Wholesale Market Insights

Through March 2019

Jonathan Smoke & Zo Rahim
Manheim Used Vehicle Value Index

Concept: A single measure of used vehicle price change that is independent of underlying segment shifts in the characteristics of vehicles being sold.

Steps: All Manheim U.S. sales
Classify by market segment
Account for differences in mileage
Weight to provide smoother segment mix
Seasonally adjust
Prices in March increased 0.58% versus February 2019 and were up 4.0% compared to March 2018.
Used Vehicle Values Continue to Stay Above Average

Year-over-year price performance has been much stronger than average over the last 24 months.
Manheim Index versus Mix & Quality Adjusted New Vehicle Price with 3 ½ year Lag

Used vehicle prices back closer to historical new vehicle price relationship trend

Source: Bureau of Labor Statistics, Manheim/Cox Automotive
Wholesale Used Vehicle Prices vs. New Vehicle Prices

Source: Manheim/Cox Automotive
2019 Weekly Price Trend Started Weak But Now Moving Up

Much higher than normal depreciation for start of year led to lower prices but prices have since turned...
Spring Bounce Most Pronounced in Non-Luxury

Much higher than normal depreciation for start of year but now also improving

Non-Luxury 3YO Model MMR Index by Week

Source: Manheim/Cox Automotive
Luxury Seeing Far Less Bounce

Much higher than normal depreciation for start of year but now also improving

Luxury 3YO Model MMR Index by Week

- 2014
- 2015
- 2016
- 2017
- 2018
- 2019

Source: Manheim/Cox Automotive
One-year-old vehicles saw less pronounced depreciation with much lower volumes and now on up trend.
Retention Values Trended Lower to Start the Year

Adjusting for MSRP and fixing the basket of vehicles by what was sold now just above last year

(1 to 3 year old models)
Tax Refunds by Week in Recent Years

Amount of Refunds (Cumulative)


Billions

$0.0

$50.0

$100.0

$150.0

$200.0

$250.0

$300.0

Source IRS
Most major segments saw year-over-year gains in March.
Shifting Consumer Preferences Not Reflected in Wholesale Market Volumes

The SUV reigns supreme in new vehicle sales while cars still dominated the used car market.

**New Vehicle Sales by Category**

- **Cars (CAR)**: 50% in 2009, 32% in 2019
- **Pickups (PICKUP)**: 16% in 2009, 16% in 2019
- **SUVs (SUV)**: 32% in 2009, 47% in 2019
- **Vans (VAN)**: 5% in 2009, 5% in 2019

**Manheim Sales by Category**

- **Cars (CAR)**: 50% in 2009, 48% in 2019
- **Pickups (PICKUP)**: 11% in 2009, 11% in 2019
- **SUVs (SUV)**: 36% in 2009, 5% in 2019
- **Vans (VAN)**: 5% in 2009, 5% in 2019

Source: Manheim/Cox Automotive
Average Auction Price – Rental Risk Units

Average price for rental risk units sold in March down 1% y/y and up 2% m/m

Source: Manheim/Cox Automotive
Average mileage for rental risk units in March was up 0.4% compared to a year ago and up 1% m/m.
# Distribution of Rental Risk Vehicles

<table>
<thead>
<tr>
<th></th>
<th>2017 Q1</th>
<th>2018 Q1</th>
<th>2019 Q1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of unique year, make, make, model, body configurations sold</td>
<td>2,736</td>
<td>3,005</td>
<td>3,030</td>
</tr>
<tr>
<td>Share accounted for top 10 YMMB</td>
<td>13.4%</td>
<td>13.1%</td>
<td>11.7%</td>
</tr>
<tr>
<td>Share accounted for top 25 YMMB</td>
<td>25.1%</td>
<td>23.3%</td>
<td>22.0%</td>
</tr>
<tr>
<td>Number of YMMB to reach 50% share</td>
<td>82</td>
<td>108</td>
<td>114</td>
</tr>
</tbody>
</table>

Source: Manheim/Cox Automotive
Rental Risk Units Sold by Condition

Source: Manheim/Cox Automotive
Rental Risk Units Sold by Make

Source: Manheim/Cox Automotive
Rental Risk Units Sold by Segment
Top selling vehicles in March at Manheim saw mixed levels of depreciation in the last 30 days (March 2 – April 1) as non-luxury vehicles appreciated while luxury saw high depreciation rate. Prices year-over-year were more comparable but luxury remained the worst performer.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Source/Type</th>
<th>Category</th>
<th>Subcategory</th>
<th>Vehicle</th>
<th>1-Apr</th>
<th>Past 30 Days</th>
<th>Last Year</th>
<th>Current Dep</th>
<th>L12M Dep/Mo</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All</td>
<td>Luxury Car</td>
<td>Luxury Car Premium</td>
<td>2016 MERCEDES-BENZ C CLASS 4D SEDAN C300 4MATIC</td>
<td>$20,500</td>
<td>$21,000</td>
<td>$24,600</td>
<td>-2.4%</td>
<td>-1.4%</td>
</tr>
<tr>
<td>2</td>
<td>All</td>
<td>Compact Car</td>
<td>Compact Car Premium</td>
<td>2016 FORD FUSION FWD 4D SEDAN 2.5L SE</td>
<td>$11,300</td>
<td>$11,100</td>
<td>$12,250</td>
<td>1.8%</td>
<td>-0.6%</td>
</tr>
<tr>
<td>3</td>
<td>All</td>
<td>Midsize Car</td>
<td>Midsize Car Premium</td>
<td>2016 NISSAN ALTIMA 4C 4D SEDAN S</td>
<td>$10,950</td>
<td>$10,700</td>
<td>$11,300</td>
<td>2.3%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>4</td>
<td>All</td>
<td>Midsize Car</td>
<td>Midsize Car Premium</td>
<td>2015 NISSAN ALTIMA 4C 4D SEDAN S</td>
<td>$9,200</td>
<td>$9,000</td>
<td>$10,550</td>
<td>2.2%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>5</td>
<td>All</td>
<td>SUV</td>
<td>SUV Midsize</td>
<td>2016 NISSAN ROGUE AWD 4D SUV 2.5L SV</td>
<td>$15,200</td>
<td>$14,900</td>
<td>$15,850</td>
<td>2.0%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>1 Dealer</td>
<td>Dealer Midsize Car</td>
<td>Midsize Car Premium</td>
<td>2015 NISSAN ALTIMA 4C 4D SEDAN S</td>
<td>$9,200</td>
<td>$9,000</td>
<td>$10,550</td>
<td>2.2%</td>
<td>-1.1%</td>
<td></td>
</tr>
<tr>
<td>1 Lease</td>
<td>Lease Luxury Car</td>
<td>Luxury Car Premium</td>
<td>2016 MERCEDES-BENZ C CLASS 4D SEDAN C300 4MATIC</td>
<td>$20,500</td>
<td>$21,000</td>
<td>$24,600</td>
<td>-2.4%</td>
<td>-1.4%</td>
<td></td>
</tr>
<tr>
<td>1 Rental</td>
<td>Rental Compact Car</td>
<td>Compact Car Premium</td>
<td>2017 NISSAN SENTRA 4D SEDAN SV</td>
<td>$10,650</td>
<td>$10,400</td>
<td>$12,000</td>
<td>2.4%</td>
<td>-0.9%</td>
<td></td>
</tr>
</tbody>
</table>
Used Vehicle Sales Plateau

Source: Cox Automotive estimates based on IHS Markit Registrations
Overall dealer sentiment rebounded this quarter according to the CADSI, but the current market index stayed in negative territory with a score of 48.

The improvement from last quarter’s more negative score of 44 was statistically significant. Year-over-year, the current market index was down only one point.

Expectations for the next quarter also rebounded, more than reversing decline in dealer optimism in Q4 of 2018. The increase in expectations was statistically significant from last quarter, but the expectations index remains significantly lower than year-ago levels, when optimism was at an all-time high for the study.

Dealers cited the government shutdown, concerns about tax refunds and auto tariffs, and winter weather as all influencing their sentiment. Market conditions, consumer confidence, and interest rates are the key measurable differences relative to this time last year when peak optimism was based largely on expectations of strong demand fueled by tax reform.

“We’ve seen a turnaround in dealer sentiment and the outlook for the future this quarter compared to the fourth quarter,” said Cox Automotive Chief Economist Jonathan Smoke. “However, gone is the euphoria we saw this time last year as views of new and used sales are lower.”

The top 5 factors holding back the business across all dealers remained the same in Q1 2019 as Q4 2018, but relative positions changed.

Market Conditions held the top spot as the most cited negative factor. Competition moved into second place, pushing Credit Availability for Consumers into third. Expenses moved into the fourth place as Limited Inventory slid to fifth.
Growth of Off-Lease Is Decelerating and Nearing a Peak

Estimated Lease Maturities

<table>
<thead>
<tr>
<th>Year</th>
<th>Million Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>2.2</td>
</tr>
<tr>
<td>2015</td>
<td>2.5</td>
</tr>
<tr>
<td>2016</td>
<td>3.1</td>
</tr>
<tr>
<td>2017</td>
<td>3.5</td>
</tr>
<tr>
<td>2018</td>
<td>3.9</td>
</tr>
<tr>
<td>2019</td>
<td>4.1</td>
</tr>
<tr>
<td>2020</td>
<td>3.9</td>
</tr>
<tr>
<td>2021</td>
<td>3.7</td>
</tr>
<tr>
<td>2022</td>
<td>3.6</td>
</tr>
<tr>
<td>2023</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Source: Cox Automotive
TARIFF ACTIONS & KEY DATES

Ratification of USMCA (Report on April 19)

Section 232 Tariff on Imported Autos and Parts (Details by May 18; 15 days to implement)

China Trade Deal (March 1; TBD)

EU Trade Deal

Japan Trade Deal

UK Trade Deal?
Thank You

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Economic Industry Insights

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