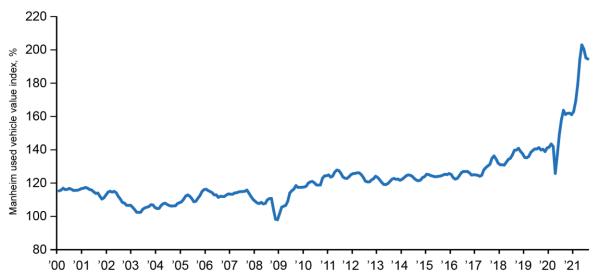


Used Vehicle Prices Likely to Stay Elevated Through Next Year

Auction prices of used vehicles have skyrocketed since the pandemic induced lockdowns. Used vehicle prices reached an all-time high in June 2021 and remain elevated as supply failed to meet rising demand (see figure 1). Low inventory and production constraints are limiting the supply of both new and used vehicles. At the same time, two factors, shifting personal preferences and elevated savings, are fueling the rising demand for automobiles, sport utility vehicles, and light-duty trucks (light vehicles). The COVID-19 pandemic shifted personal transportation preferences in favor of privately owned vehicles, and the elevated level of personal savings provided by pandemic assistance enabled consumers to purchase more vehicles. Prices are expected to remain high through at least the next year as demand continues to grow and production of new cars lags.





Source: Manheim/Haver Analytics, September 2021

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Increases in Households and Licensed Drivers Support Demand

Two main factors have increased the demand for vehicles. First, the pandemic created an immediate demand for light vehicles as a safer alternative to public transportation. Second, demographic changes in the U.S. are increasing the long-term demand for light vehicles. Not only does population growth continue to add to the demand, but the number of licensed drivers per population is increasing as shown in figure 2. This increase is led by millennials obtaining drivers licenses after almost a decade of decline. In addition, population growth in suburban areas with limited public transportation is increasing light vehicle demand.

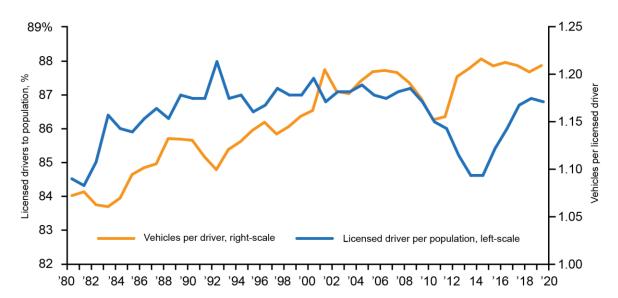


Figure 2: Licensed Drivers and Vehicles Per Driver

Sources: U.S Federal Highway Administration/Haver Analytics, Census Bureau

Note: Licensed drivers measured as share of U.S. population over 16 years old.

The fundamental demand for new light vehicles includes demand for additional vehicles per household and replacement vehicles. It is a function of additional drivers, the number of vehicles per driver and per household, and the loss rate of existing vehicles through accidents, scrappage, abandonment, and the sale and shipping of vehicles abroad. As shown in figure 3, the fundamental demand for light vehicles has risen since 2014. This thirty-five year high will increase pressure on prices until production can catch up to the demand.

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22 Fundamental demand New vehicle sales rate 20 undamental demand (polynomial trend) 18 Vehicles, millions 16 12 10 80 '84 '92 '94 '96 '98 '00 '02 '04 '08 '10 '12 '14 '16 '86 '88 '90 '06

Figure 3: Fundamental Demand for New Vehicles

Sources: Autodata/Haver Analytics, IHS Markit, Federal Highway Adeministration, Author's calculation

Lower Auto Production and Inventories Elicit Fewer Sale Incentives

After initially recovering from shutdowns triggered by the pandemic, auto production declined as supply shortages of computer chips and other raw materials emerged. Auto inventories started to fall in 2015 from improvements to "just-in-time" inventory management, enabling dealerships to keep lower inventories of vehicles. But higher demand and lower production led to extreme lows in new vehicle inventories as shown in figure 4. As a result, the availability of manufacturer's incentives (both low rate financing and cash back offers) have declined substantially. Lower incentives changed the effective pricing and demand for both new and used vehicles as buyers shifted from the new vehicle market to the used vehicle market. Under the current supply challenges and the resulting drawdown in new vehicle inventories, incentives are likely to remain limited. This limited supply is leading some dealerships to charge more than the sticker price for new cars and/or require the buyer to accept high-profit vehicle dealer add-ons or upgrades, leading even more consumers to choose used vehicles. The combination of these factors will likely keep used vehicle prices elevated in the near future.

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¹ Usually, by creating a lower effective price for new vehicles, manufacturer incentives put downward pressure on used vehicle prices. Because the effective new vehicle price is lower, some consumers are able to purchase a new vehicle instead of a used vehicle. Now that manufacturer incentives are lower, the effective prices for new vehicles are higher, resulting in more demand for used vehicles by some consumers who no longer want or can afford a new car. In turn, higher used vehicle demand pushes used vehicle prices up.

5.0 Vehicle sales and production, quarterly, millions 4.5 inventories, quarter-end, millions 4.0 3.5 3.0 8.0 2.5 0.6 2.0 1.5 Production Sales 1.0 Inventory, right-scale 0.5 0.0 0.0 '05 '09 19 '21 '07 11 13 15 17

Figure 4: Light Vehicle Production, Sales, and Inventories

Sources: Bureau of Economic Analysis(BEA), AUTODATA/Haver, Autonews/Haver Analytics (July 2021)

Used Vehicle Supply Hurt by Below-Average New Car Sales

The market for used vehicles also is experiencing its own supply-side challenges. Used-car supply consists of vehicles traded-in for new ones and vehicles coming off leases. Since cars entering the used-car market are most commonly about three years old, new vehicle sales are a precursor of used vehicle supply with a lag of a few years.

New vehicle sales accelerated following the financial crisis of 2008, peaking in 2015 as shown in figure 4. This stimulated growth in the used car market through 2019. As a result, wholesale used vehicle prices were relatively flat from 2014 through 2019.

Due to the recent decline in new vehicle sales and leases, the supply of used cars is forecasted to remain low over the next two years. Lower new vehicle production in 2020 has not only decreased the number of new vehicles, but it has also had an immediate effect on the used car market by decreasing the supply of used cars available for sale from trade-ins of old cars.

Cox Automotive breaks down the wholesale supply and forecast of used cars by source and highlights a few additional sources of supply crunch in figure 6. Declines in new fleet sales to rental car companies in 2020 will result in fewer cars entering the used car market over the next couple of years. With the supply-side bottlenecks impacting new vehicle production, rental car companies are forced to retain their older rental fleet, reducing the pipeline of used cars for sale. In addition, fewer cars are entering the used car market via repossession, as repossession volume is down, with fiscal stimulus and various accommodation programs assisting auto borrowers who might otherwise default.² Furthermore, leases have leveled out over the past few years and fallen dramatically in 2020. Since residual value is up for vehicles coming off their leases, more lessees will likely opt to purchase these vehicles once their lease contract expires.

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² Banks making auto loans that go into default as stimulus and accommodation programs unwind may have more incentive to repossess if collateral value is higher.

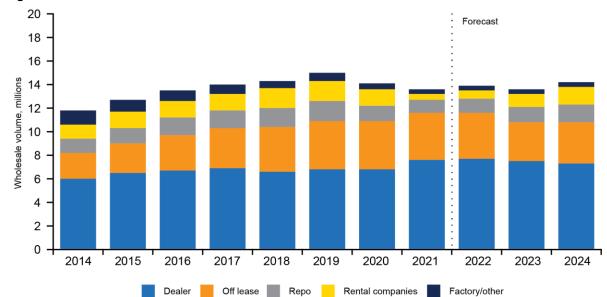


Figure 5: Estimated Wholesale Volume of Used Vehicles

Source: Cox Automotive, April 2021

The Point?

Used vehicle prices (and thus collateral value on auto loans) are likely to remain elevated over the next year due to increasing demand for private transportation and limited supply of new and used autos.

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