

OCTOBER 2021 WHOLESALE MARKET UPDATE

USED VEHICLE PRICE INDEX

Used-vehicle prices experienced exceptional strength in October and, as a result, the J.D. Power Used Vehicle Price Index increased 11.2 points vs. September. This was the first time in the last 25+ years that used prices increased in the month of October, and the first time that the index crossed the 200-point threshold, landing at a record-high 207.5.

Typically, used-vehicle prices cool in the fall. However, new market disruptions continue to bolster used values as both consumers and dealers alike lean on this side of the market to satisfy demand. In addition to all the ongoing challenges on the new side of the market, used vehicles remain in short supply. This has driven prices even higher as volume remains down nearly 30% compared with pre-pandemic levels at auctions across the country. Compared with the same period in 2020, used prices this year are, on average, 37% higher though October 2021—with no signs of softening. Used prices are expected to remain very strong for the next year, with fluctuations up and down as the new industry, specifically production and inventory, continues to work towards recovery.

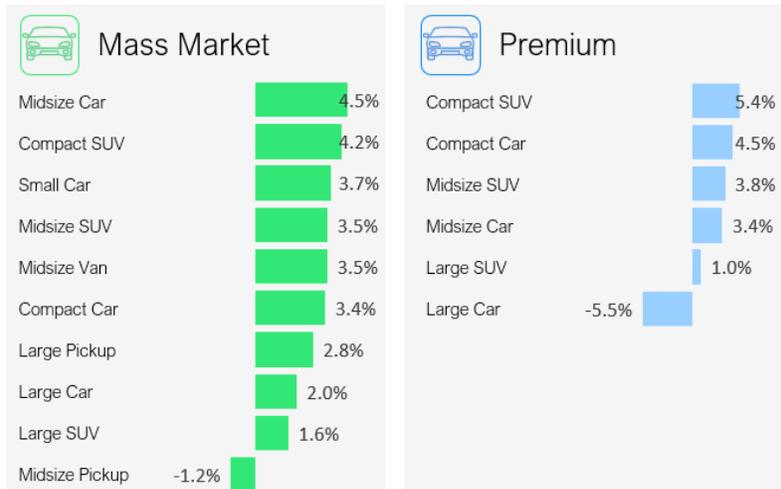
J.D. Power Valuation Services Used Vehicle Price Index (seasonally adjusted)



SEGMENT PRICE PERFORMANCE

In October, month-end results at the segment level were yet again generally positive. Mass market compact, small, and midsize car and SUV prices were some of the strongest on the non-premium side of the market increasing by a tight range of. Large car and SUV price movement was also positive. However, growth reached a slightly lesser range of 2.8% to 1.6%. The only mass market segment to experience a decline in prices was midsize prices, whose prices fell by 1.2%. On the premium side of the market, increases were in line with their mainstream counterparts, which is out of character for the time of year. Typically, premium prices are much softer than mass market in the fall but, this year, prices across the board have been significantly stronger than they historically have been.

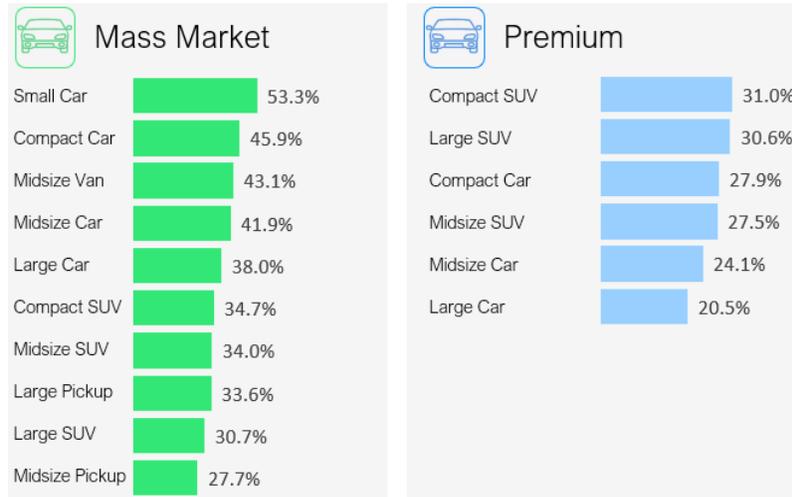
September vs. October 2021 Segment Wholesale Price Performance



Overall industry wholesale prices are up an average of 37% this year. This increase is being driven primarily by large increases on the mass market side of the market, such as mass-market passenger car prices that are up 53% for small cars and 38% for large cars. Large and midsize pickup prices also are up 36% and 28%, respectively. However, the pairs once extremely sizeable gains have begun to drift lower recently with softening performances each month. Remaining mass market segment growth is all less than the overall industry average.

Price growth in the premium sector continues to lag mass market. Growth is still impressive from a historical perspective as premium prices are not often as strong as their mass market counterparts. For example, compact SUV prices have risen the most (up 31%), while on the opposite end of the spectrum, even large car prices are up nearly 21%. Premium prices continue to be under more pressure because wholesale sales activity hasn't been nearly as limited as mass market auction sales volume.

Year-Over-Year Segment Wholesale Price Performance



WHOLESALE VOLUME UPDATE

In terms of wholesale sales, volume at the industry level is now nearly 13% lower this year when compared with the first 10 months of 2020. This figure appears even depressed when compared with 2019, as auction sales are trending between 25% to 30% lower than pre-pandemic levels. Mass market sales are certainly more constrained, currently almost 14% lower than a year ago, which is being amplified by massive reductions in passenger car wholesale volume. Premium wholesale sales are faring better, as sales for this sector are relatively flat when compared with the same period a year ago. This continues to be a major contributing factor as to why premium prices aren't up quite as much as mass market.

Wholesale Auction Sales (000s)

Segment	Oct. '20	Sep. '21	Oct. '21	M/M Change %	Y/Y Change %	CYTD '20	CYTD '21	CY Change %
Mainstream Total	324	274	249	▼ -9%	▼ -23%	3,336	2,847	▼ -15%
Premium Total	54	48	45	▼ -5%	▼ -16%	530	532	▲ 0%
Industry Total	378	322	294	▼ -9%	▼ -22%	3,866	3,379	▼ -13%

Note: Vehicles up to eight years in age.

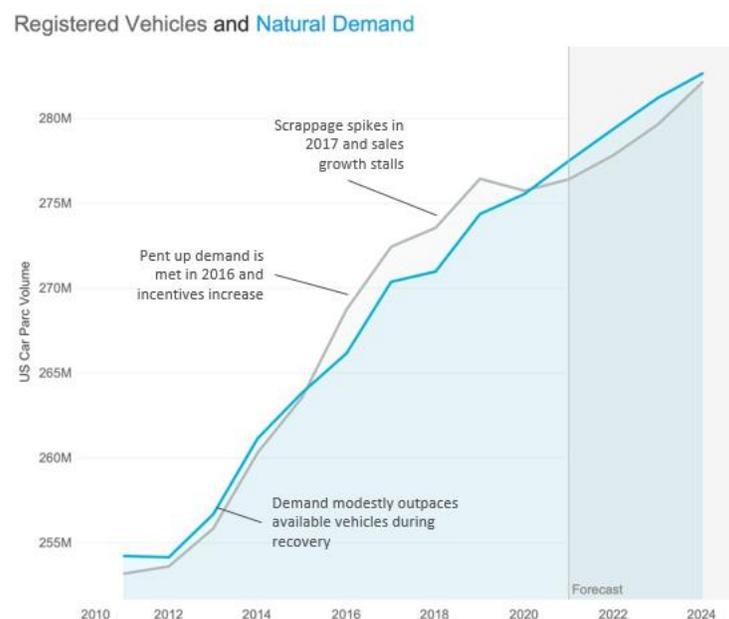
ALG NATURAL DEMAND FOR THE US DRIVER POPULATION

The current imbalance between low supply and high demand in the automotive industry has created unprecedented profit margins on historically low volumes. The past 18 months have raised many pressing issues about the industry's ability to sustain this challenging dynamic. ALG, a division of J.D. Power, has worked tirelessly to understand this phenomenon so that industry partners are aware and prepared to pivot when natural demand is ultimately met.

Natural demand addresses pent-up demand from deferred sales during economic disruptions by measuring the need for vehicles by eligible drivers in the United States and comparing that number against annual scrappage rates. It quantifies how a shortage of vehicles will result in higher transaction prices, lower incentives, fewer vehicles sent to the scrap yard and an increase to the average age of vehicles in the U.S. An oversupply yields the inverse: lower prices and higher incentives as automakers force vehicles into the marketplace. The transition from one condition to another can often occur suddenly, catching key players by surprise. In these circumstances, the key is to avoid getting seduced by prevailing market conditions.

Historically, the industry, collectively, trends toward bad habits regarding sales and production discipline. Softening demand are not always met with appropriate prompt production adjustments, resulting in overcrowded dealerships that ignite a downward spiral in profitability across the industry.

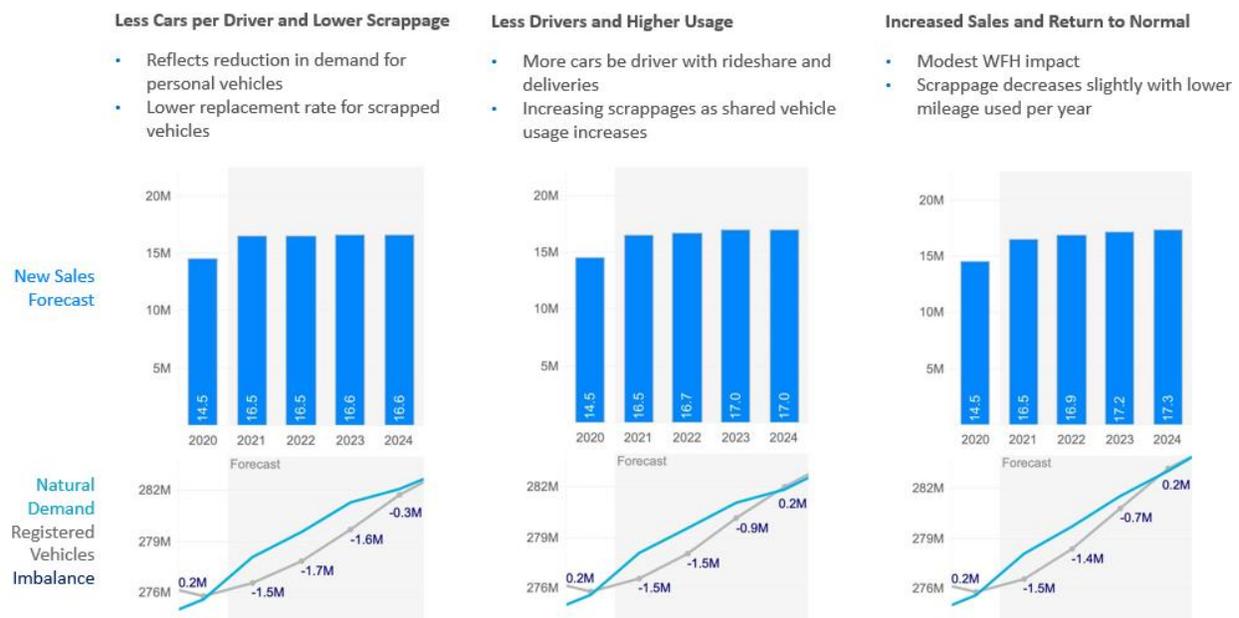
The aftermath of the Great Recession put natural demand's automotive forecast metrics to its first test. In 2012, for instance, natural demand analysis projected that the country would reach an inflection point around Q3 of 2016.



The prediction bore fruit. In 2016 the industry observed an increase in incentivized spending that validated the formula. However, production continued at a rate that exceeded demand during this period, requiring dealers to create more incentives for consumers to sell the overflow of vehicles.

NATURAL DEMAND BACK TO EQUILIBRIUM

The current outlook expects that supply will exceed demand by the middle of the decade, when at that point incentive spending will increase as a response. ALG's natural demand forecast has created three possible scenarios for how automakers will approach supply imbalances and consumer behavior, which are outlined below:



- **The first scenario assumes lower scrappage rates and fewer cars per driver.** Lower scrappage rates minimize the vehicles flowing out of the car parc, requiring fewer vehicles to backfill demand. It suggests that record prices of vehicles today will result in consumers being more willing to maintain or fix aging cars for extended periods before purchasing new ones.
- **A second scenario assumes fewer drivers and owners.** Fewer consumers would be getting their driver's license or owning a vehicle because of a heavier reliance on rideshare and car-share services. In this scenario, reliance on public transportation, rideshare and car-share services result in a surge in the number of miles traveled per vehicle, causing a subsequent increase in the scrappage rate. However, the second scenario seems unlikely due to continuing hesitation in the safety of public transportation and sharing services.

- **The third scenario assumes a continued overall increase in automotive production.** If automakers could, they would already be producing more. As shortage issues remain unresolved, automotive manufacturers will have a strong desire to satisfy demand. This scenario is the most logical outcome, but it will take time to ramp up the required production to reach parity with demand. The earliest expectation of achieving that goal is 2024, assuming sales figures rebound in 2022 and 2023.

At this point in the industry's history, timing is essential. Natural demand analysis enables the automotive industry to monitor the market's inventory to benchmark supply, incentives, and vehicle pricing. As pent-up demand nears fulfillment the automotive industry should heed the overproduction warnings of the past.