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## ANALYSIS

# Wholesale Used-Car Price Report: 2019Q3


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## Introduction

Auto retention values were not immune to the slowdown in the U.S. economy in the third quarter. Wholesale used-vehicle value retention dropped 1.7% in September on a year-over-year basis. This at a time when U.S. economic growth slowed from 3% a year earlier to about 2%. Additionally, job growth has roughly halved over the same period, going from 225,000 new jobs to just over 110,000 new jobs per month. Third quarter GDP growth was the slowest of 2019 and the slowest year-over-year growth since 2016. The 1.7% drop in used-vehicle value retention in September was the largest monthly decline since July 2017.

# Wholesale Used-Car Price Report: 2019Q3

BY MICHAEL BRISSON AND LOC QUACH

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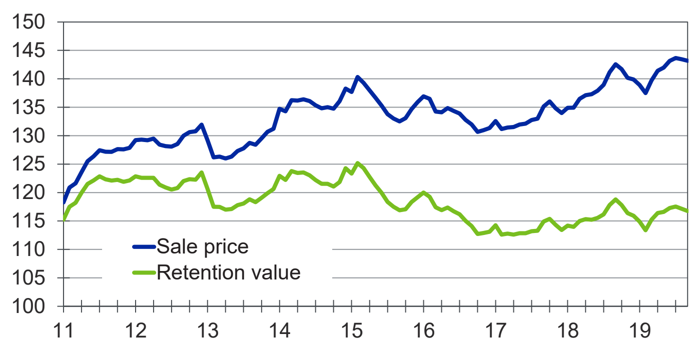
The hedonically derived Moody's Retention Value Index shown in Chart 1 controls for vehicle mix as well as MSRP to hold steady the sample of vehicles being observed and extract only the movements in value. Similarly, the Moody's Sale Price Index is hedonically derived, but does not control for movements in MSRP. This will allow for the natural movements in MSRP caused by inflation or other nonmix-related exogenous factors to be represented in these numbers. Still, growth in the sales price index has slowed to 0.4% on a year-over-year basis. This slowdown represents the slowest growth rate for the sales price index in more than two years.

The slowdown in vehicle price growth is less obvious when looking at the average statistics of the wholesale market. As shown in Table 1, average vehicle sale prices increased almost 2% in the third quarter. This is a large improvement compared with the year-over-year declines experienced through the end of 2018 and into early 2019. Still, this average price is less indicative of the market movement and biased by the makeup of the vehicle being sold on the market. For example, if there is a larger share of trucks and SUVs at auctions this quarter than in the third quarter of 2018, then this will explain the increase, even if the trucks and SUVs were selling for less than they were the previous year. Additionally, if MSRP growth were to skyrocket and vehicles were retaining the same percentage of value, then this will also show an increase in average price, hence the need for the hedonically driven price index methodology.

This methodology can be used to further narrow the scope of the analysis into what the movement has been in the market by focusing on individual subsegments. Movements within subsegments can give a clearer picture of the supply and demand dynamics taking place within the used-vehicle market. For instance, Chart 2 shows that sale prices for cars have continued to increase throughout the third quarter, but there has been a decrease in the sale price for trucks and SUVs. This tells the story of how the market

## Chart 1: Used-Vehicle Value Growth Slows

Moody's Wholesale Price Indexes, SA, Jan 2010=100




Sources: NADA, Moody's Analytics

## Table 1: Seasonal Decrease in Auction Prices

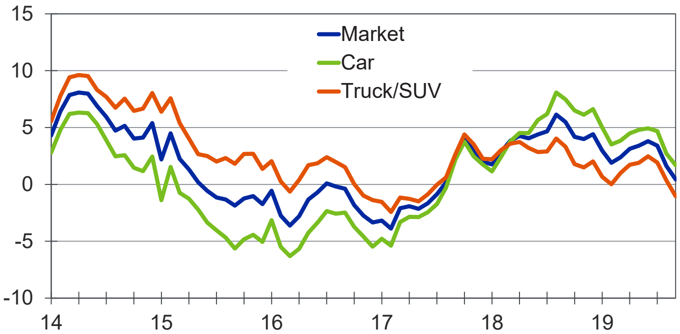
Wholesale used-vehicle auction summary

| | 2019Q3 | 2019Q2 | 2019Q1 | 2018Q4 | 2018Q3 |
|---|---|---|---|---|---|
| **Avg sale price, $** | 10,825 | 11,138 | 10,602 | 10,502 | 10,618 |
| **Avg sale price, % change yr ago** | 1.95 | 3.84 | -0.28 | -1.32 | -1.33 |
| **Avg price-to-MSRP ratio** | 0.34 | 0.35 | 0.34 | 0.34 | 0.34 |
| **Sale volume** | 1,913,701 | 2,032,097 | 1,969,859 | 1,857,644 | 1,909,561 |
| **Sale volume, % change yr ago** | 0.22 | 1.51 | 10.39 | 17.67 | 5.41 |
| **Lease/fleet sale volume** | 773,146 | 829,911 | 807,011 | 739,344 | 718,977 |
| **Lease/fleet volume, % change yr ago** | 7.53 | 6.42 | 9.25 | 8.44 | -5.40 |
| **Lease/fleet penetration rate, %** | 0.41 | 0.41 | 0.41 | 0.40 | 0.38 |

Sources: NADA, Moody's Analytics

## Chart 2: Car Prices Outpace the Market

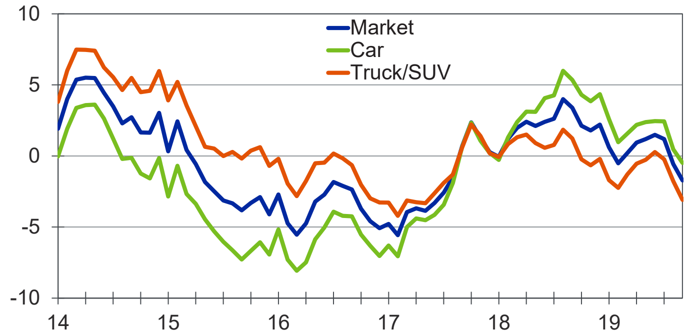
Moody's Sale Price Index, SA, % change yr ago




Sources: NADA, Moody's Analytics

## Chart 3: Retention Dropped Across Industry

Moody's Retention Value Index, SA, % change yr ago




Sources: NADA, Moody's Analytics

has become saturated with trucks and SUVs as they come to dominate both new- and used-vehicle sales. At the same time, demand for smaller and less expensive cars has not dropped as far as the supply would indicate, allowing prices on used cars to appreciate. The split between car and trucks is also evident when looking at year-over-year changes in the retention index shown in Chart 3.

The difference in segments can be broken down further, as shown in Table 2. The table shows the retention value index by the National Automobile Dealers Association-defined subsegments. From this disaggregated view, one can see that SUVs across the spectrum have been losing value this quarter, with premium SUVs hit especially hard. Moreover, this is not the only segment driving the downward trend, as every size of pickup truck decreased year over year in each month this quarter. The only truck/SUV segments to increase in value retention this past quarter were large and midsize vans. Cars were more of a mixed bag, with sports cars performing well and non-sport premium cars losing retention value.

Outside of the price indexes, it is also useful to look at vehicles by age. When looking at the specific age of a vehicle over time, this can limit movement of the two largest drivers of depreciation: years on the road and mileage. As shown in Chart 4, the age of the vehicle has been an important differentiator showing which vehicles have been increasing in terms of the price-to-MSRP ratio and which have not. In more than 11 of the past 13 months, autos under 6 years old have increased in their price-to-MSRP ratio, and this is not because the denominator has decreased. This trend has subsided in the past two months, and now all age cohorts are experiencing the decreases associated with the most recent slowdown in economic activity.

One age cohort of interest is 3-year-old vehicles. These vehicles are important, as they tend to be off-lease cars and trucks that hit the market all at once. Chart 5 shows trucks and SUVs in this cohort perform particularly well in terms of the price-to-MSRP ratio. This may appear to be a disconnect in regard to the retention statistics in Table 2; however, those numbers were showing that the price-to-MSRP ratios, all else equal, were declining. Here they are declining from a higher starting level. This point is reinforced in Chart 6, which shows 3-year-old pickups losing value at an elevated clip.

### Outlook

Despite the recent economic slowdown in the third quarter of this year, we expect the U.S. economy to continue growing steadily throughout the fourth quarter. Our probability of recession model put the chance of recession at 11% in the next six months. To put

## Table 2: Truck/SUV Retention Losses Lead Q3

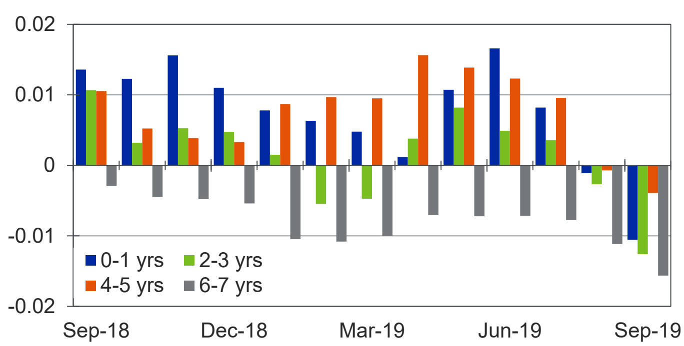
Moody's Retention Value Indexes, % change yr ago by subsegment

| Subsegment | Sep 2019 | Aug 2019 | Jul 2019 | Subsegment | Sep 2019 | Aug 2019 | Jul 2019 |
|---|---|---|---|---|---|---|---|
| Compact car | -0.85 | 0.16 | 2.49 | Large van | 0.18 | 5.17 | 1.93 |
| Compact MPV | -3.06 | -1.06 | -0.12 | Midsize car | 0.08 | 0.54 | 2.90 |
| Compact premium car | -3.31 | -1.85 | -0.54 | Midsize pickup | -2.99 | -2.69 | -1.16 |
| Compact premium sport | 6.22 | 6.98 | 5.62 | Midsize premium car | -2.48 | -2.15 | 0.34 |
| Compact premium SUV | -7.51 | -5.35 | -3.87 | Midsize premium sport | 1.73 | 1.79 | 3.51 |
| Compact sport | -0.80 | 3.36 | 3.22 | Midsize premium SUV | -1.49 | -0.44 | 0.89 |
| Compact SUV | -2.49 | -1.46 | 0.21 | Midsize sports car | -0.48 | 0.27 | 3.15 |
| Large car | -0.62 | 0.30 | 2.69 | Midsize SUV | -2.92 | -0.90 | 0.88 |
| Large premium car | 0.12 | -0.51 | 3.77 | Midsize van | -0.35 | 0.10 | 1.81 |
| Heavy-duty truck | -4.88 | -5.26 | -2.91 | Small car | -2.45 | -0.53 | 0.57 |
| Light-duty truck | -4.38 | -3.45 | -1.60 | Small premium SUV | -5.79 | -5.58 | -2.80 |
| Large premium SUV | -3.95 | -3.89 | -3.04 | Small SUV | -3.85 | -2.60 | -1.36 |
| Large SUV | -1.61 | -0.37 | 2.01 | | | | |

Sources: NADA, Moody's Analytics

## Chart 4: Retention Dropping Across Ages

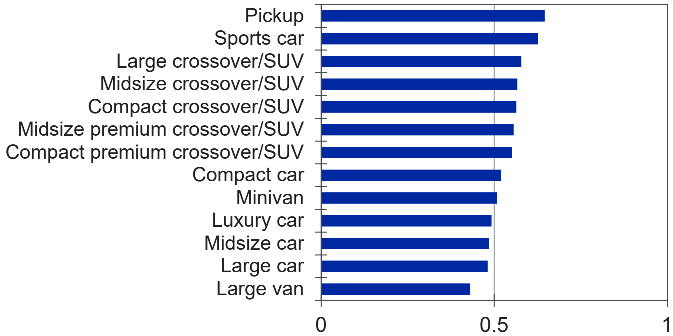
Avg price-to-MSRP ratio, change yr ago, by age of vehicle




Sources: NADA, Moody's Analytics

## Chart 5: Truck/SUVs Remain Favorable

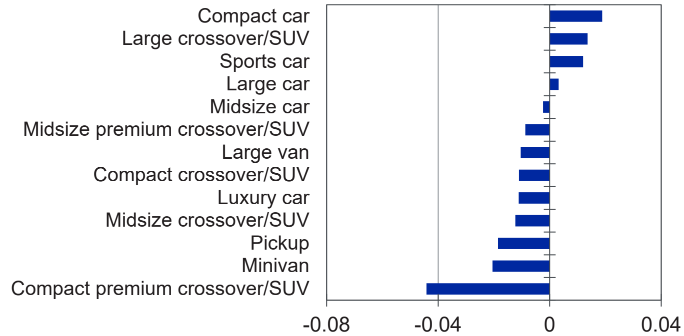
Avg price-to-MSRP ratio, 3-yr-old vehicles, 2019Q3




Sources: NADA, Moody's Analytics

## Chart 6: Cars Gain as Pickups Drop

Avg price-to-MSRP ratio, change yr ago, 3-yr-old vehicles, 2019Q3

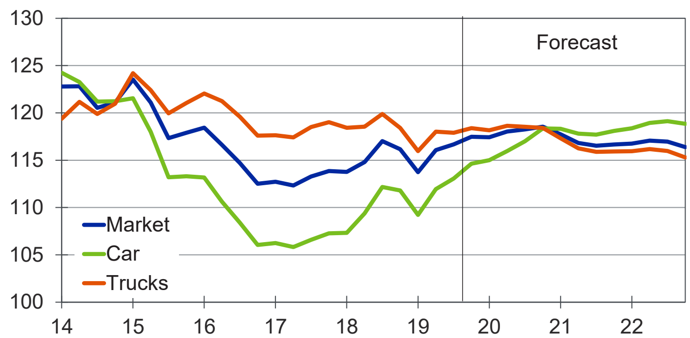



Sources: NADA, Moody's Analytics

this in perspective, the average for the recession probability is 22% and our baseline forecast does not work in a recession unless the chances surpass 60%. Given the steady growth expected across the wider economy and the limited supply pressures from slowing new-vehicle sales, Moody's Analytics expects vehicle retention values to grow over the next 12 months, with growth being fastest in the car segment. Over the medium term, our forecast has the unemployment rate increasing in the second half of 2020. This increasing unemployment is expected to ding demand and lower retention values slightly through 2021 and into 2022, as shown in chart 7.

## Chart 7: Retention Growth Returns

Moody's Retention Value Indexes, SA, Jan 2010=100




Sources: NADA, Moody's Analytics

## About the Authors

Michael Brisson is a senior economist and associate director at Moody's Analytics. He is the lead auto economist, working as a member of the Specialized Modeling group in West Chester PA. Mike works developing new empirically driven auto-related products and services. Prior to joining the Specialized Modeling group, Mike built CECL, CCAR, and stress-testing models of consumer loan performance as a member of the Business Analytics team. Additionally, Mike has worked in the Moody's Analytics Research group, where he developed models for state and local government revenue forecasts. Mike holds a PhD in applied economics from Northeastern University.

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