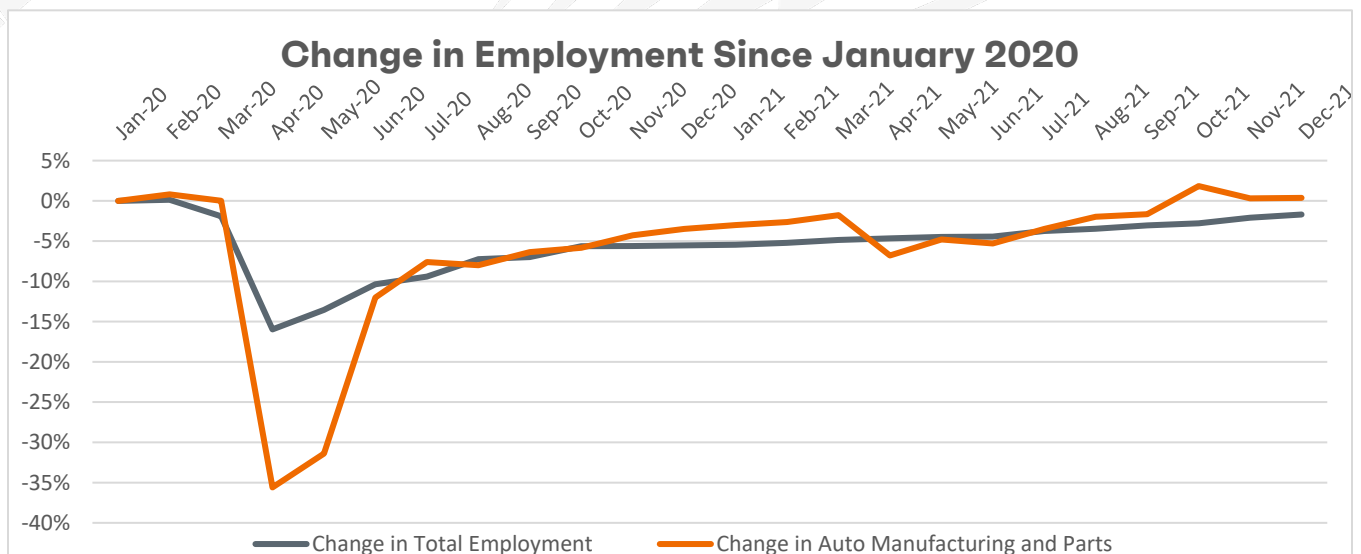
Surveys of Consumers Chief Economist, Richard Curtin³²: “Although Consumer Sentiment posted a slight increase in the last half of February, it still remained at its lowest level in the past decade, and the loss was still entirely due to a 12.9% decline among households with incomes of \$100,000 or more. The February descent resulted from inflationary declines in personal finances, a near universal awareness of rising interest rates, falling confidence in the government’s economic policies, and the most negative long term prospects for the economy in the past decade (see the chart). Virtually all interviews were conducted prior to the Russian invasion so its impact is yet to be felt by consumers. The most likely linkage to the domestic economy is through rising energy prices, with the size and length of the potential increases subject to substantial uncertainty.”



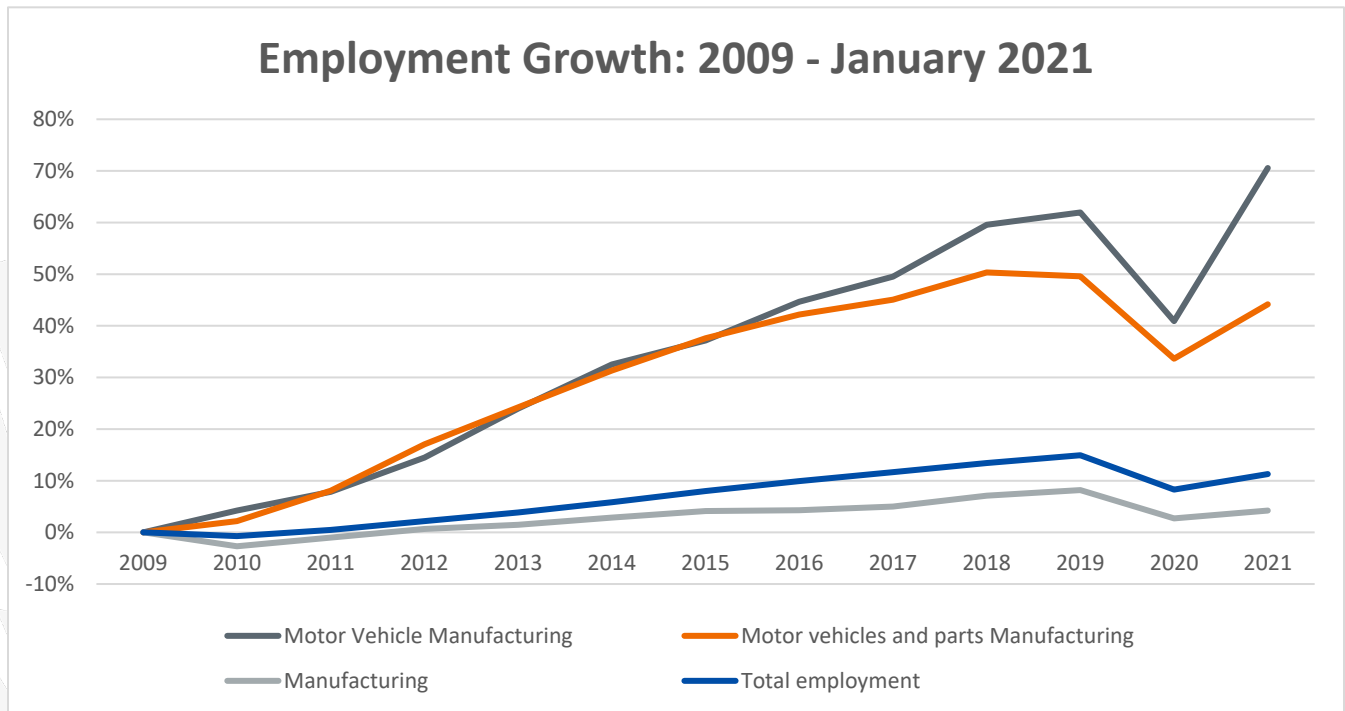
Employment (Updated 3/10)

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.³³

- **Motor Vehicle And Parts Manufacturing Lost 18,000 Jobs In February.**³⁴



After the recession in 2009, the auto industry was credited with being on the leading edge of the recovery, which began a ripple effect through other parts of the country.³⁵ Additionally, the chart below shows how the recovery of jobs in motor vehicle manufacturing alone and motor vehicle and parts manufacturing far outpaced the recovery of manufacturing and total jobs.



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