Vehicle Market Insights

Manheim Used Vehicle Value Index Call - April 7, 2020

Jonathan Smoke & Zo Rahim
Special Guests: Zach Hallowell & Ben Flusberg
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<th><strong>Cox Automotive™</strong></th>
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Covid-19 State Impact Varies Per County (Cases per Million)

Data as of April 5, 2020
Cases per million population

Source: CDC
Weekly Initial Claims Hit Record Levels

Source: U.S. Department of Labor
Consumer Sentiment Declined Steeply in March

Morning Consult’s Index of Consumer Sentiment on Monday was down 28% since March 1

ICS Value (7-Day Average)
Retail Trend Estimate - New

DAILY NEW RETAIL % CHG YoY vs SAME DAY OF WEEK

-65.6%
New Vehicle Sales Slide Swiftly In March

Source: BEA
New Vehicle Sales Slide Swiftly In March

% Change Y/Y

-70%
-60%
-50%
-40%
-30%
-20%
-10%
0%
-10%
-20%
-30%
-40%
-50%
-60%
-70%

Fiat  Buick  Porsche  Infiniti  Mitsubishi  Audi  Acura  BMW  Honda  Nissan  Subaru  Cadillac  Lexus  Dodge  Jeep  Volvo  Hyundai  Mazda  Volkswagen  Mercedes-Benz  Alfa Romeo  Chrysler  Chevrolet  Toyota  Land Rover  Jaguar  Genesis  GMC  Lincoln  Ford  Kia  Ram

Source: Motor Intelligence
New Vehicle Sales Slide Swiftly In March

Source: Cox Automotive

% Change Y/Y

-70%
-60%
-50%
-40%
-30%
-20%
-10%
0%
10%
20%
30%
40%
50%
60%
70%

Subcompact Car
Luxury Car
Full-size Car
Hybrid/Alternative Energy Car
Luxury Compact SUV/Crossover
Minivan
Compact Car
Full-Size SUV/Crossover
Entry-level Luxury Car
High-end Luxury Car
Subcompact SUV/Crossover
Sports Car
Mid-size Car
Full-size SUV/Crossover
Luxury Full-size SUV/Crossover
Mid-size Pickup Truck
Luxury Subcompact SUV/Crossover
Full-size Pickup Truck
Van
High Performance Car

Source: Cox Automotive
Retail Trend Estimate - Used

DAILY USED RETAIL % CHG YoY vs SAME DAY OF WEEK

YoY % Chg 2019  YoY % Chg 2020

Source: Cox Automotive
The Step Change to All-Digital

Zach Hallowell
VP, Manheim Digital
ACCESSING MANHEIM INVENTORY

PHYSICAL SALES

MANHEIM.COM

OVE / PRIVATE STORES

DIGITAL BLOCKS

MANHEIM EXPRESS
MANHEIM DIGITAL SNAPSHOT

STATS: MANHEIM DIGITAL MARKETPLACE

150,000
MONTHLY UNIQUE VISITORS TO DIGITAL CHANNELS IN 2019

25%
OF LANES AT MANHEIM SITES ARE DIGITAL IN 2020

52%
OF INVENTORY SOLD TO A DIGITAL BUYER IN 2020

18M+
BIDS IN A DIGITAL CHANNEL IN 2019

2.3M+
VEHICLES SOLD TO A DIGITAL BUYERS IN 2019
BEFORE COVID-19: THE RISE OF DIGITAL

Shift from Physical to Digital Sales

Increased Adoption of Digital Platforms & Mobile Apps

Increased Usage of MMR & Mobile Scans

Source: Manheim/Cox Automotive
BEFORE COVID-19: CLIENT SENTIMENT

80% of dealers have been doing at least some pre-sale research digitally.

3/4 say digital tools make it easier to prepare for the auction and enhances their work.

2/3 say digital tools have a positive impact.

Dealers Expect Growth Across Various Digital Channels

Dealers expect wholesale digital buying to grow over 30% in the next year.

Source: Manheim/Cox Automotive
POST COVID-19: BUYERS AND SELLERS ARE ADAPTING TO DIGITAL ONLY

40% of dealers say that Simulcast has been an excellent replacement

34% of Simulcast buyers since March 16 were first-time buyers on the platform in 2020

“Beginning of a new ERA!!! I like it a lot.”

“We prefer to buy in person if possible, you get a better feel for the inventory, [but] shifting online for now it’s a good thing.”

“Not super happy about it. But at least I can still buy.”

Simulcast Remote Seller Logins

Simulcast Bids

Source: Manheim/Cox Automotive
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
Wholesale Prices Decline In March

Prices in March decreased 1.10% versus February 2020 and were up 4.4% compared to March 2019.
Used Vehicle Values Off Lows

Year-over-year price performance stronger than average

source: Manheim/Cox Automotive
Manheim Index versus Mix & Quality Adjusted New Vehicle Price with 3 ½ year Lag

Used vehicle prices stay above the 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
2020 Spring Bounce Was Short-Lived

Week 11 was the official peak in values

3-Year-Old Model MMR Index by Week

Source: Manheim/Cox Automotive
How does MMR currently work?

MMR represents the wholesale value of distinct Year-Make-Model-Styles (YMMS), adjusted for vehicle attributes like mileage, AutoGrade™ condition and exterior color.

MMR is powered by a non-editorialized, statistical analysis of in-lane and digital wholesale vehicle transactions that are facilitated by Manheim, and it’s updated daily.

MMR uses a dynamic look-back period. MMR starts with transactions from the prior 30 days and extends back further as needed based on recent auction volumes.

MMR is not a simple average. To reflect today’s value rather than a historic average, MMR accounts for upward/downward trend of transaction prices over look-back period.
How does MMR currently work?

**MMR in typical markets**

**[a]** 2019 Weekly Auction Prices vs. MMR

- **Avg Auction Prices**
- **Avg MMR**

In **Spring**, real-time auction prices rise 1-2 weeks before MMR.

In **Fall**, real-time auction prices drop 1-2 weeks before MMR.

**[b]** 2019 Weekly MMR Retention

- **Spring**: MMR Retention above 100% for a few weeks
- **Fall**: MMR Retention below 100% for a few weeks

Source: Manheim
How does MMR currently work?

**MMR in today’s market**

[a] Q1-2020 Daily Auction Prices vs. MMR
- **Spring bounce begins:** real-time auction prices above MMR
- **COVID-19 impact:** real-time auction prices drop precipitously

[b] Q1-2020 Daily MMR Retention
- **Spring bounce begins:** MMR Retention rises above 100%
- **COVID-19 impact:** MMR Retention drops far below 100%

Source: Manheim
Manheim.com links to daily MMR Retention trend


Requires Manheim log-in credentials
Retention Values Ended March Down 0.2% Relative to 2019

Relative to MSRP and fixing the basket of vehicles by what was sold leaves residuals swinging from up to down.
Most major segments saw year-over-year gains in March.

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

Average price for rental risk units sold in March up 7.3% y/y and up 3.0% m/m

Source: Manheim/Cox Automotive
## Distribution of Rental Risk Vehicles

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<th>2018 Q1</th>
<th>2019 Q1</th>
<th>2020 Q1</th>
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<tr>
<td>Number of unique year, make, model, body configurations sold</td>
<td>3,005</td>
<td>3,030</td>
<td>3,390</td>
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<td>Share accounted for top 10 YMMB</td>
<td>13.1%</td>
<td>11.7%</td>
<td>11.8%</td>
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<td>Share accounted for top 25 YMMB</td>
<td>23.3%</td>
<td>22.0%</td>
<td>21.4%</td>
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<tr>
<td>Number of YMMB to reach 50% share</td>
<td>108</td>
<td>114</td>
<td>113</td>
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Average mileage for rental risk units in March was up 1% compared to a year ago and down 12% m/m
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

Source: Manheim/Cox Automotive
Top selling vehicles in March at Manheim saw accelerating depreciation rates in the last 30 days (March 5 – April 4) with top rental vehicle declining the most. Prices year-over-year saw mostly higher than normal depreciation.
Sales Impact Varies by DMA As Evidenced By Unique Credit Apps
Appendix
Weekly Price Trend More Severe For Non-Luxury

Stronger appreciation turned into stronger depreciation

Non-Luxury 3-Year-Old Model MMR Index by Week

Source: Manheim/Cox Automotive
Weekly Price Trend Less Severe For Luxury

Luxury vehicles have outperformed by not declining as much so far

Luxury 3-Year-Old Model MMR Index by Week

Source: Manheim/Cox Automotive
One-year-old vehicle prices were very stable throughout most of 2019 but have had a rough March.
Luxury prices in March were up 6.4% compared to March 2019, while non-luxury prices increased 2.8%.
Electric Car Prices Improve In March

Electric car prices in March were up 22.8% compared to March 2019.
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**

- CAR: 50%
- PICKUP: 19%
- SUV: 26%
- VAN: 5%

**Manheim Sales by Category**

- CAR: 45%
- PICKUP: 39%
- SUV: 11%
- VAN: 5%
Thank You

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Economic Industry Insights

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