



Q4 Manheim Used Vehicle Value Index Call

January 9, 2023

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Presenters

Mark Schirmer, Director, Corporate Communications

Jonathan Smoke, Chief Economist

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The Power of Cox Automotive

Harnessing the power of connected data for game-changing results



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CAPITAL

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NEW
TECHNOLOGIES**

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LIVE MARKET VIEW

VinSolutions

 xtime

DRIVEQ
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Jonathan Smoke

Chief Economist

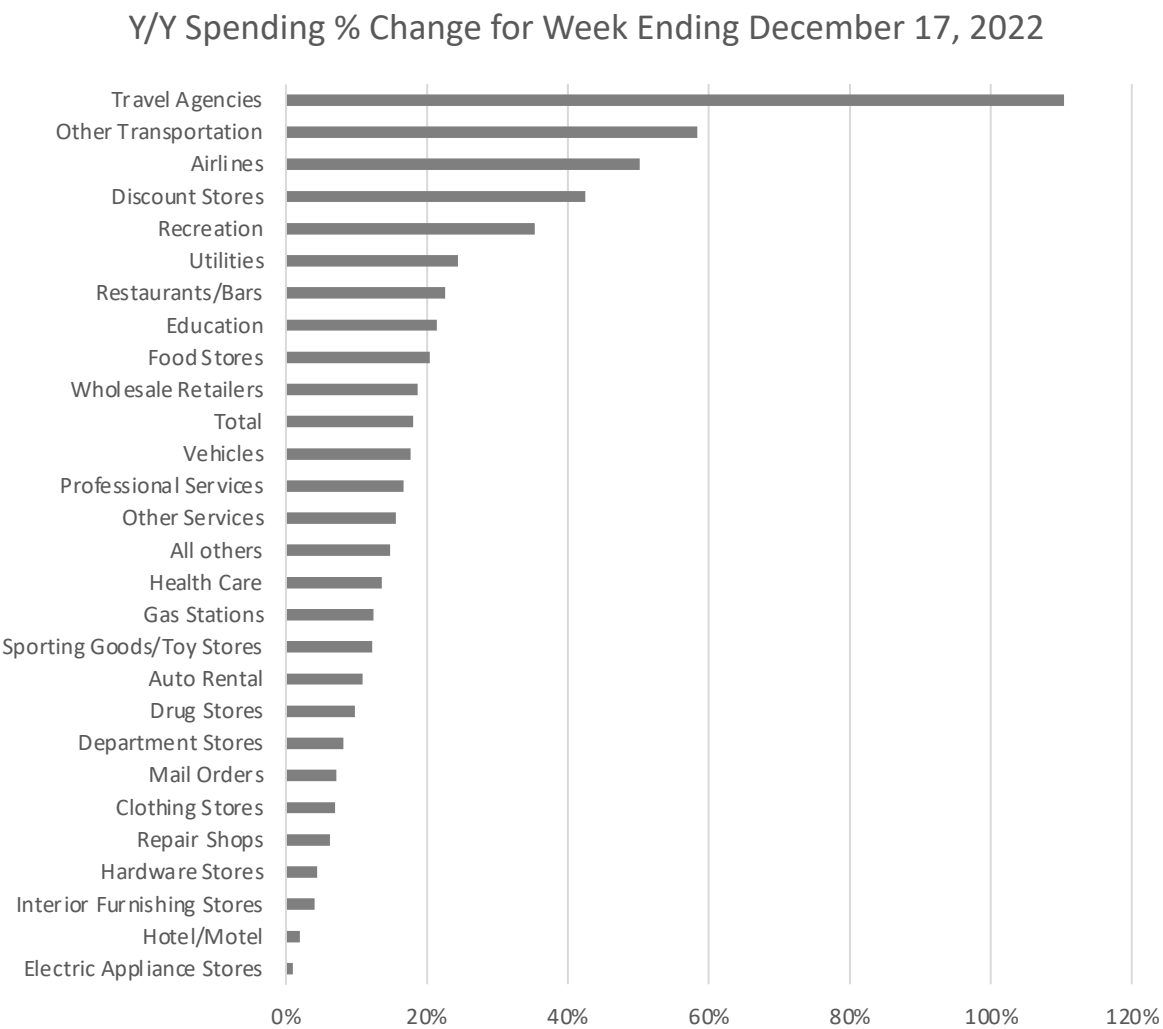
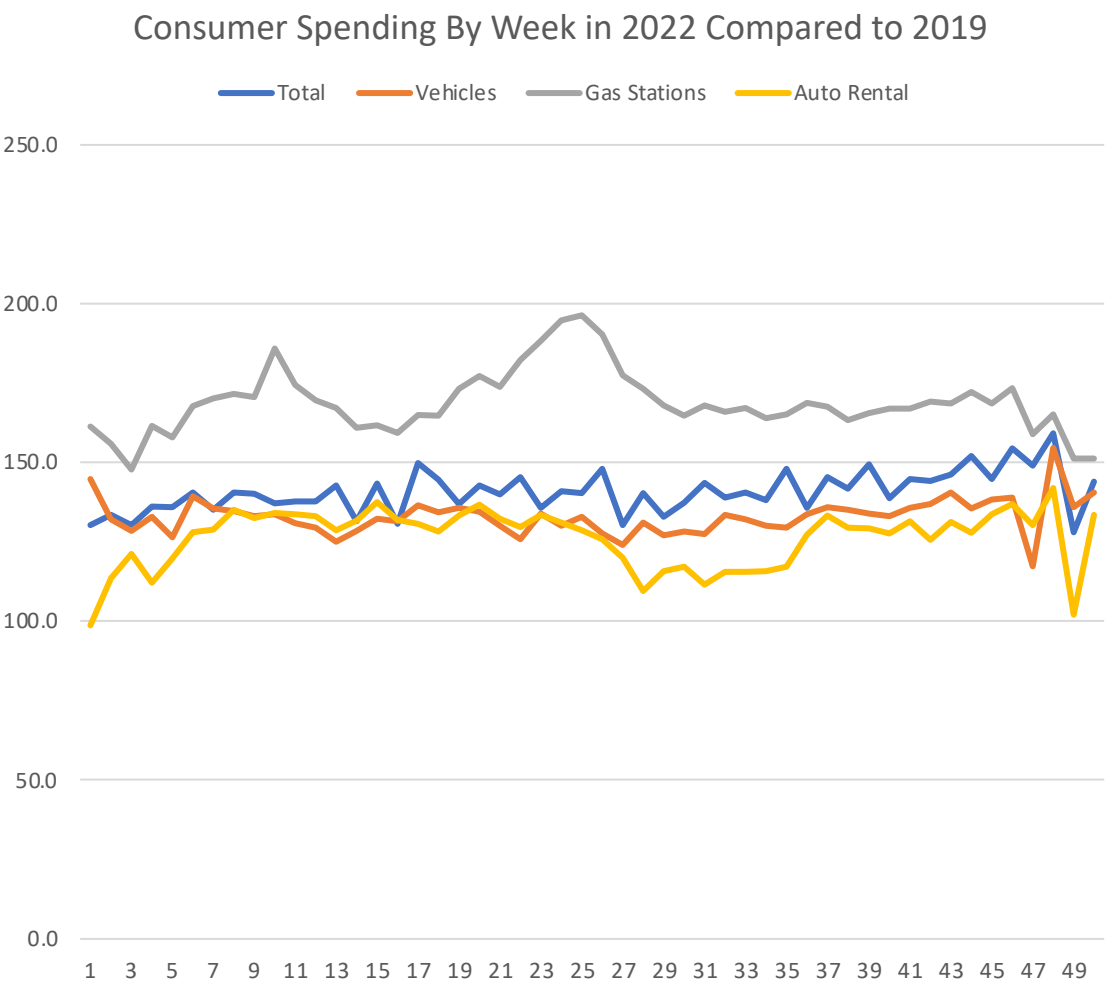
 @smokeoncars

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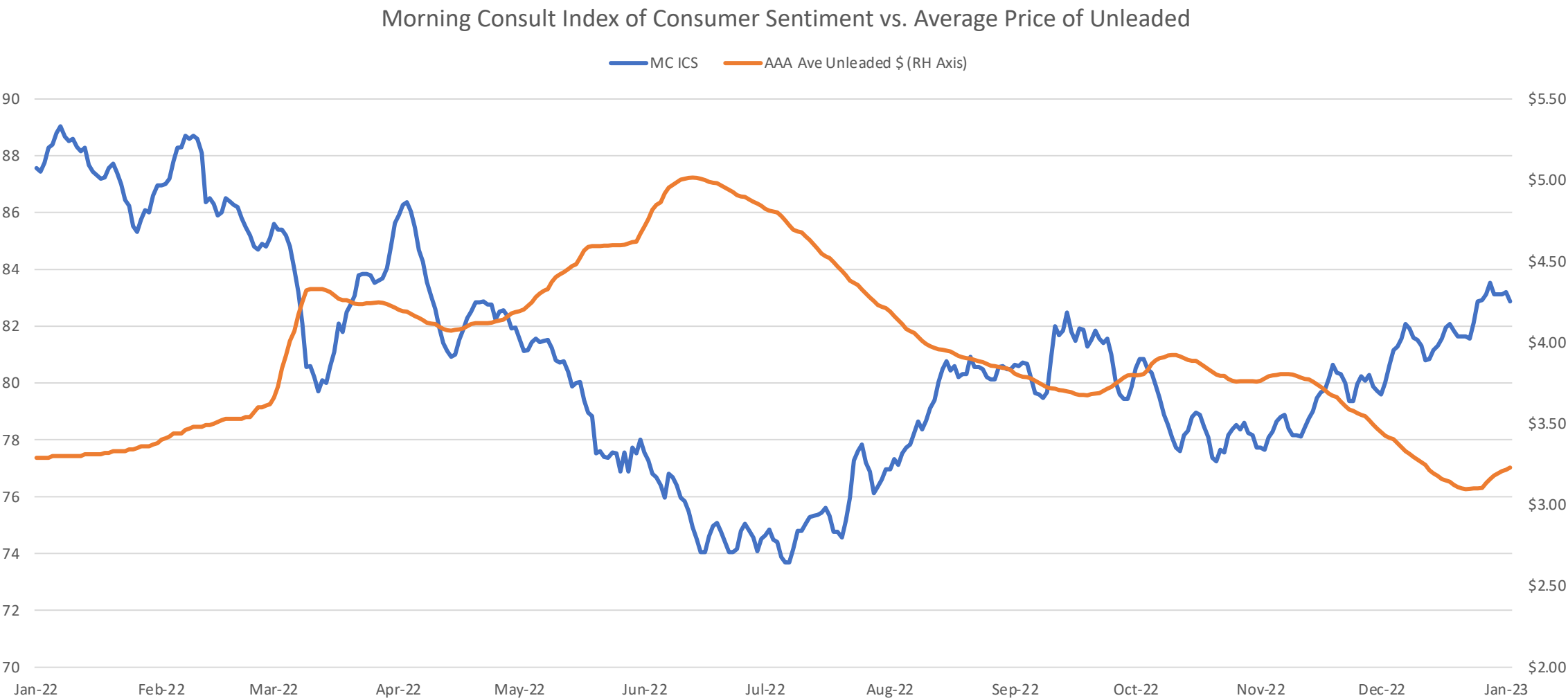
Consumer Spending Remains Strong

Total spending in 2022 was up 18% y/y in latest data and showing little evidence of pullback in total spending

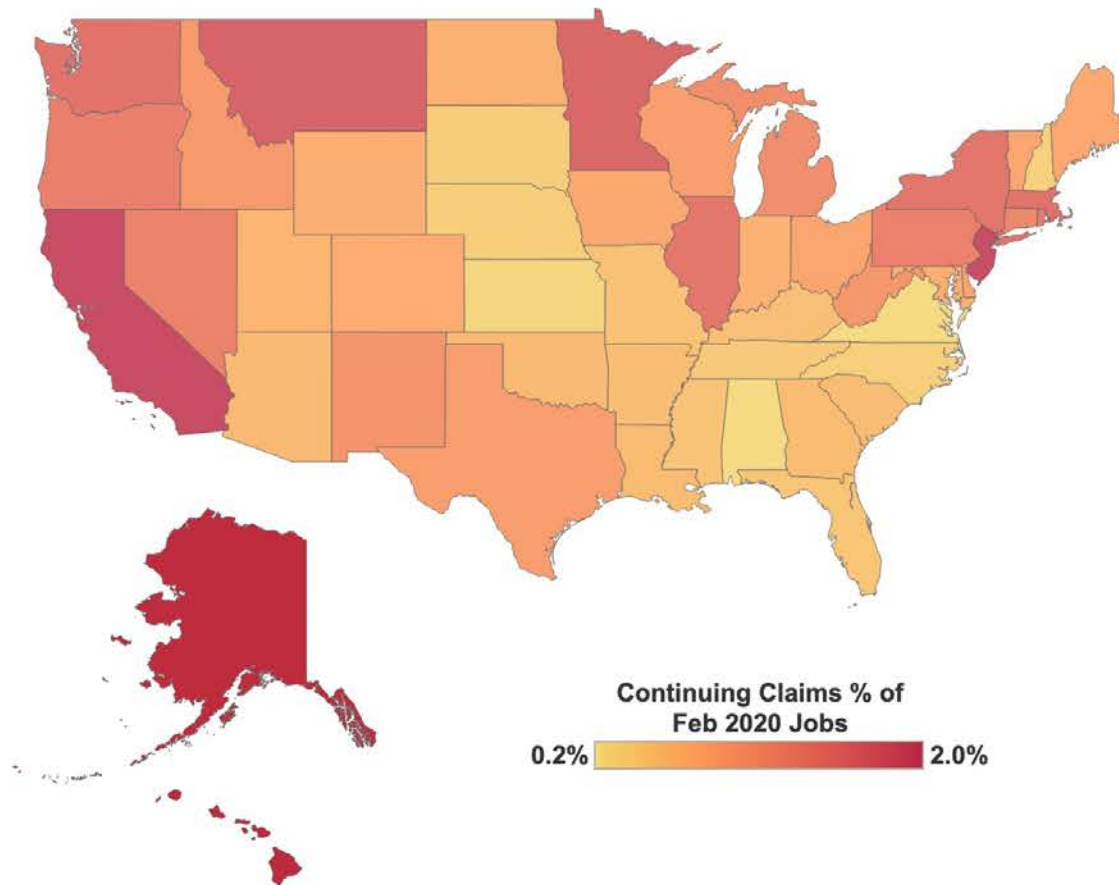
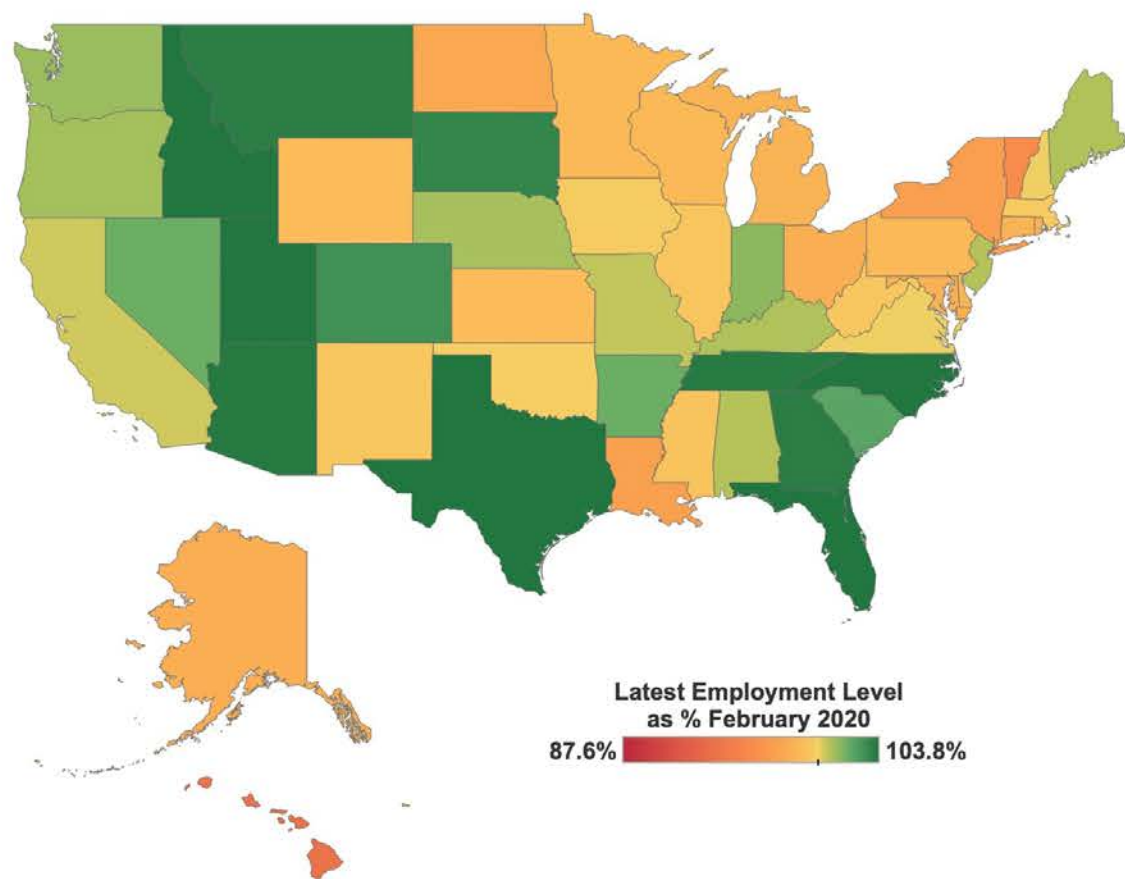


Consumer Sentiment Improving Again

The Index of Consumer Sentiment increased 2.6% in November and 4.3% in December



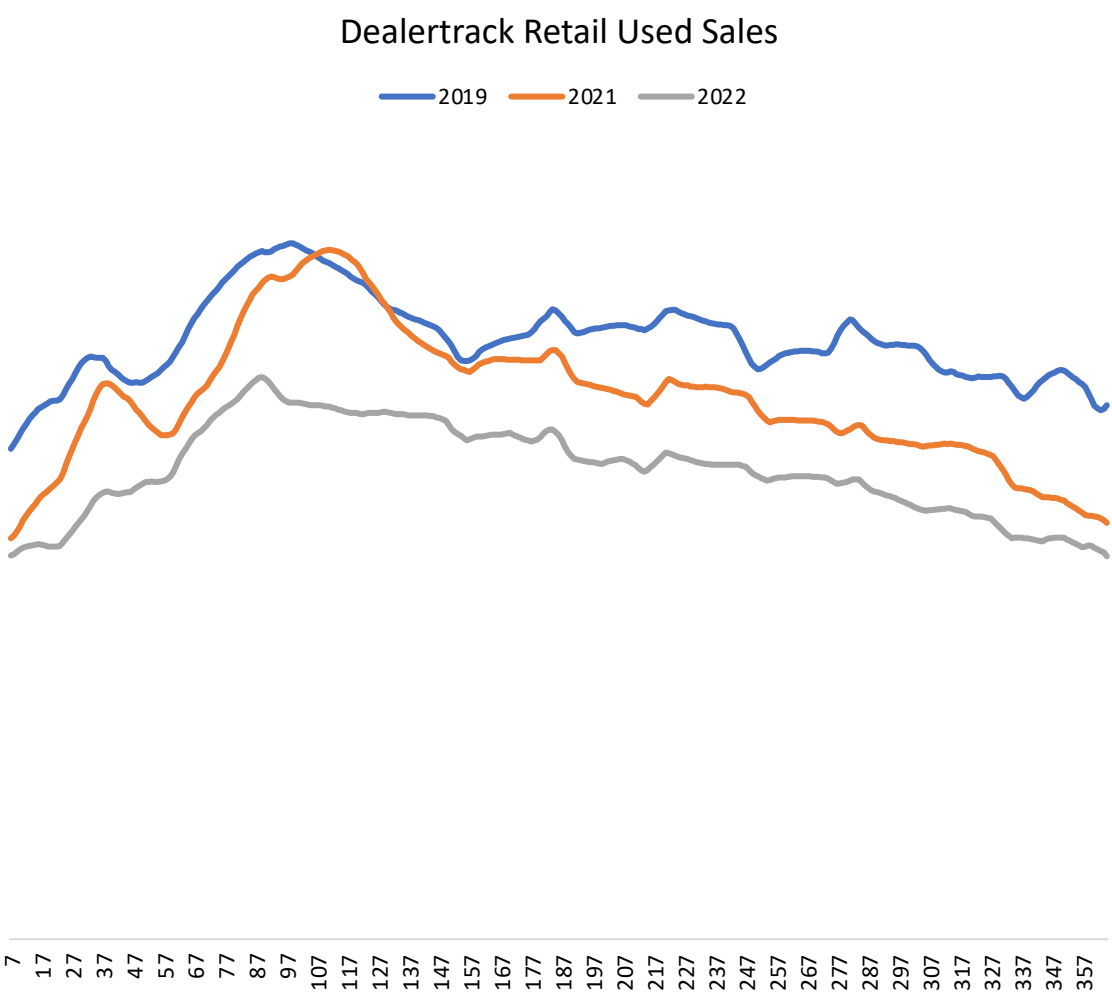
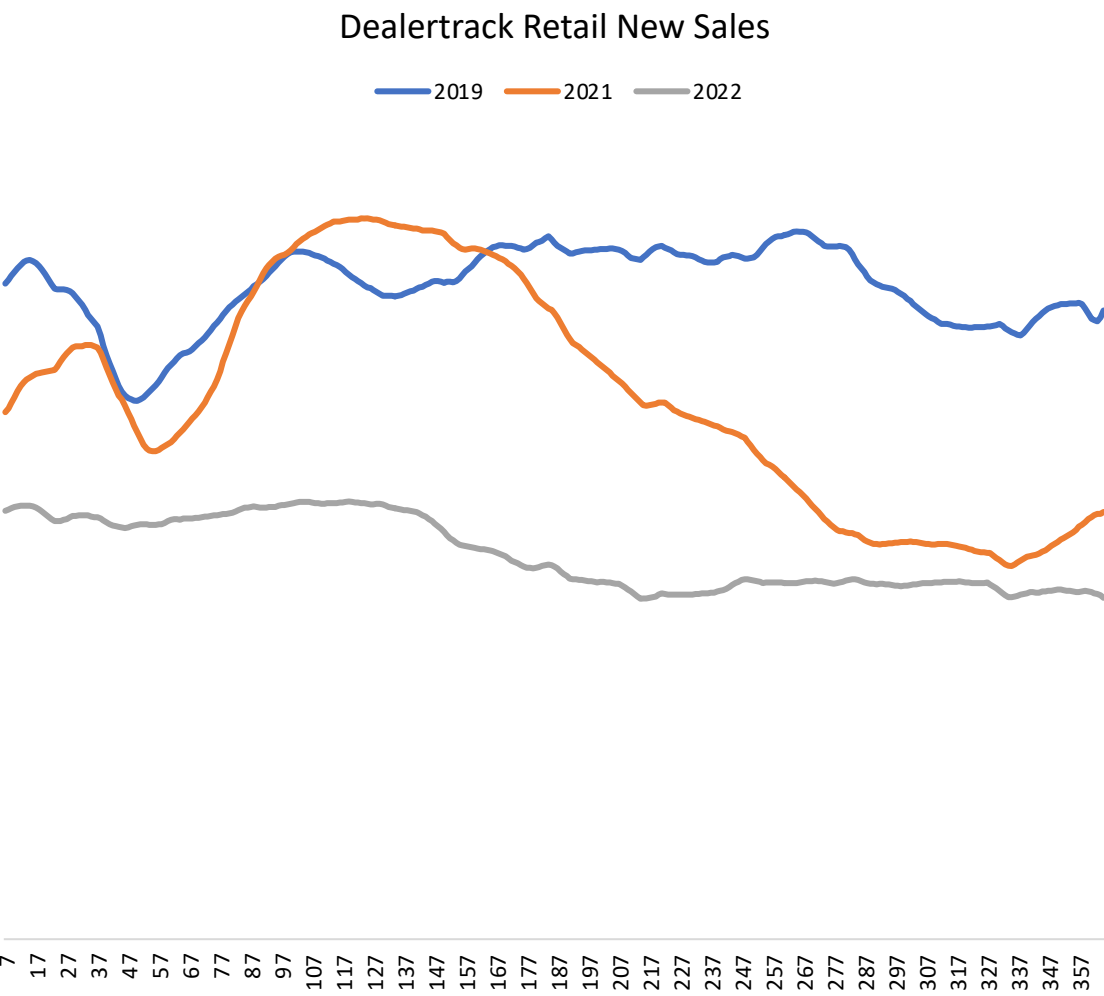
Continuing Claims at 1.71 Million Nationally



Note: Latest Employment Numbers for November 2022; Continuing Claims Unemployment Data for Week Ending December 10

Retail Vehicle Sales Estimates

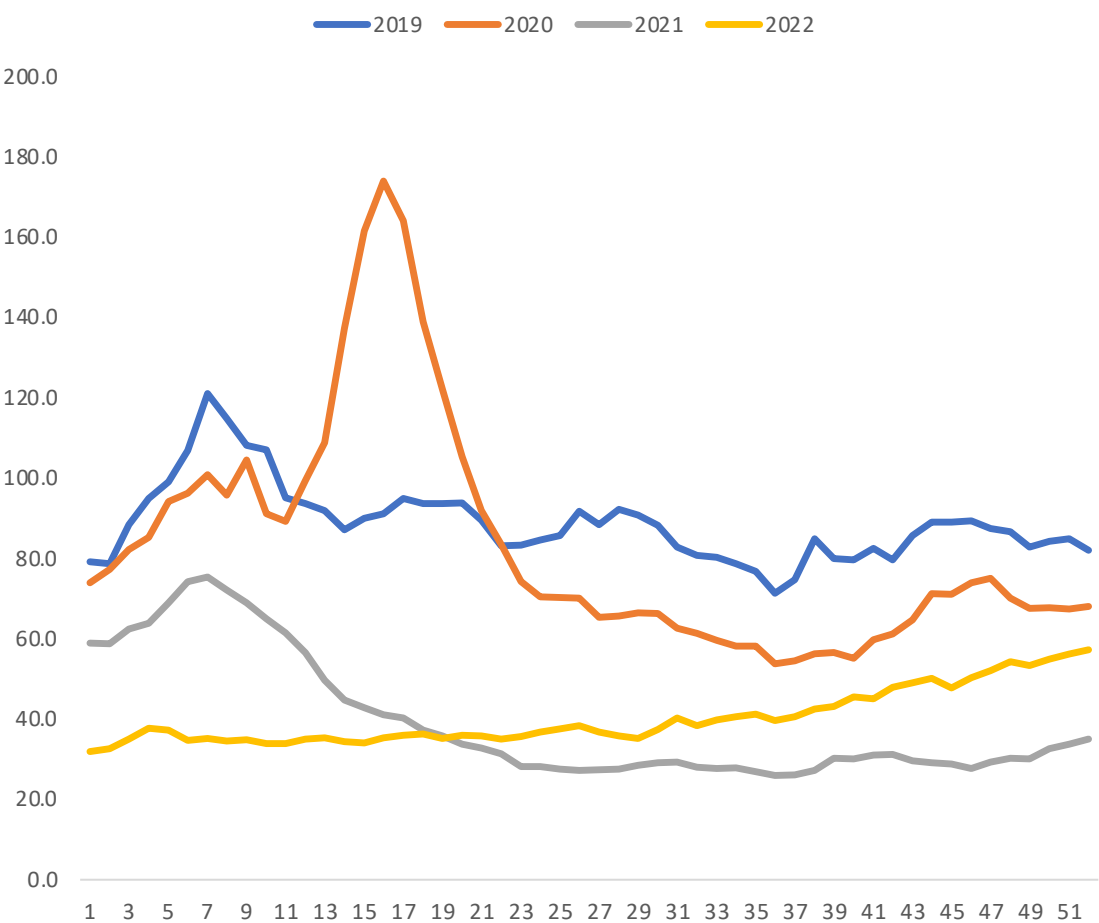
The holidays did not deliver the typical uplift in new retail sales, which were down 20% y/y the final week of the year



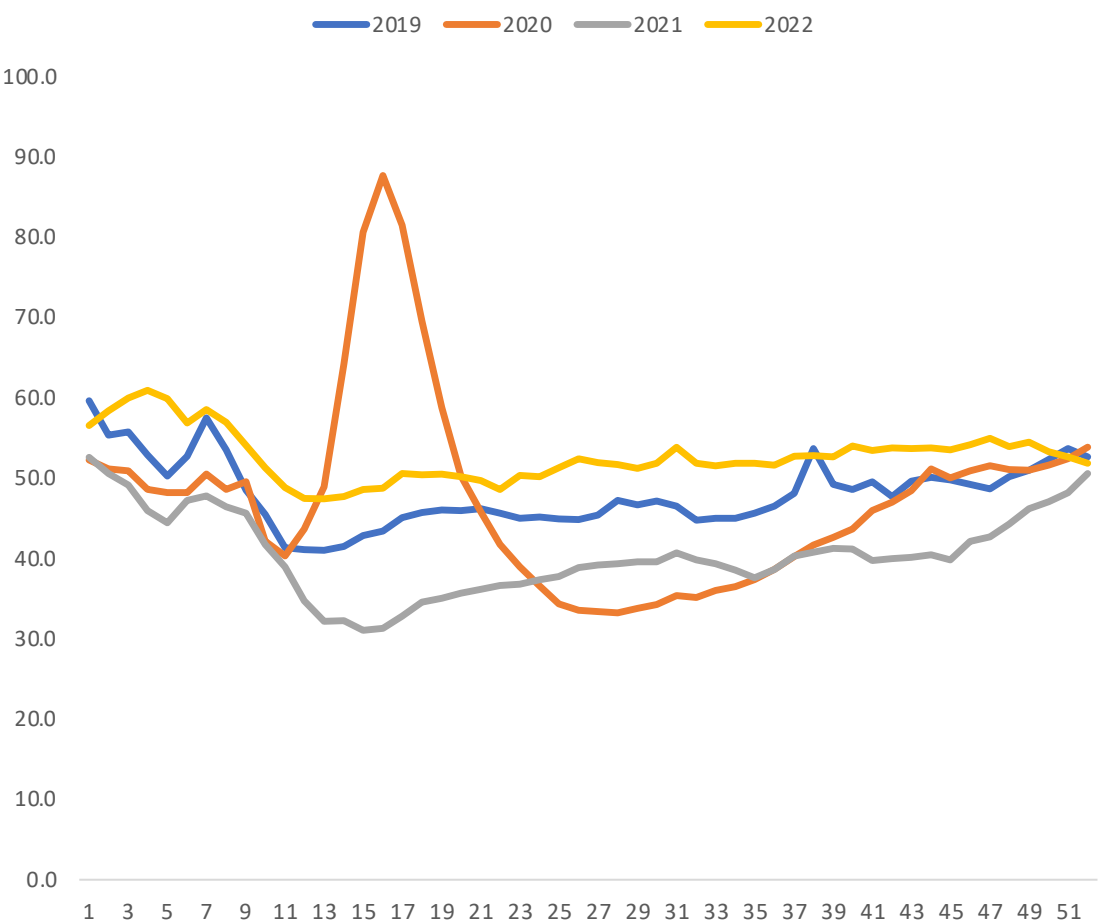
Retail Supply Improving in New; Normal in Used

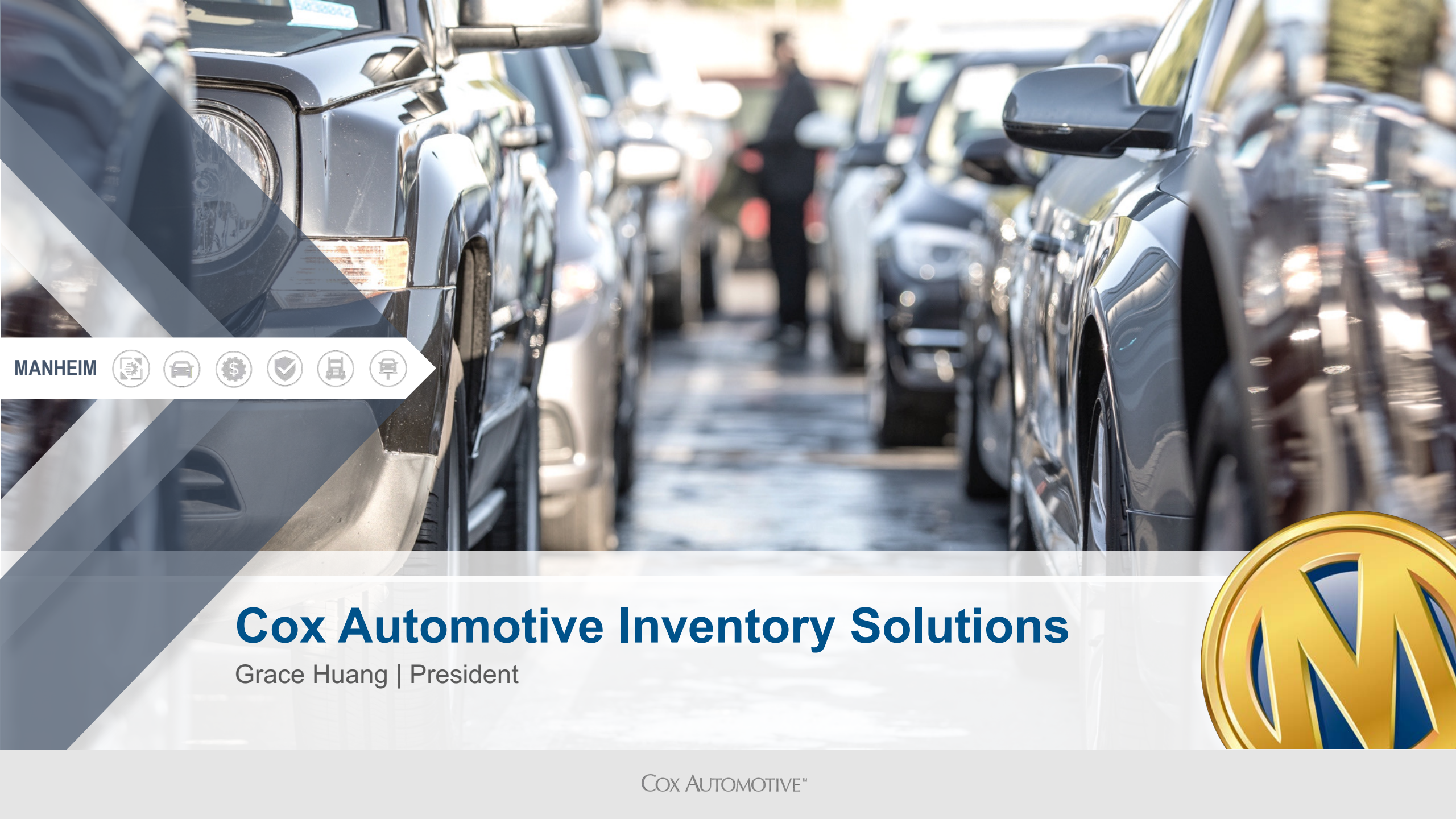
New supply ended the year 22 days higher and up 3 days from Nov; used supply up 1 day y/y and down 2 days from Nov

New Days' Supply



Used Days' Supply





MANHEIM



Cox Automotive Inventory Solutions

Grace Huang | President



***Manheim** is the world's largest wholesale vehicle marketplace*

Industry Experience

77+
Years

Network

111
Physical,
Digital, Mobile
Sites

Land

6,500+
Acres

Workforce

11,000+

Population

84%
within 100
miles of a
Manheim site

Vehicles Handled

5M

Annual Revenue

\$2.98B

Our Business is *Evolving*



➤ Our Key Focus Areas

Investing in Vehicle Information, AI



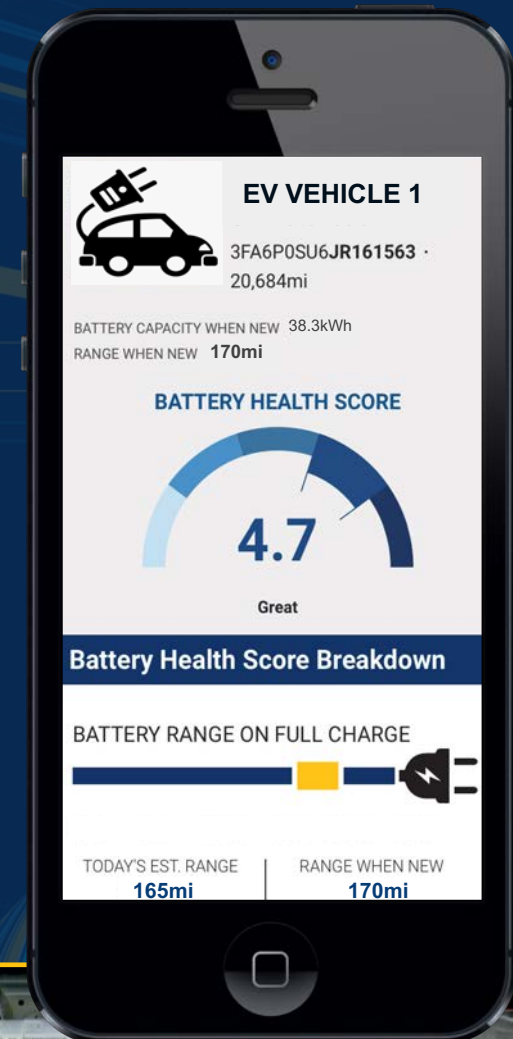
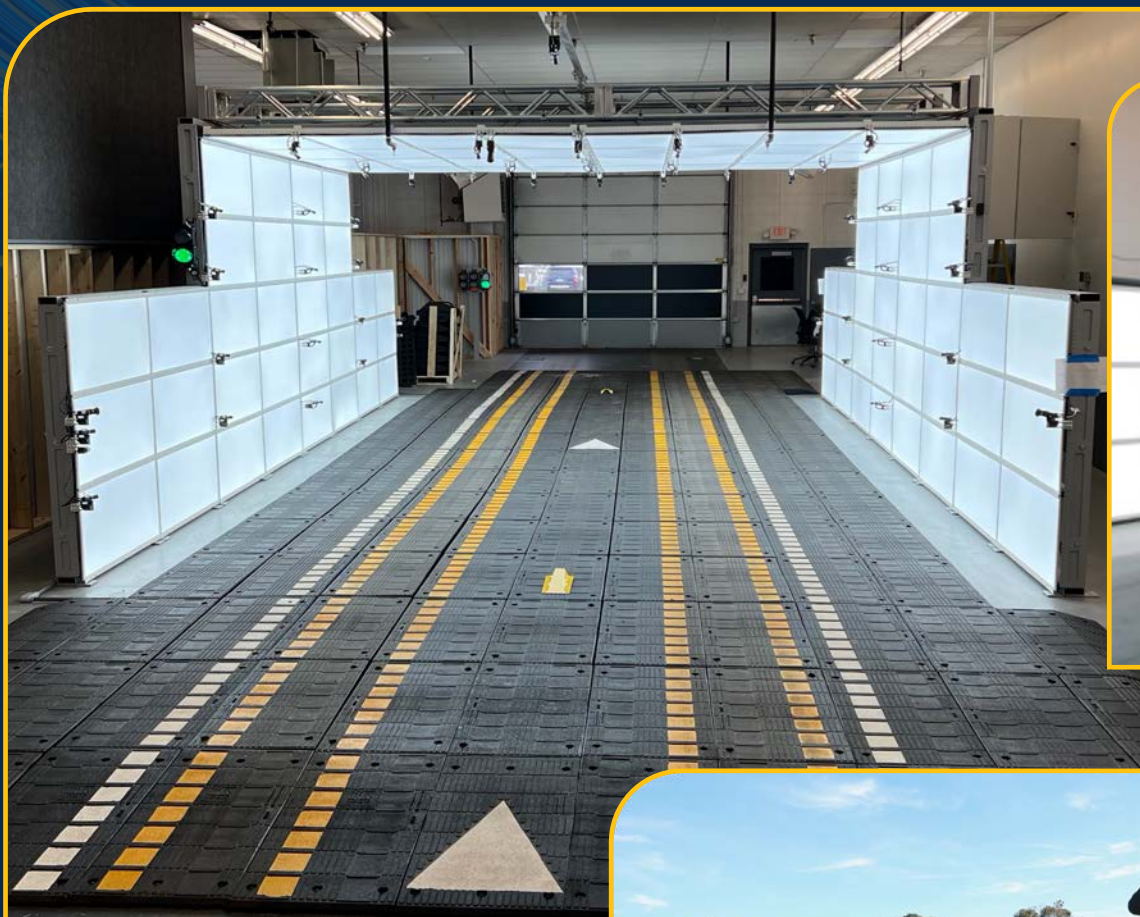
Delivering Actionable Data



Transforming Automotive Logistics



> Vehicle Information Is Vital



Actionable Data for Decision Making

UPSIDETM
by COX AUTOMOTIVE

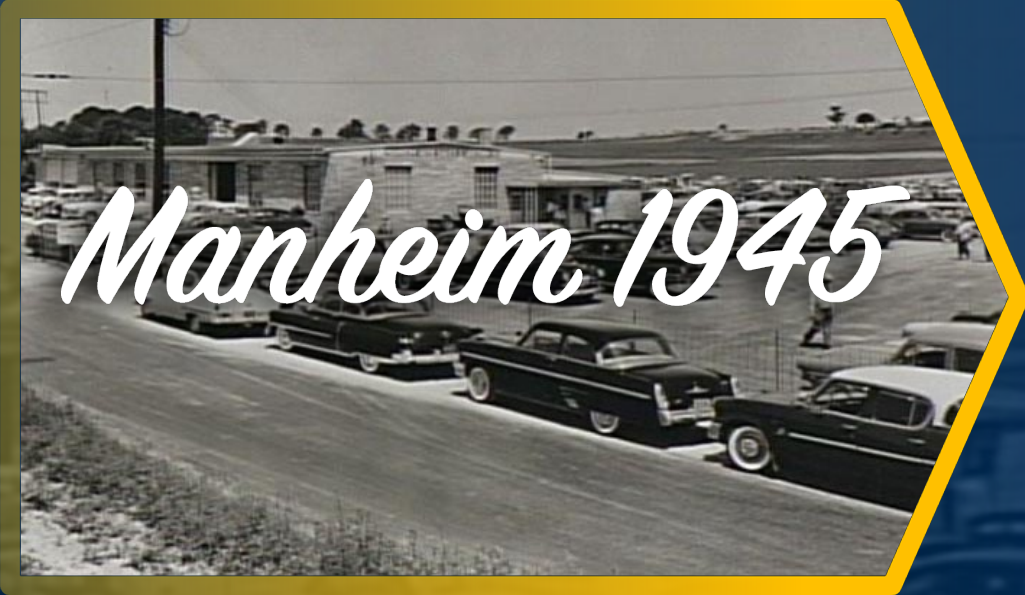
vAuto[®] / ProfitTime[®]GPS

vAuto[®] / Stockwave[®]
WHOLESALE SOURCING

➤ Transportation and Logistics Becoming More Integral

- *Business Intelligence and Analytics for Risk Management*
- *Better Vehicle Tracking*
- *Machine Learning for Rate and Capacity Prediction*







Chris Frey

Senior Manager, Economic and Industry Insights

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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

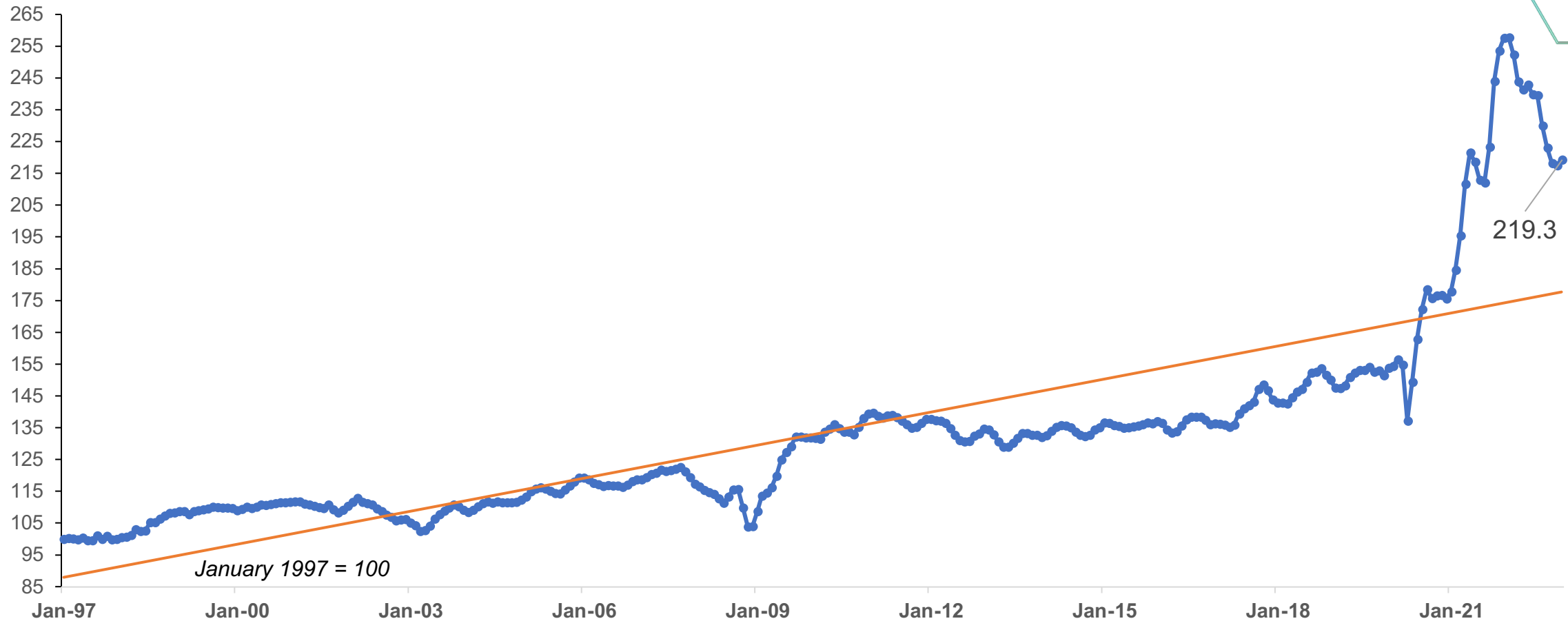
Steps

1. All Manheim U.S. sales
2. Classify by market segment
3. Account for differences in mileage
4. Weight to provide smoother segment mix
5. Seasonally adjust



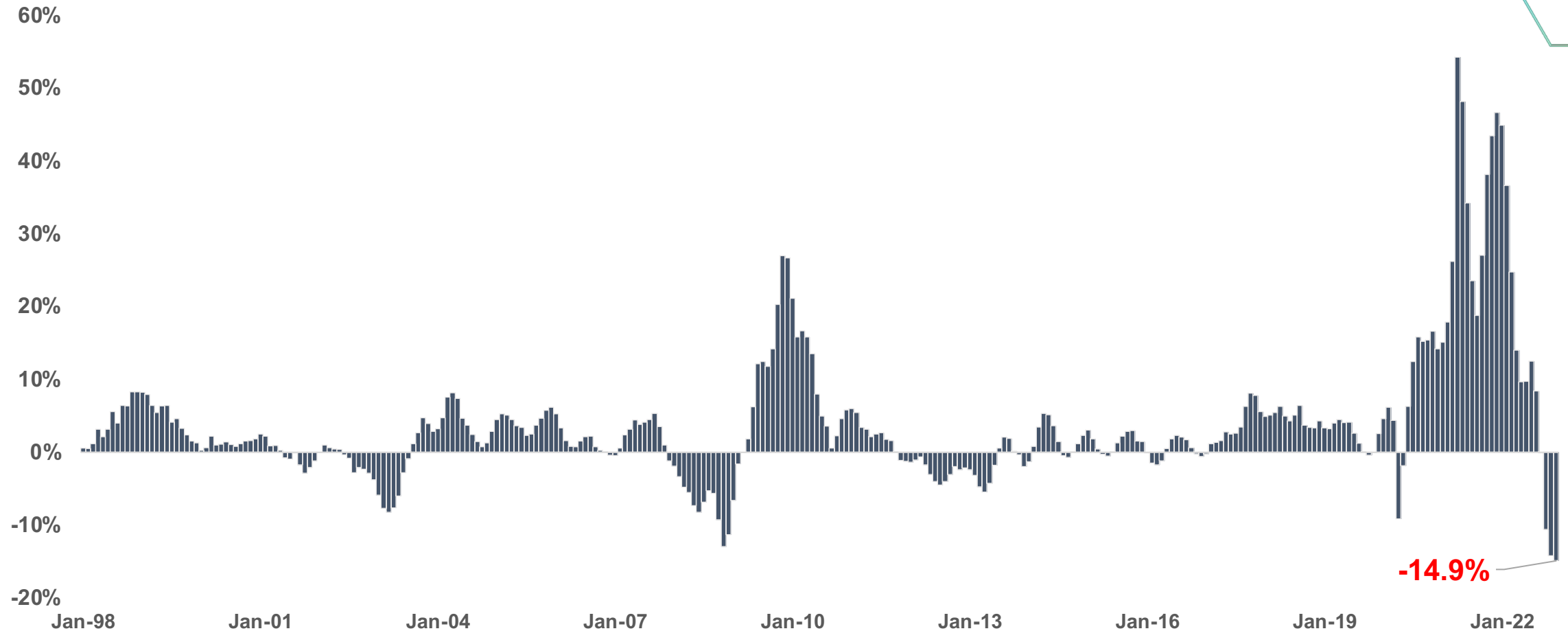
Wholesale Vehicle Values Saw Largest Annual Decrease in History in December

Prices in December increased 0.8% from November and were down 14.9% compared to December 2021.



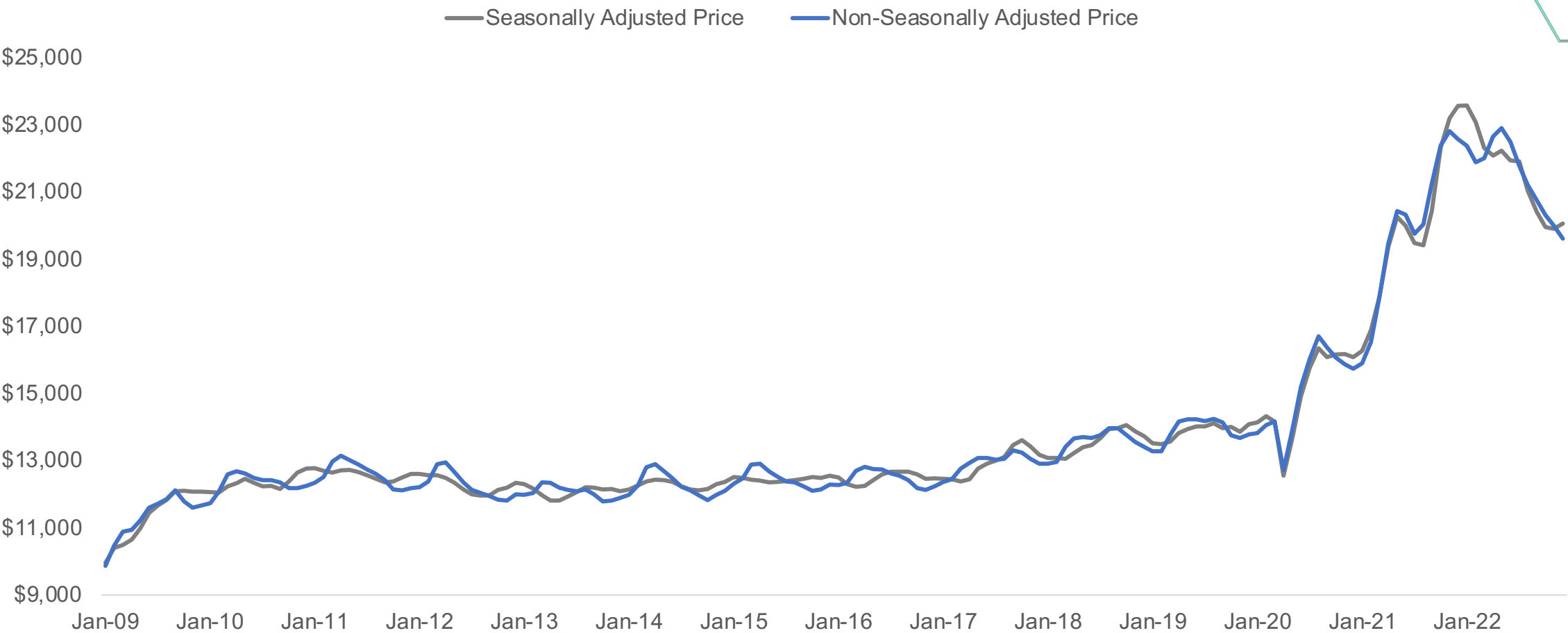
Year-Over-Year Performance Giving Back Large Gains from 2020-21

Year-over-year price performance turned negative in September and has accelerated since.



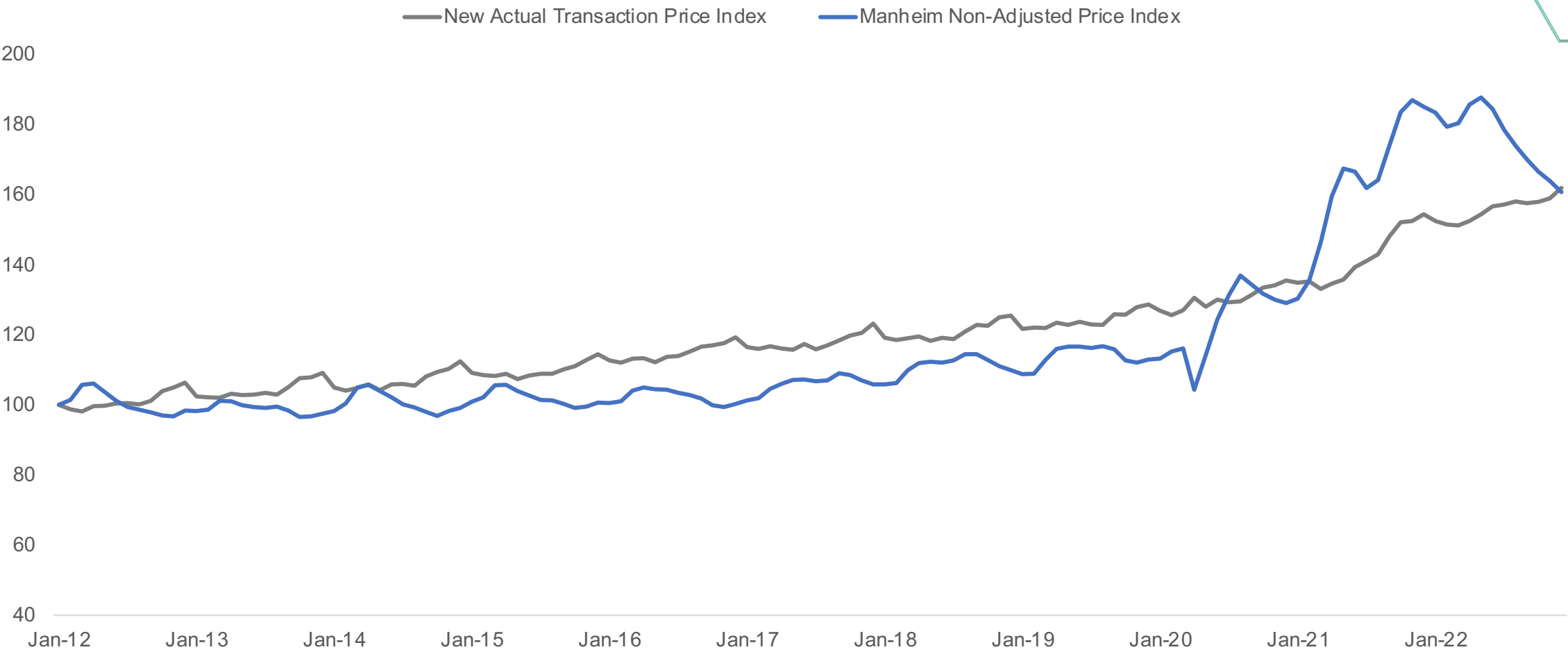
Seasonal Adjustment Less Influential Since July

Both series moved lower through Q4, though Adjusted Price ticked up in November and December.



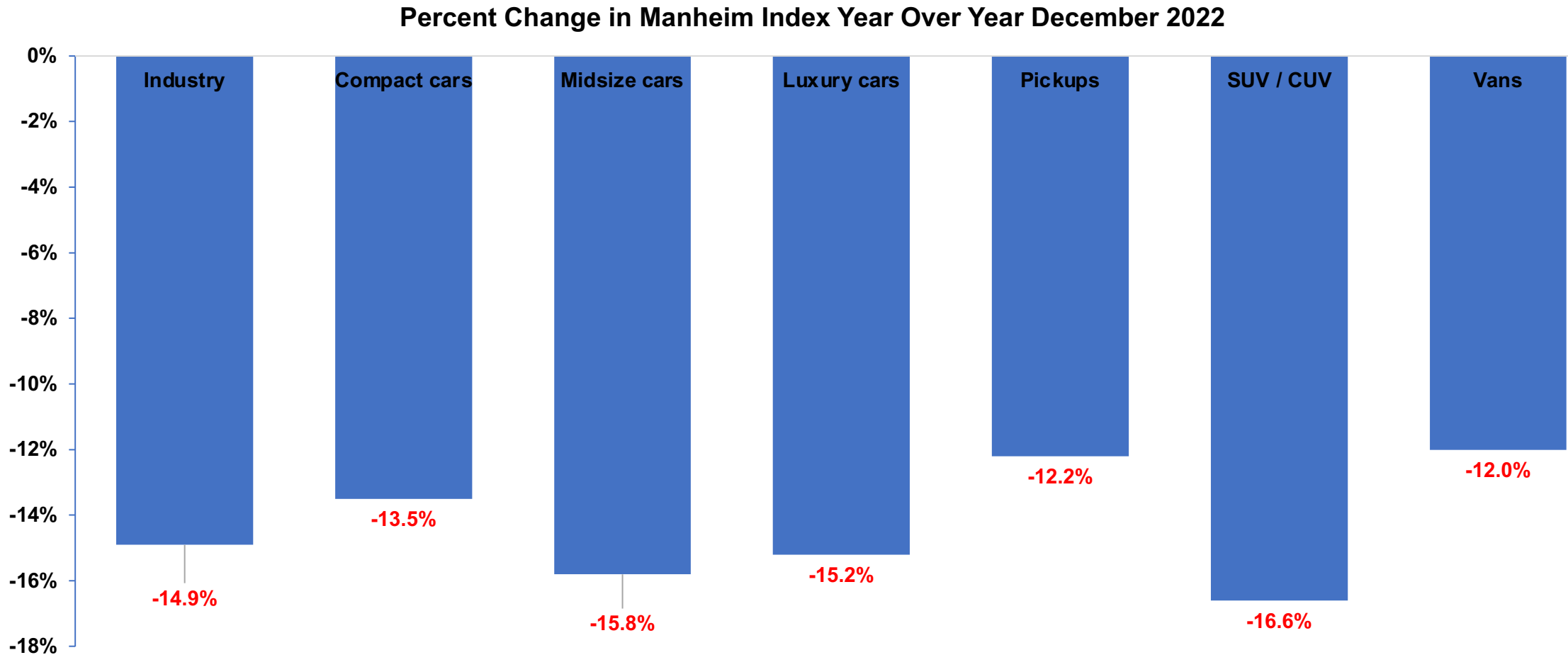
Wholesale Used Vehicle Versus New-Vehicle Index Prices

Wholesale prices kept moving lower, while new-vehicle prices kept moving higher during Q4 closing the gap.



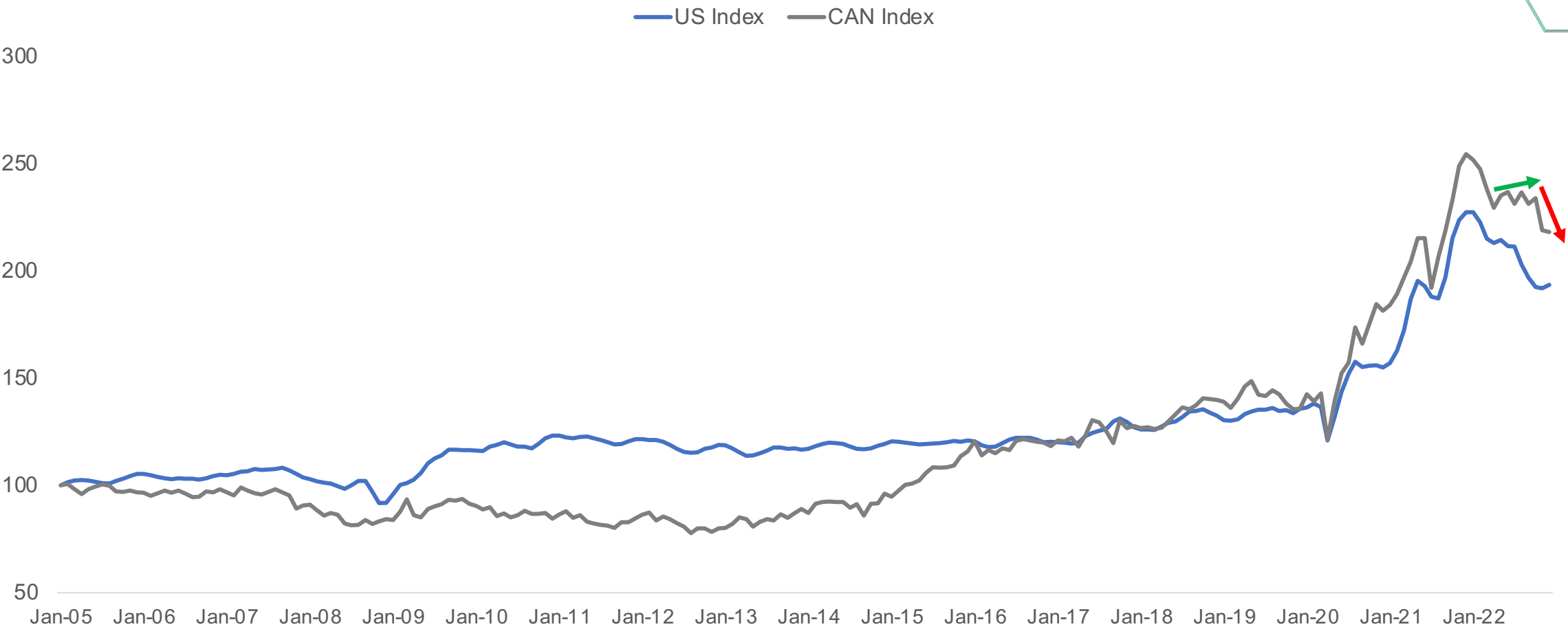
Year-Over-Year Performance Declined in All Segments Compared to 2021

Work-related and Price-sensitive units fared best, compared to the overall industry.



Wholesale Performance, U.S. Versus Canada

Canadian Index strength was highest in October 2022; gap has since closed to 25 points in December.





Jeremy Robb

Senior Director, Economic & Industry Insights, Cox
Automotive

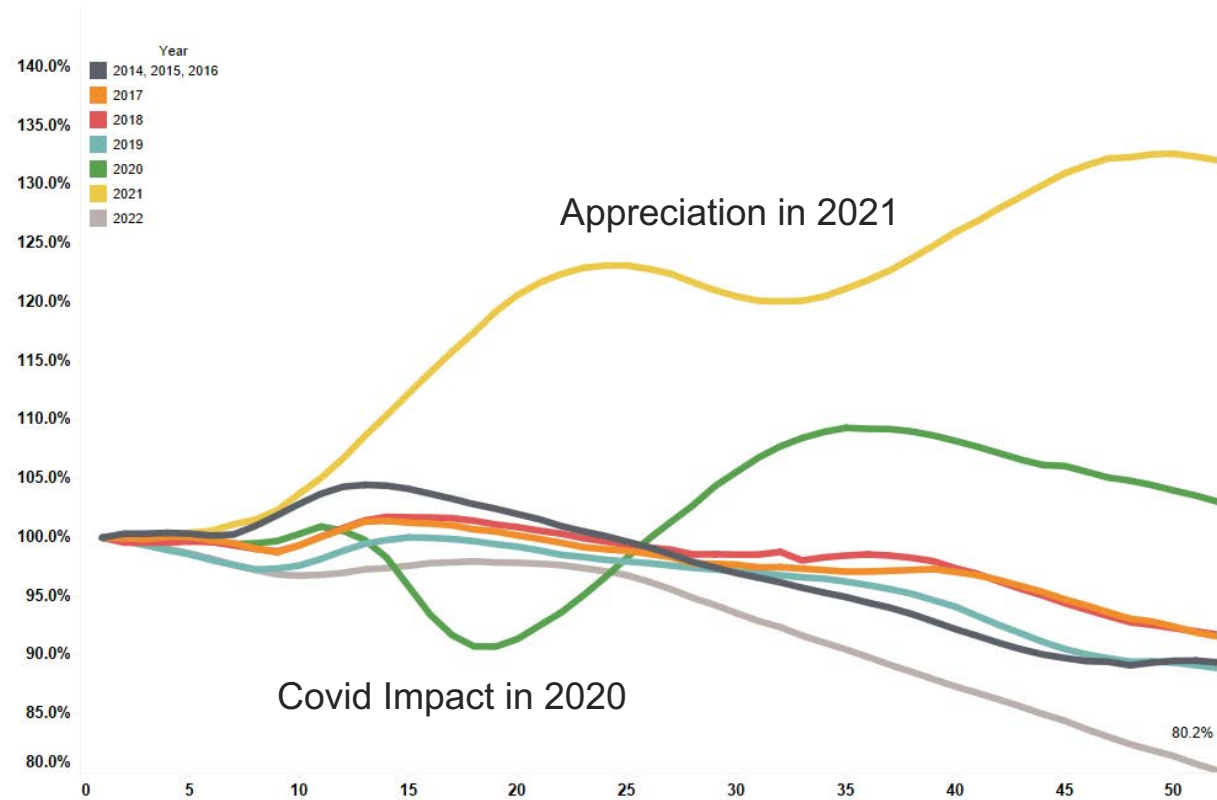
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Overall Wholesale Depreciation Trends Remained Above Average

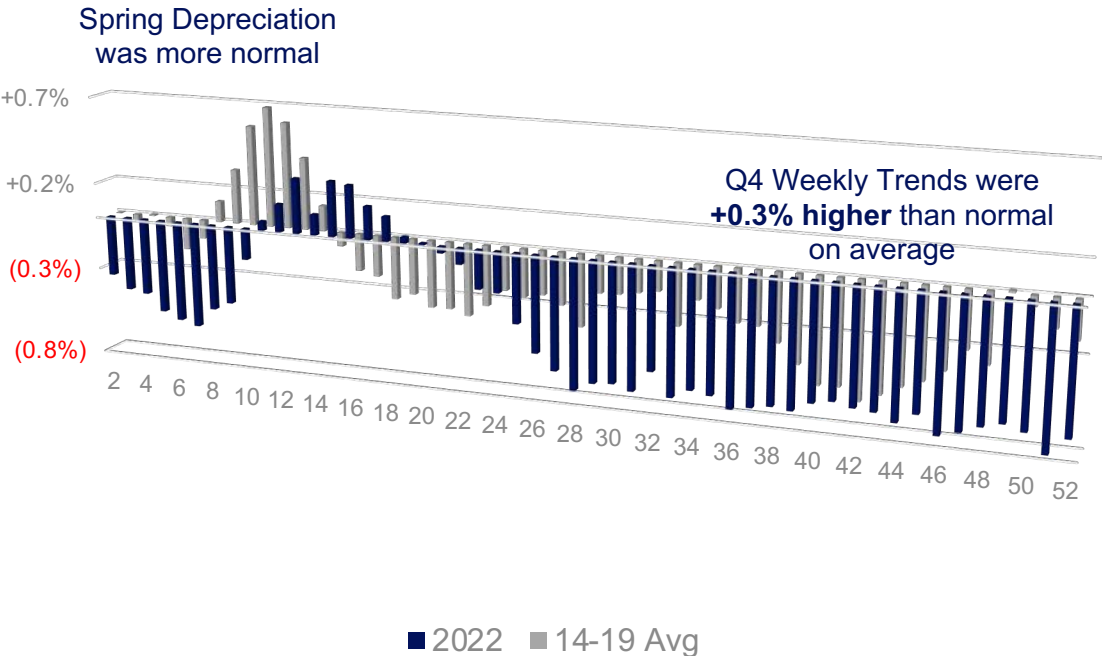
Weekly declines in Resale Value have been 30 basis points higher than normal in Q4: Overall MMR Index ended at 80.2%

Overall MMR Index Trends (All Model Years)



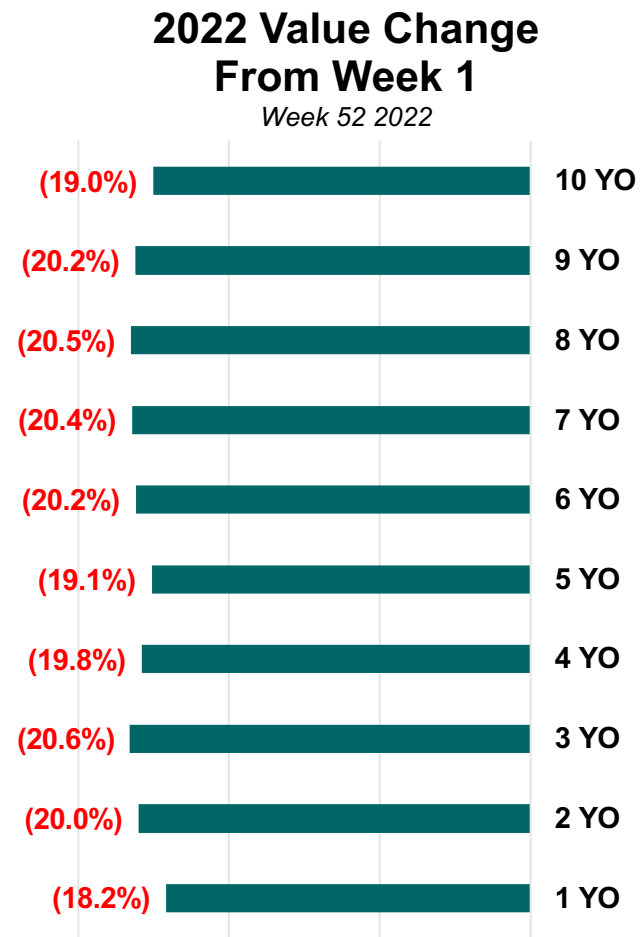
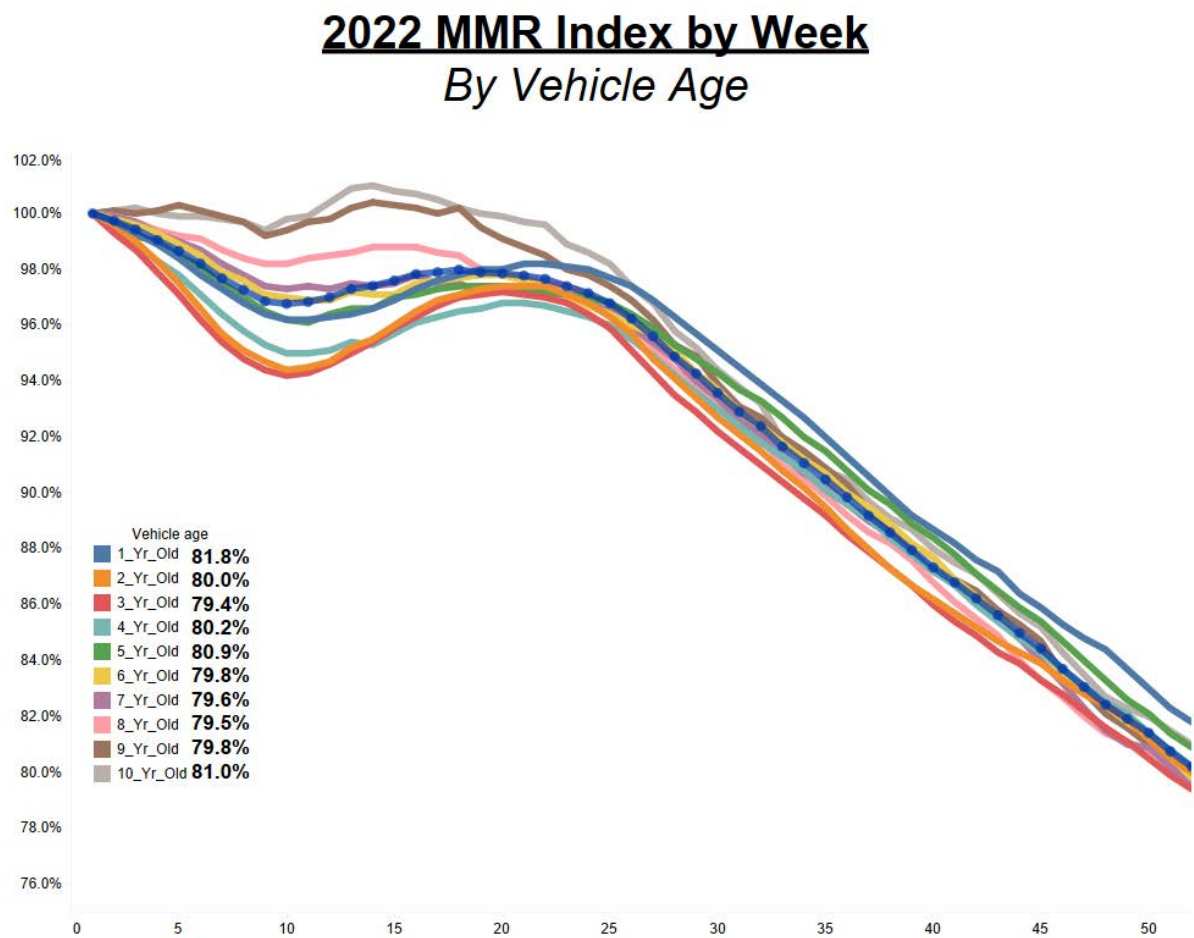
Resale Values continued to show meaningful declines in Q4

Weekly Change in Resale Value All Model Years



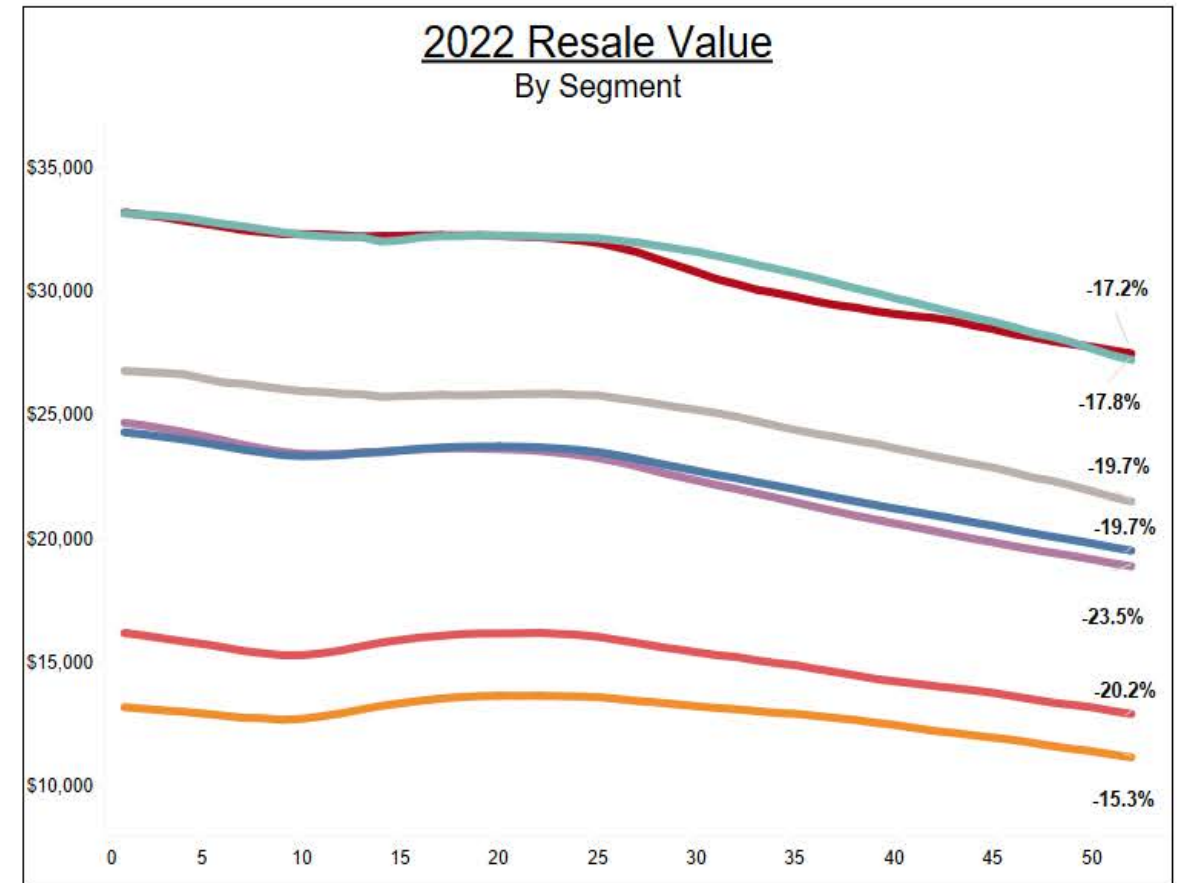
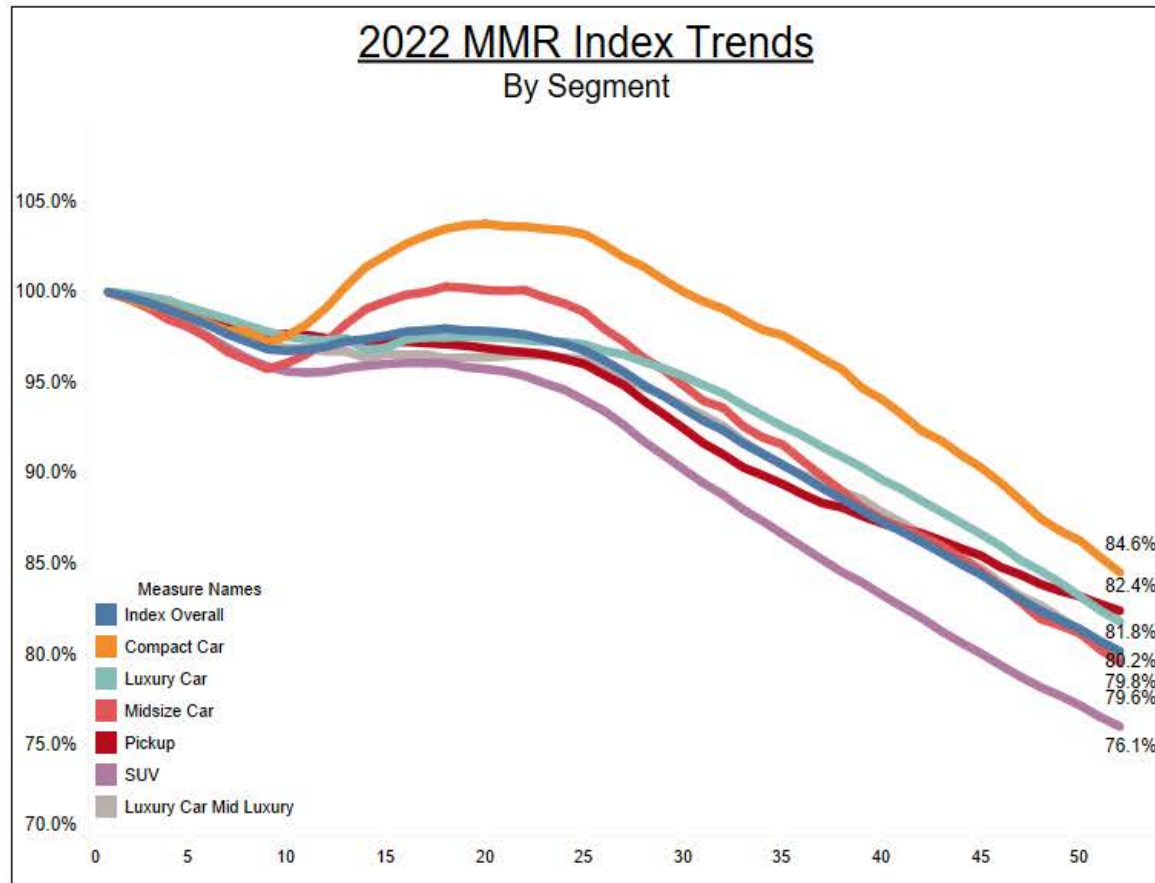
Consistent 2022 Depreciation Patterns in Q4 Across All Age Brackets

All age groups continued to decline over the quarter, dropping by 7.1% in Q4 alone



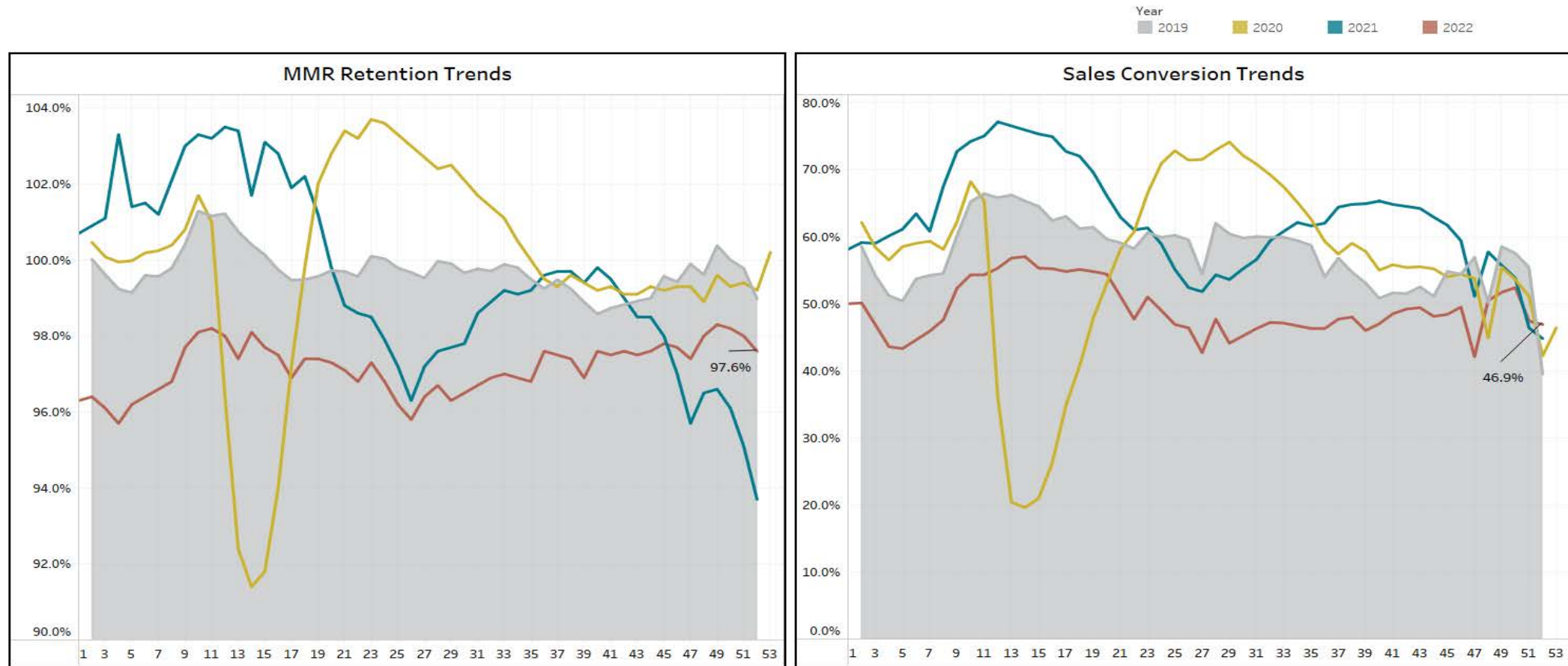
2022 Overall Model Year MMR Trends by Segment

In wholesale depreciation patterns, Compact Cars outperformed SUVs by almost 9 points in 2022



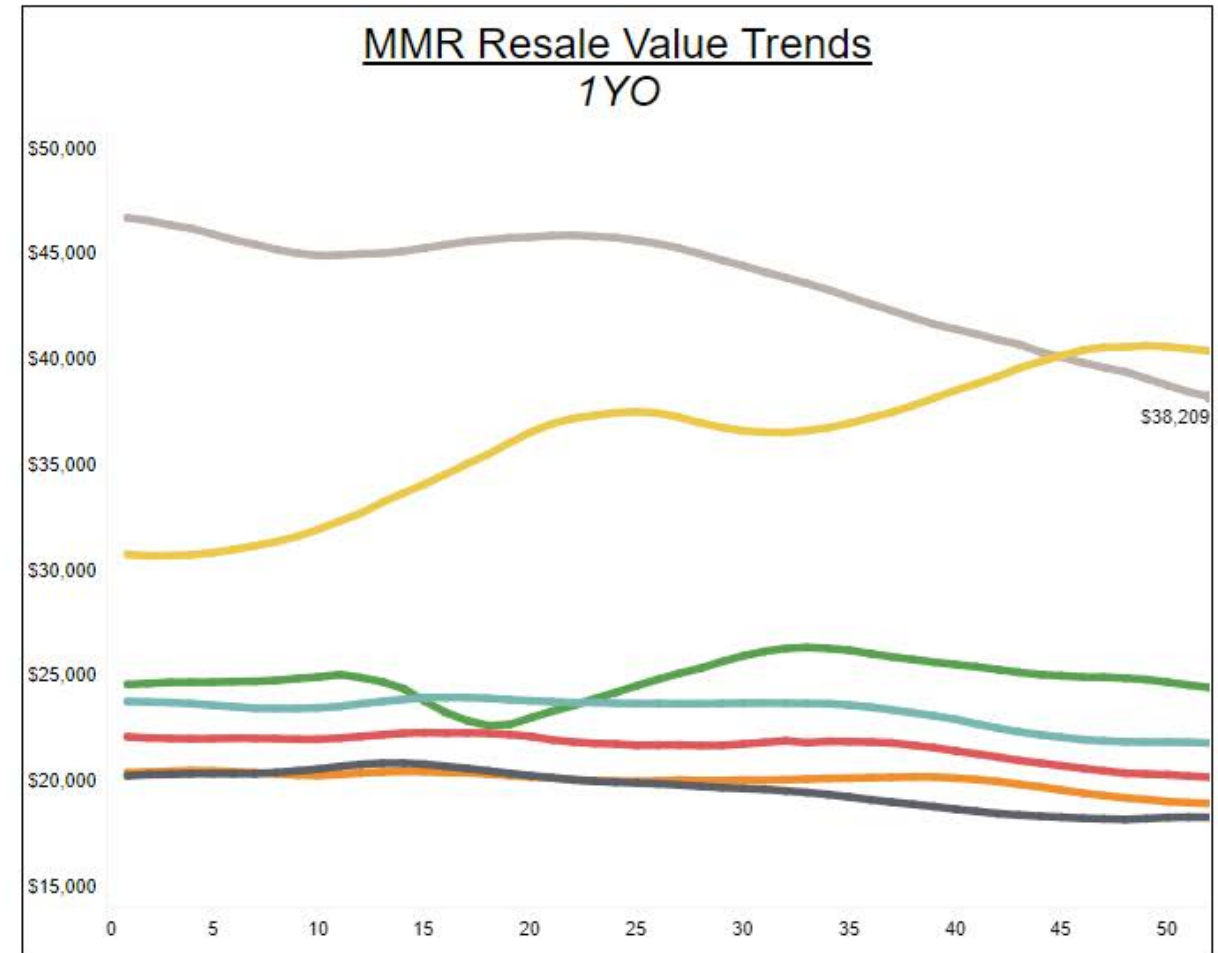
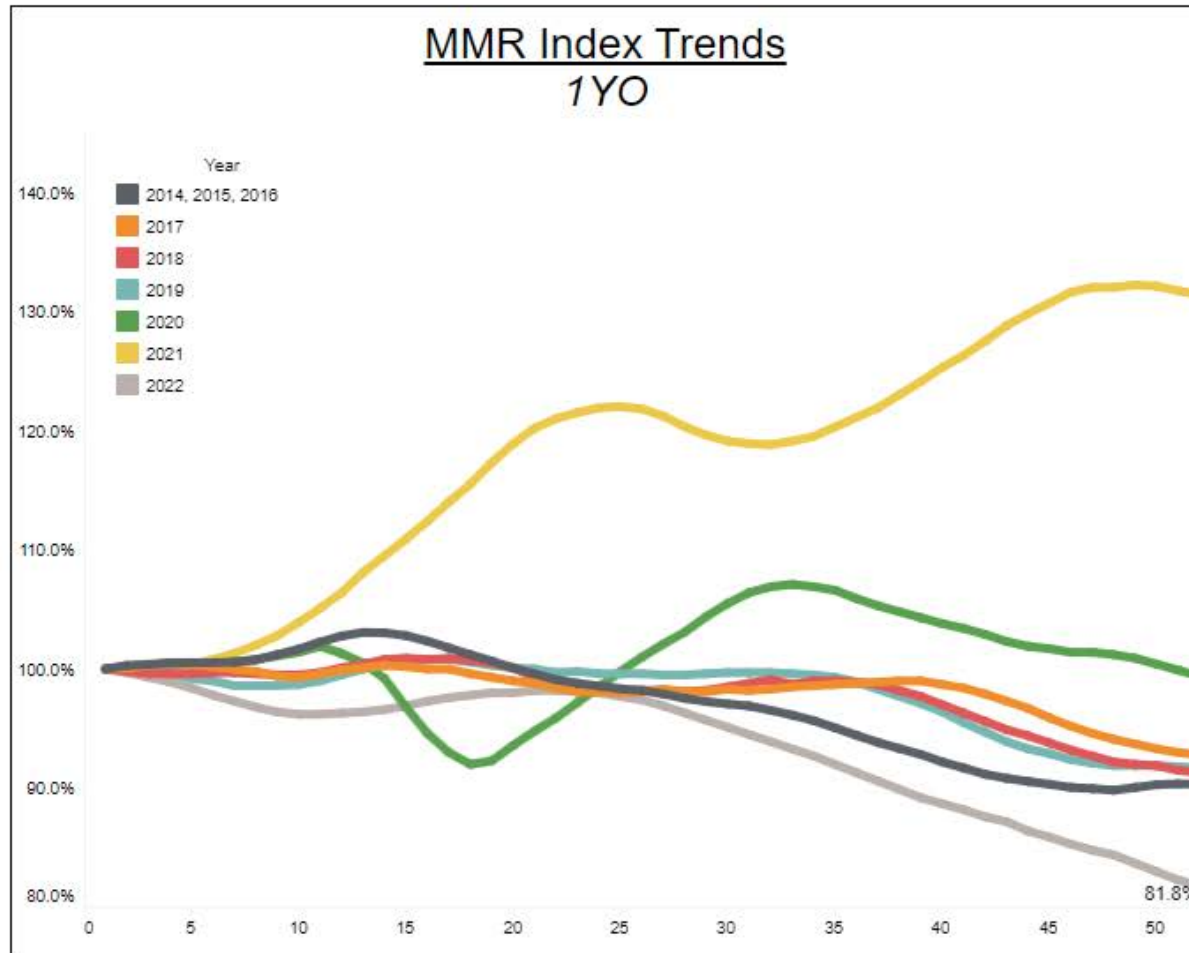
MMR Retention & Lane Efficiency

MMR Retention rose in Q4 as prices continued to decline, pushing sales conversion back towards more normal levels



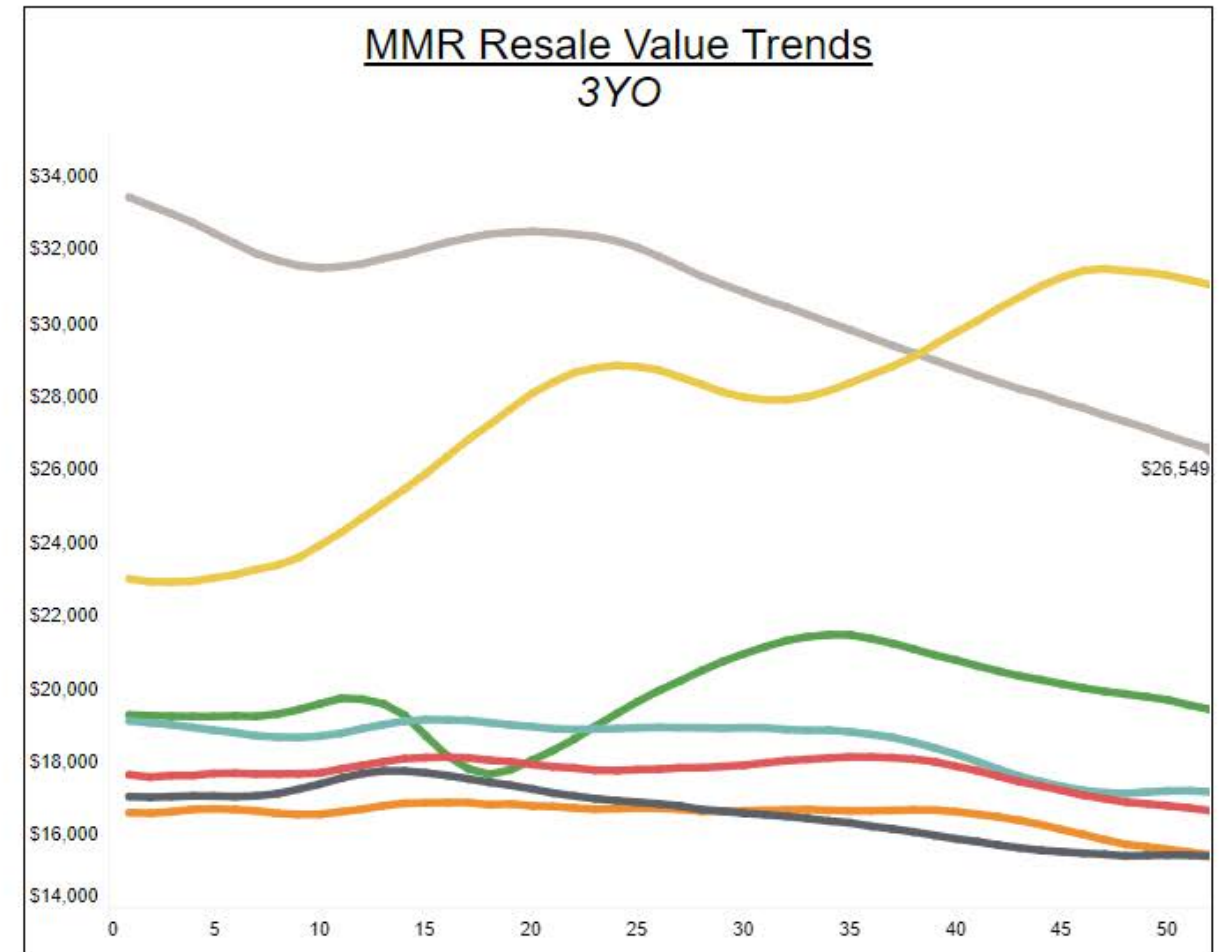
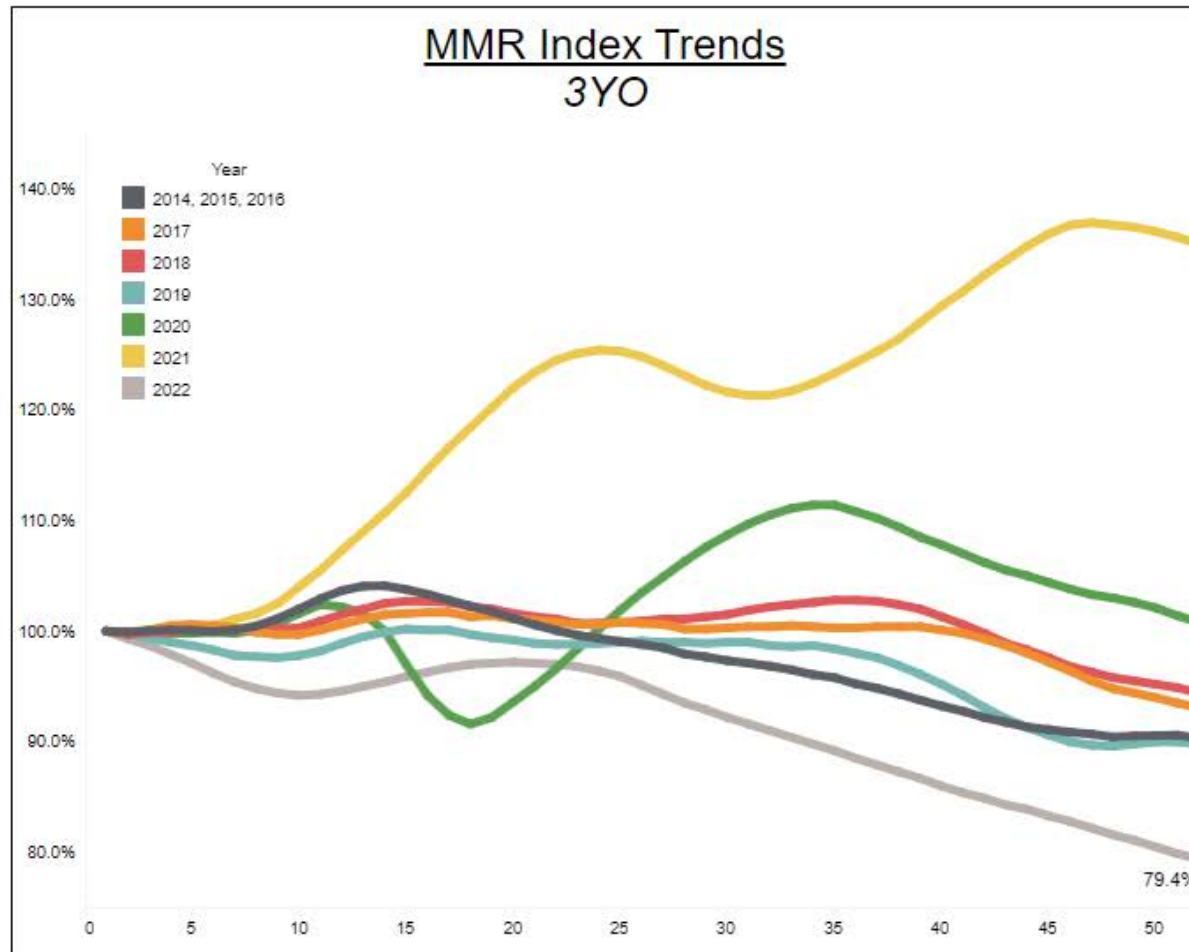
1 Year Old MMR Index Trends

The 1YO ended with the least depreciation on the year, but declines picked up a bit into year-end as new car supply rose



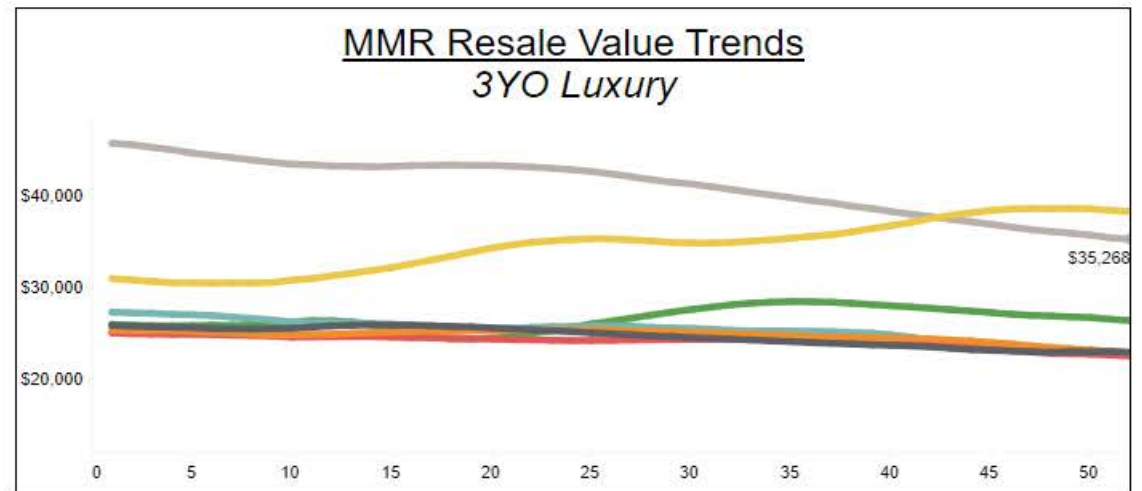
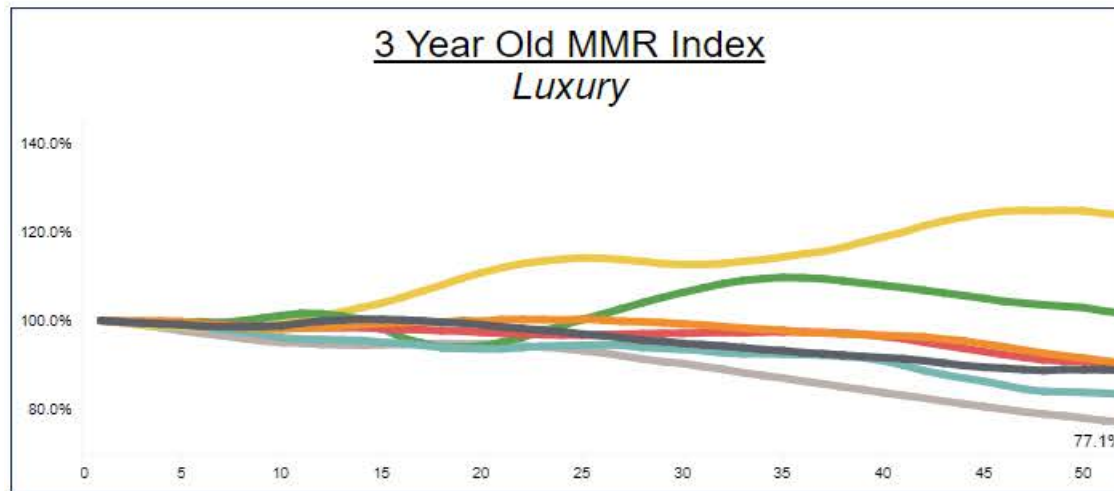
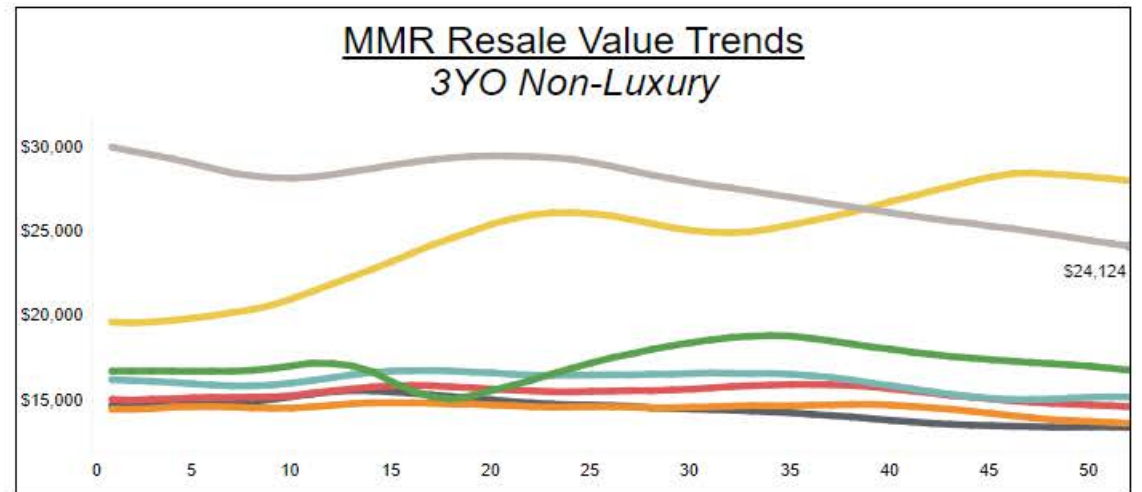
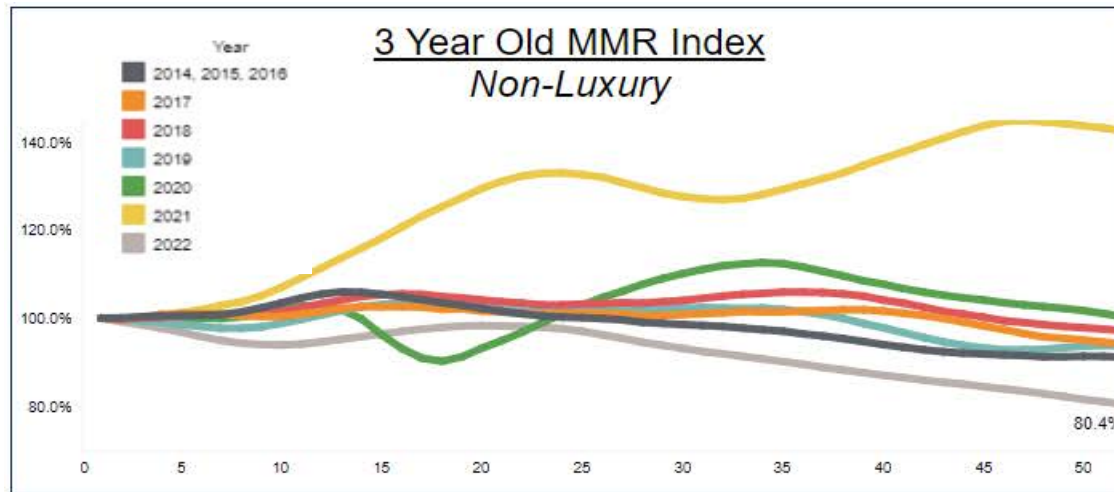
3 Year Old MMR Index Trends

Depreciation on 3YO units was the strongest of all age groups, with Resale Value \$ down almost 15% vs 2021



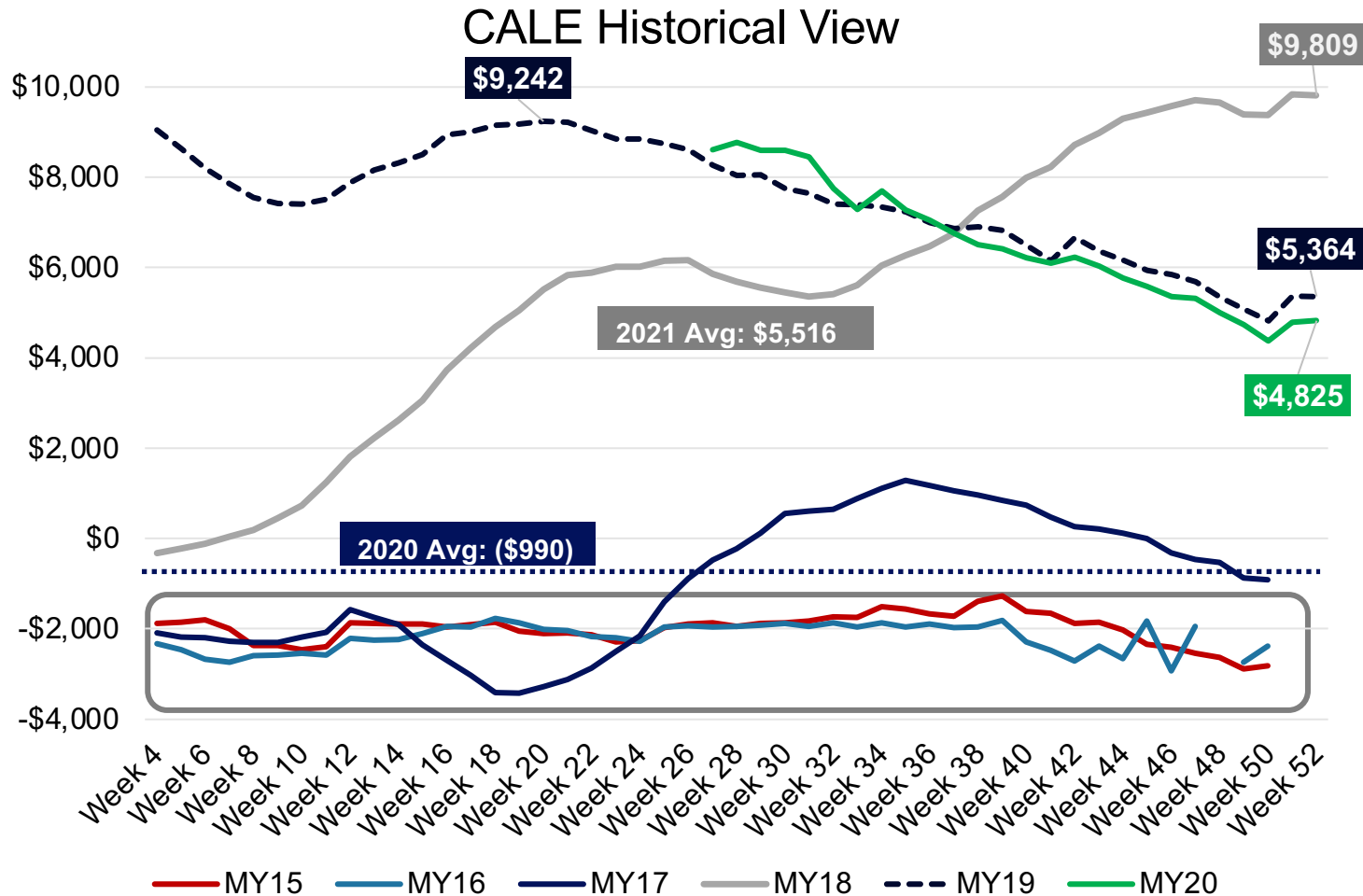
3 Year Old MMR Index for Luxury & Non-Luxury

Non-Luxury fared better than Luxury – both segments declined 6.6% in Q4



CALE: Equity in Maturing Leases Declined Steadily in Q4

CALE trends on 36M term are about \$5K positive overall but vary greatly by make



CALE = Cox Automotive Lease Equity Position

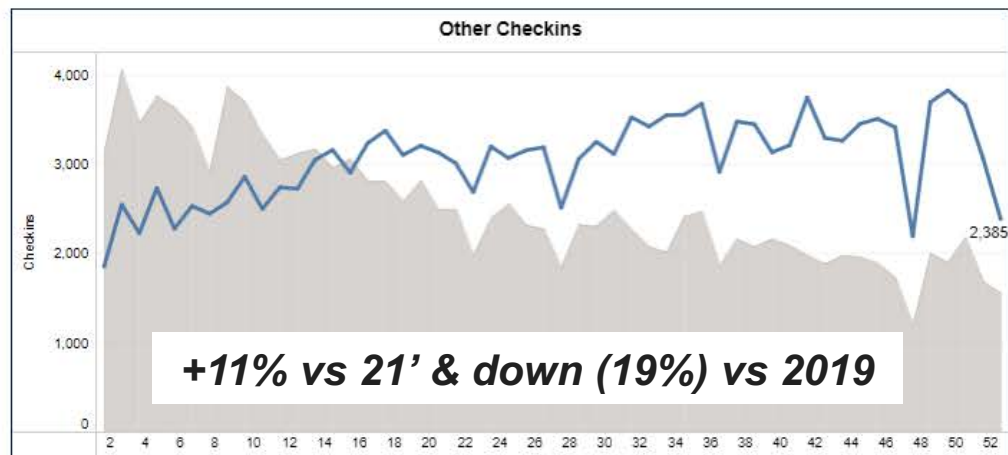
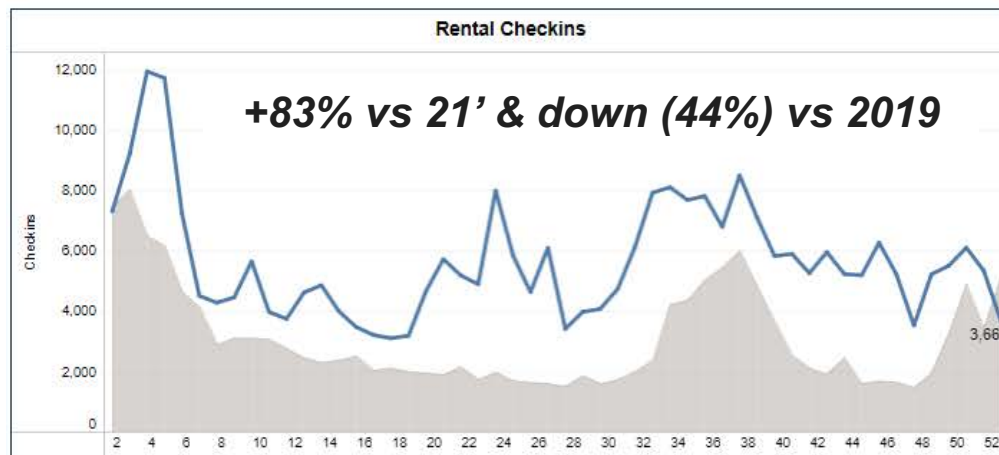
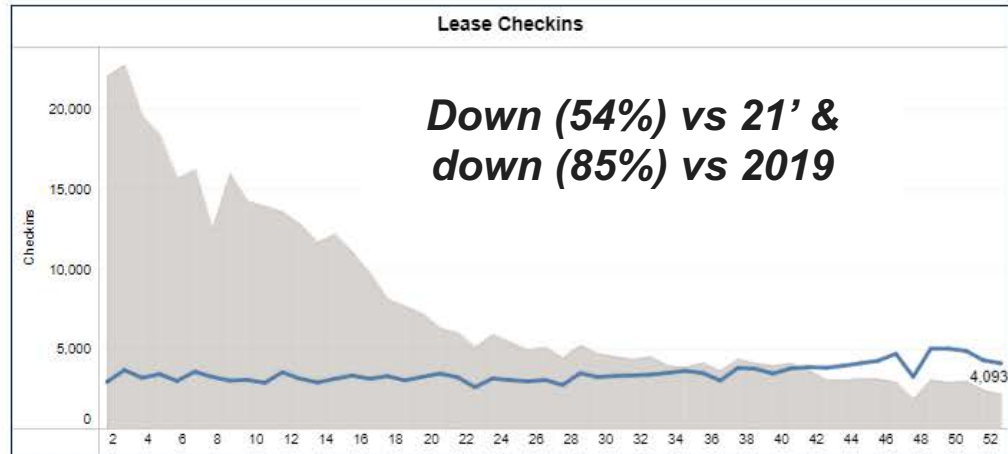
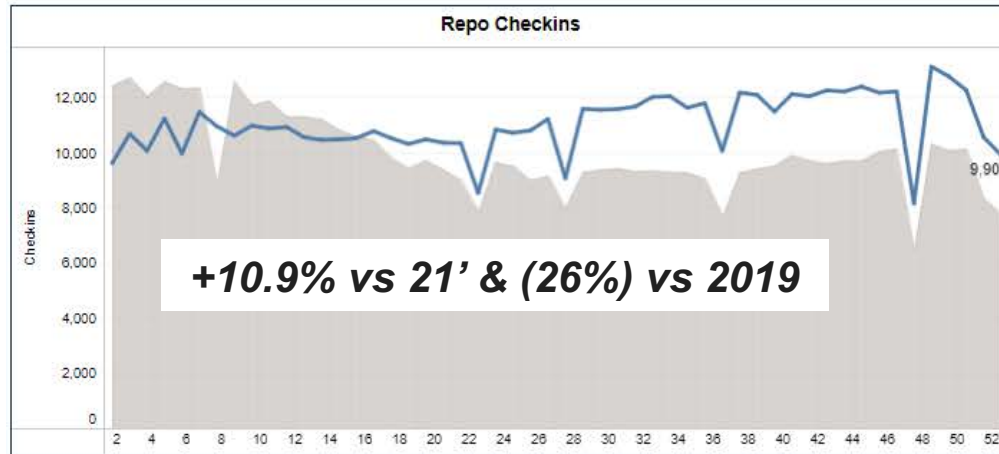
Measures the difference between Wholesale MMR at Maturity and Residual Value for 36-month term leases

As we continue to see declines, more brands are getting closer to \$0 or breakeven in CALE. We expect this to continue into 1H 23'.

Commercial Supply – Moving Up, Ever So Slowly

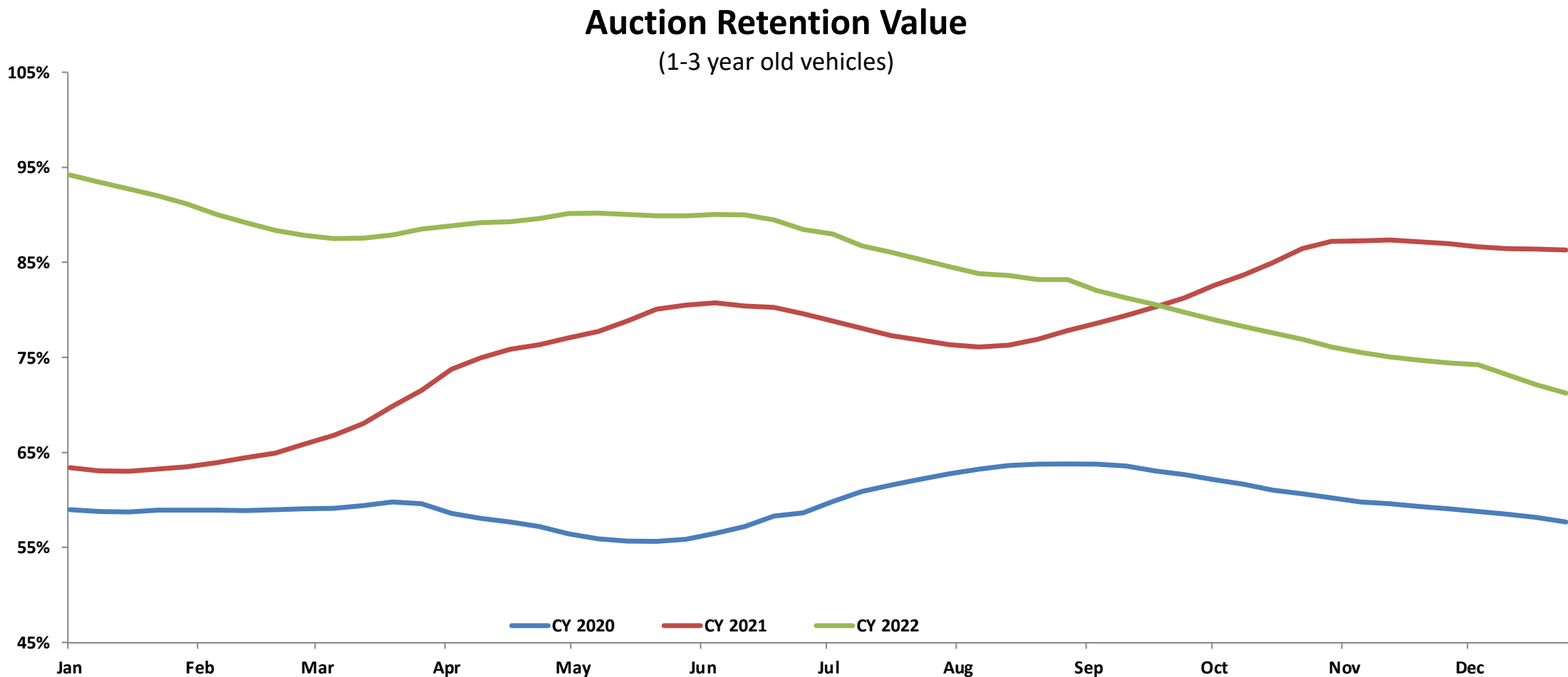
Repo check-ins finally picked up a bit closer to normal, as Lease check-ins averaged 4,200 in Q4

Wholesale Commercial Checkin Volume



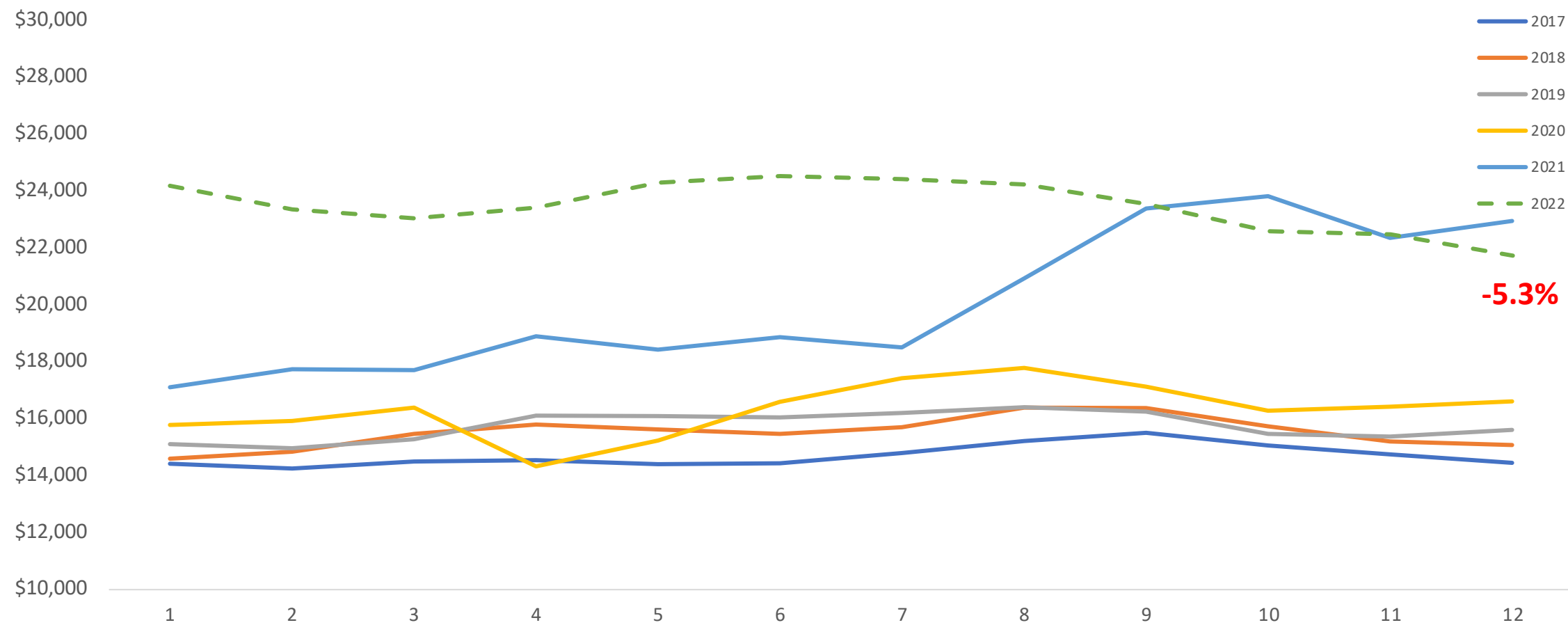
Retention Values End Year Lower Than End of 2021

Retention values peaked at 94% in January; declines since leave retention at year end at 71%



Rental Risk Average Auction Prices

Average price for rental risk units sold in December down 5.3% year over year and down 3.4% from November.



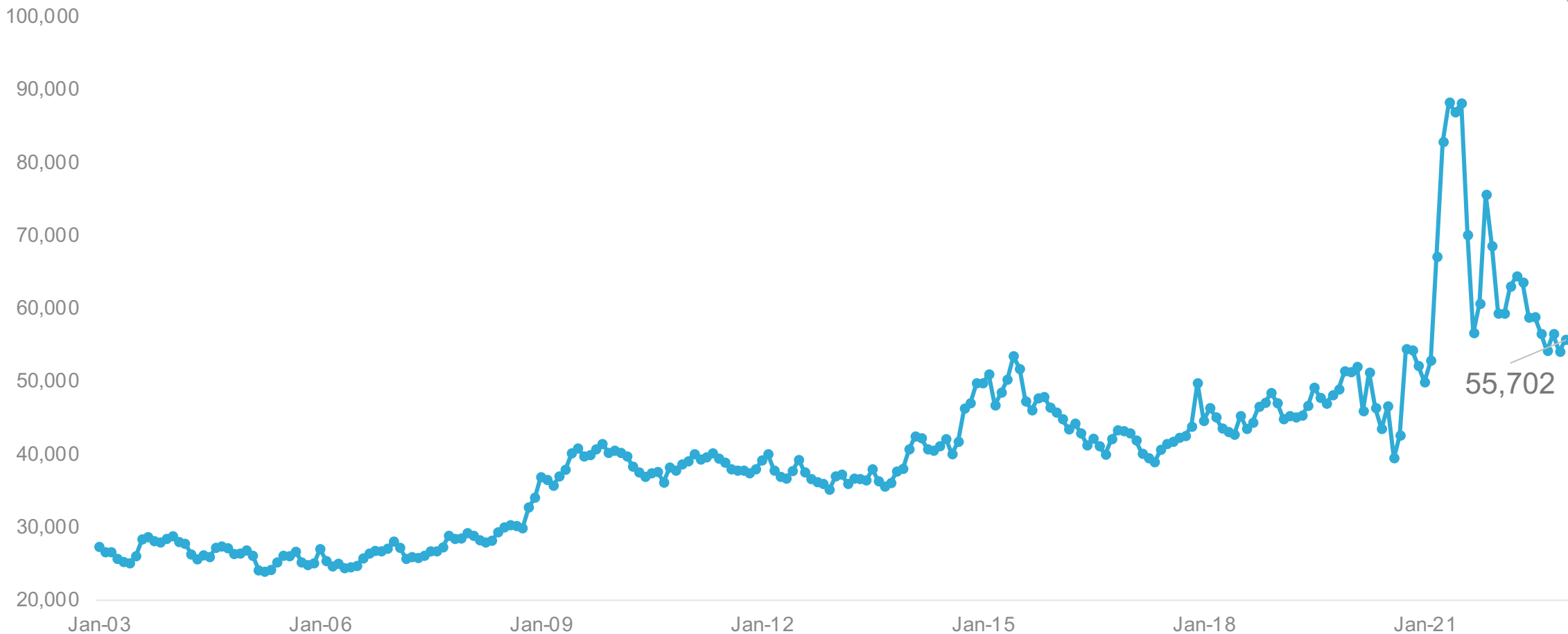
Rental Risk Vehicle Variety Represented in Sales

Configuration count was the highest since 2015 Q4's 4,178; YMMB shares similar to Pandemic onset in Q1 2020.

	2020 Q4	2021 Q4	2022 Q4
Number of unique year, make, model, body configurations sold	3,792	2,543	4,164
Share accounted for top 10 YMMB	13.9%	20.6%	11.6%
Share accounted for top 25 YMMB	24.1%	34.1%	20.5%
Number of YMMB to reach 50% share	125	64	137

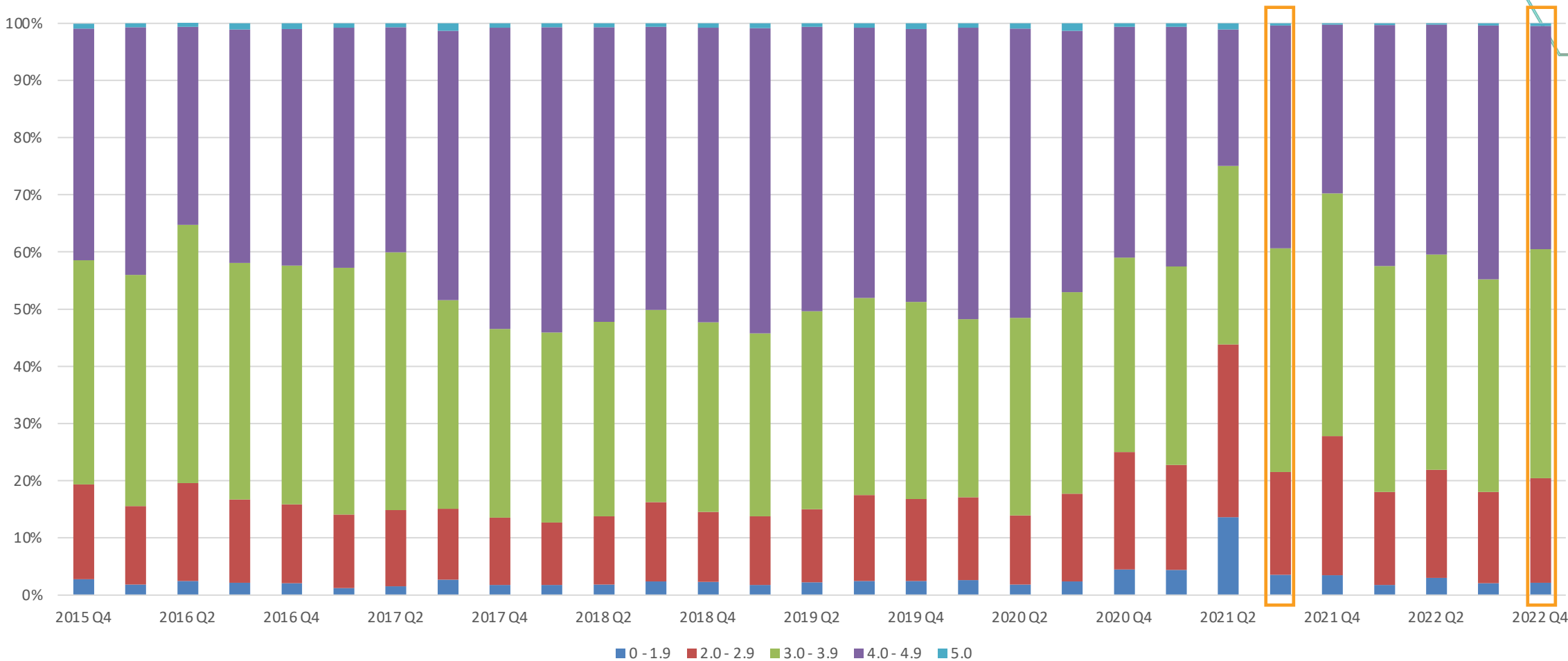
Rental Risk Average Mileage

Average mileage in December was down 19% compared to a year ago but up 3% from November.



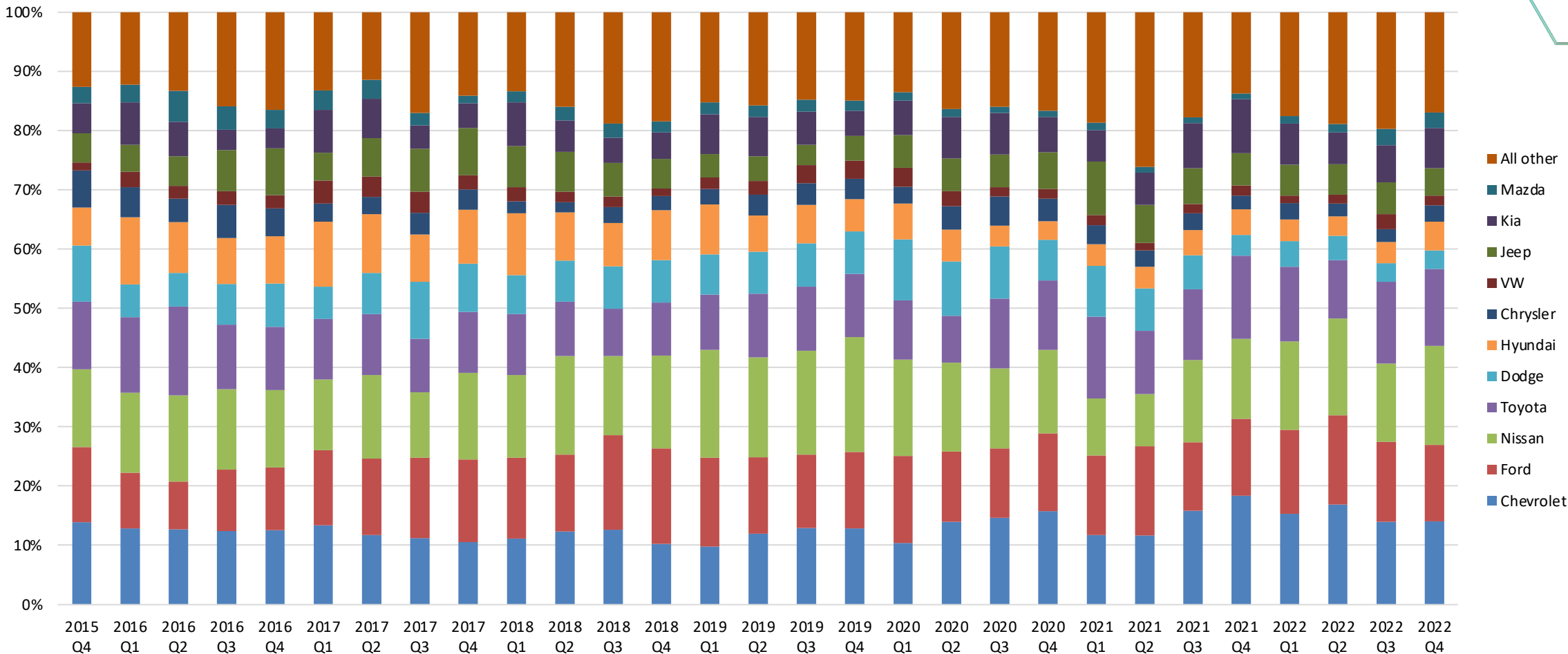
Rental Risk Sales Condition

Q4 2022 distribution almost identical to Q3 2021; more 2.0 – 3.9 and fewer 4.0 - 4.9 from Q3 2022.



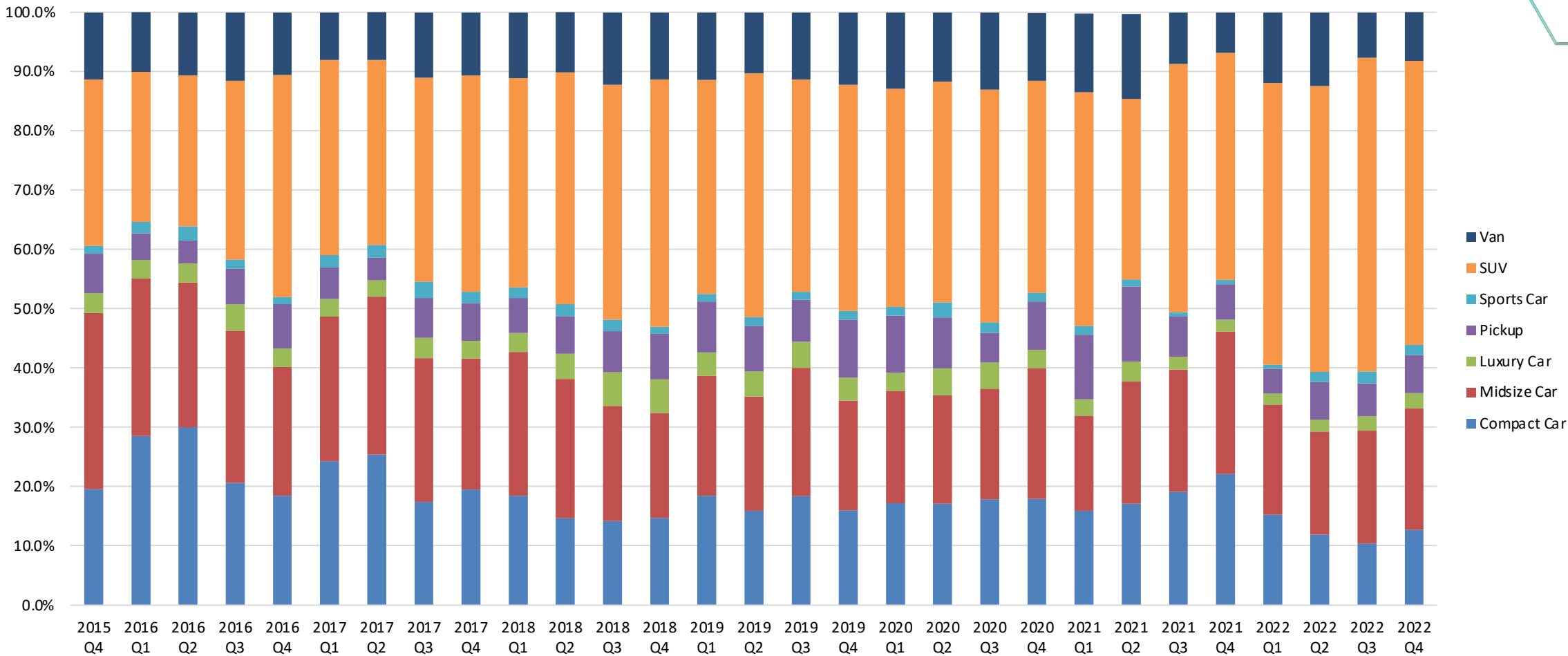
Rental Risk Sales By Make

Chevy, Ford, and Toyota lost 1.4% share compared to Nissan's 3.5% gain from Q3.



Rental Risk Sales By Vehicle Segment

Compact and Midsize cars gained 3.8% total vs. a 5.0% loss for SUVs from Q3 to Q4.



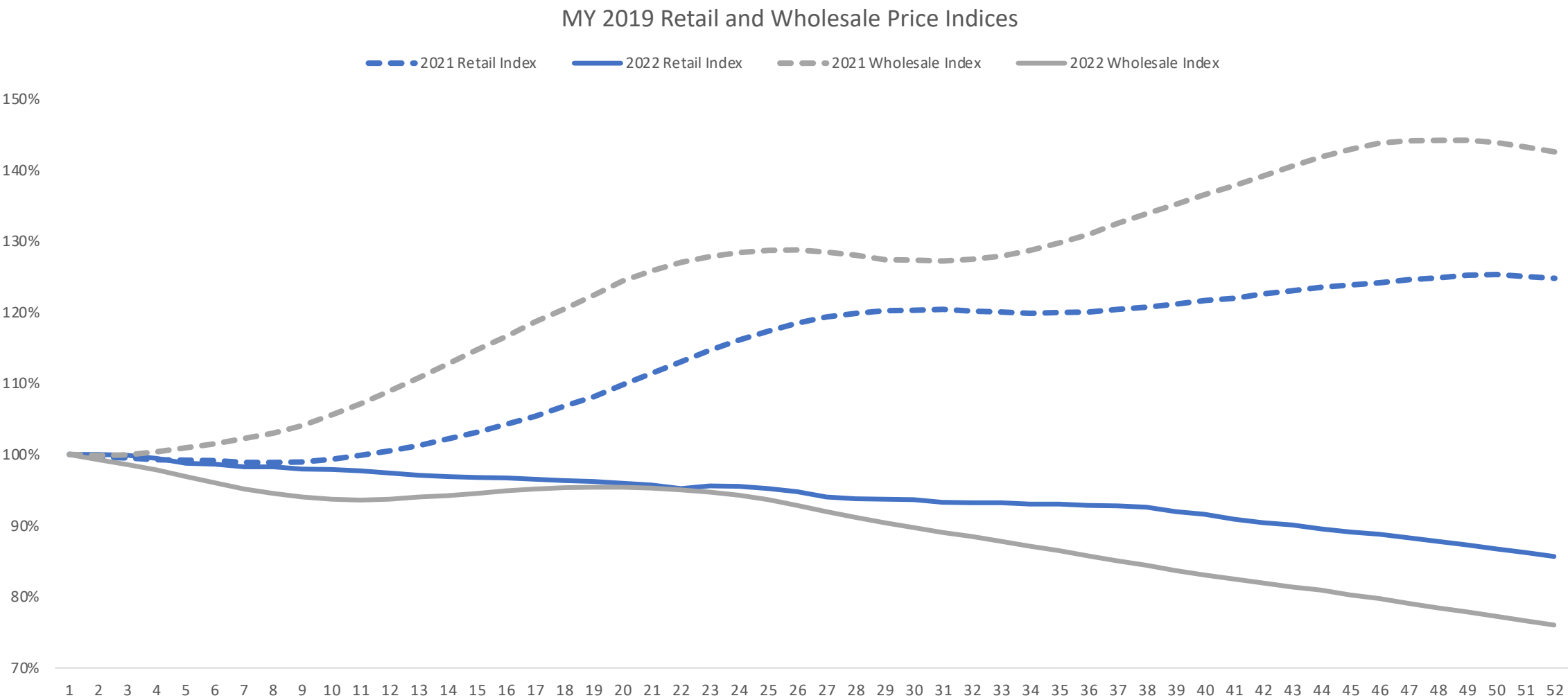
Manheim Insights on Top Volume Vehicles

Price trends on top selling vehicles in December at Manheim showed declining values for the month and year

Rank	Source(Rank)	Category	Subcategory	Vehicle	3-Jan	Past 30 Days	Last Year	Current Dep	L12M Dep/Mo
1	All	Compact Car	Compact Car Premium	2020 TOYOTA COROLLA 4D SEDAN LE	\$15,550	\$15,850	\$18,800	-1.9%	-1.4%
2	All	Compact Car	Compact Car Premium	2021 TOYOTA COROLLA 4D SEDAN LE	\$17,950	\$18,150	\$21,400	-1.1%	-1.3%
3	All	Mid-Size Car	Mid-Size Car Premium	2020 NISSAN ALTIMA FWD 4D SEDAN 2.5L S	\$15,800	\$16,150	\$20,600	-2.2%	-1.9%
4	All	SUV	SUV Midsize	2020 FORD EXPLORER 4WD 4C 4D SUV XLT	\$29,900	\$30,200	\$39,000	-1.0%	-1.9%
5	All	Mid-Size Car	Mid-Size Car Entry	2021 KIA FORTE 4D SEDAN LXS	\$16,100	\$16,400	\$20,600	-1.8%	-1.8%
1 Dealer	Dealer	Compact Car	Compact Car Premium	2020 TOYOTA COROLLA 4D SEDAN LE	\$15,550	\$15,850	\$18,800	-1.9%	-1.4%
1 Lease	Lease	SUV	SUV Luxury	2020 VOLVO XC90 AWD 4D SUV T6 MOMENTUM	\$34,600	\$34,900	\$51,800	-0.9%	-2.8%
1 Rental	Rental	Compact Car	Compact Car Entry	2021 NISSAN VERSA 4D SEDAN SV	\$13,350	\$13,950	\$16,900	-4.3%	-1.8%

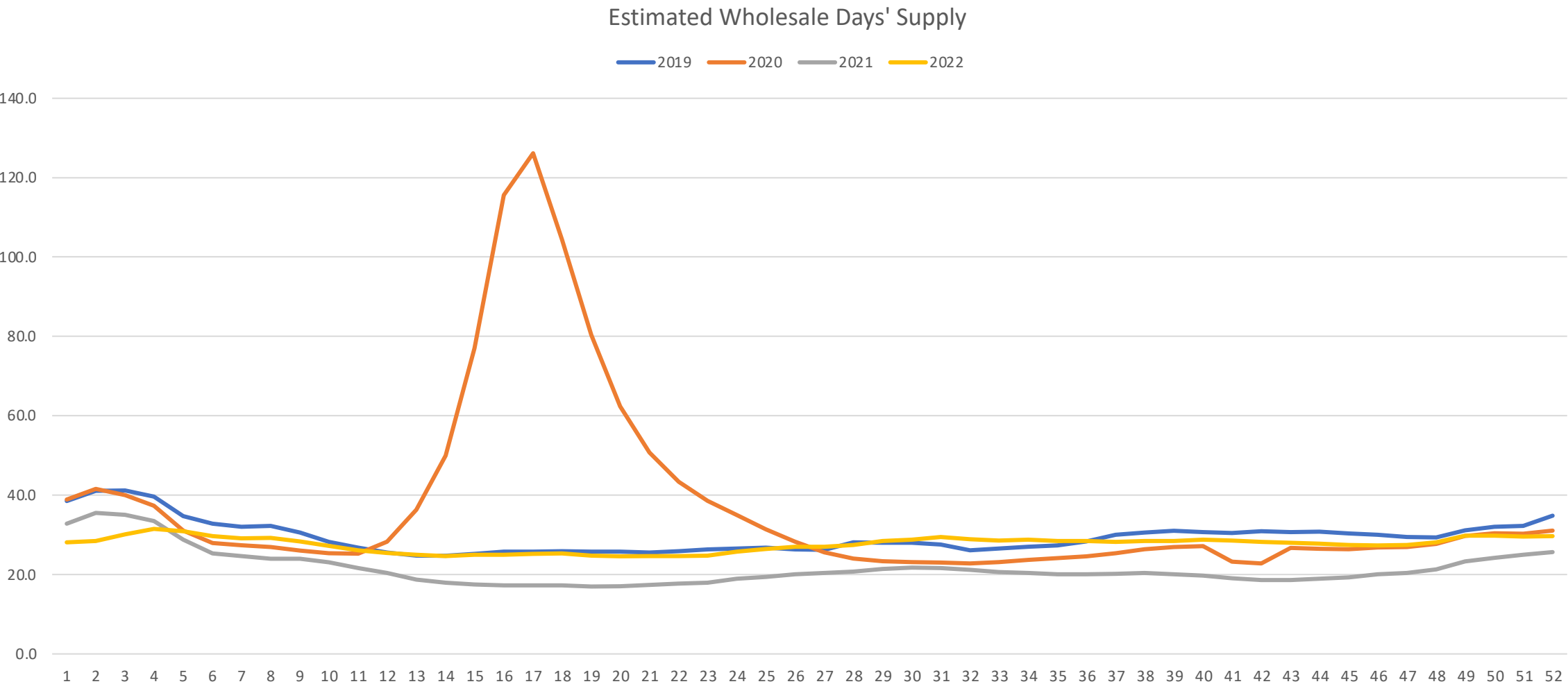
Used Prices Ended Down Year with Larger Declines

The average MY 2019 wholesale price declined 0.8% in last week of December, and retail declined 0.6%



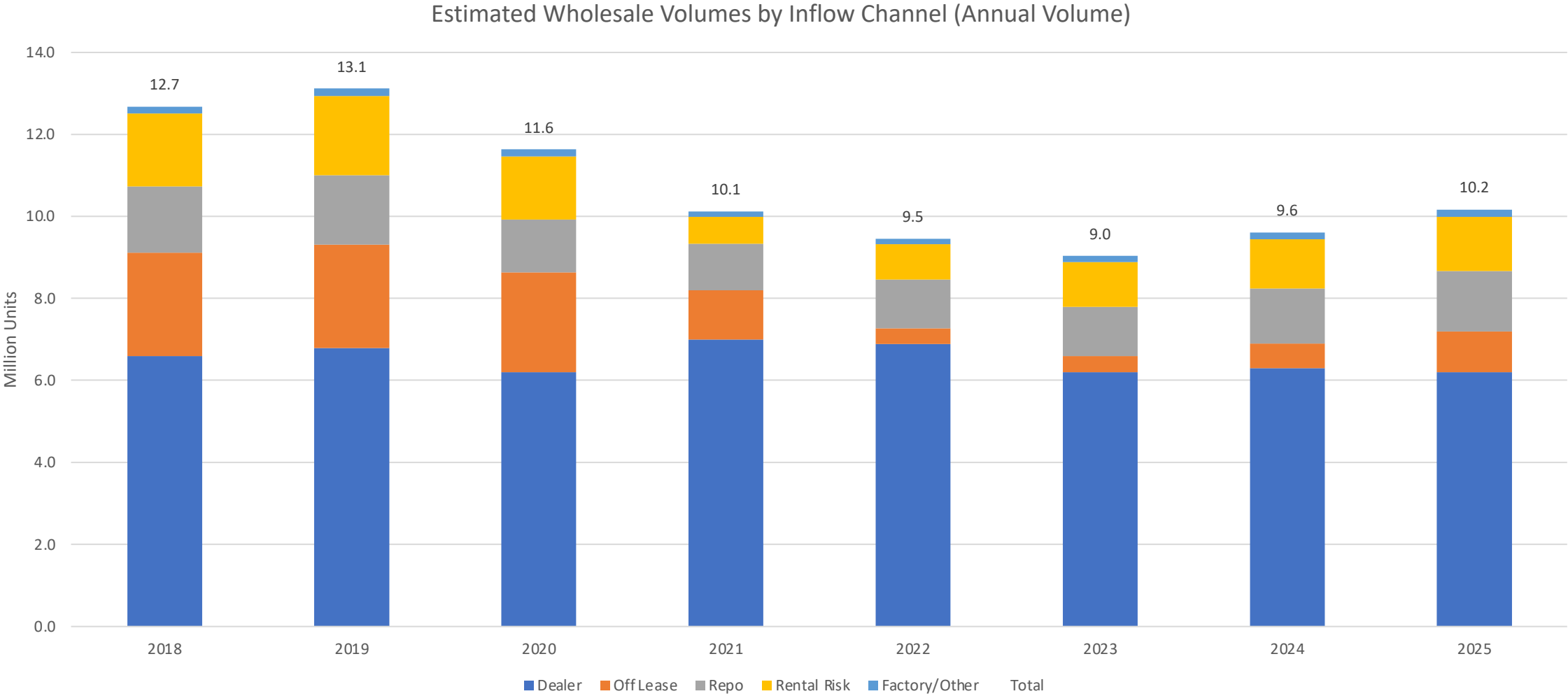
Wholesale Days' Supply Ending Year Below Normal

Level of supply was most elevated this summer giving more power to buyers



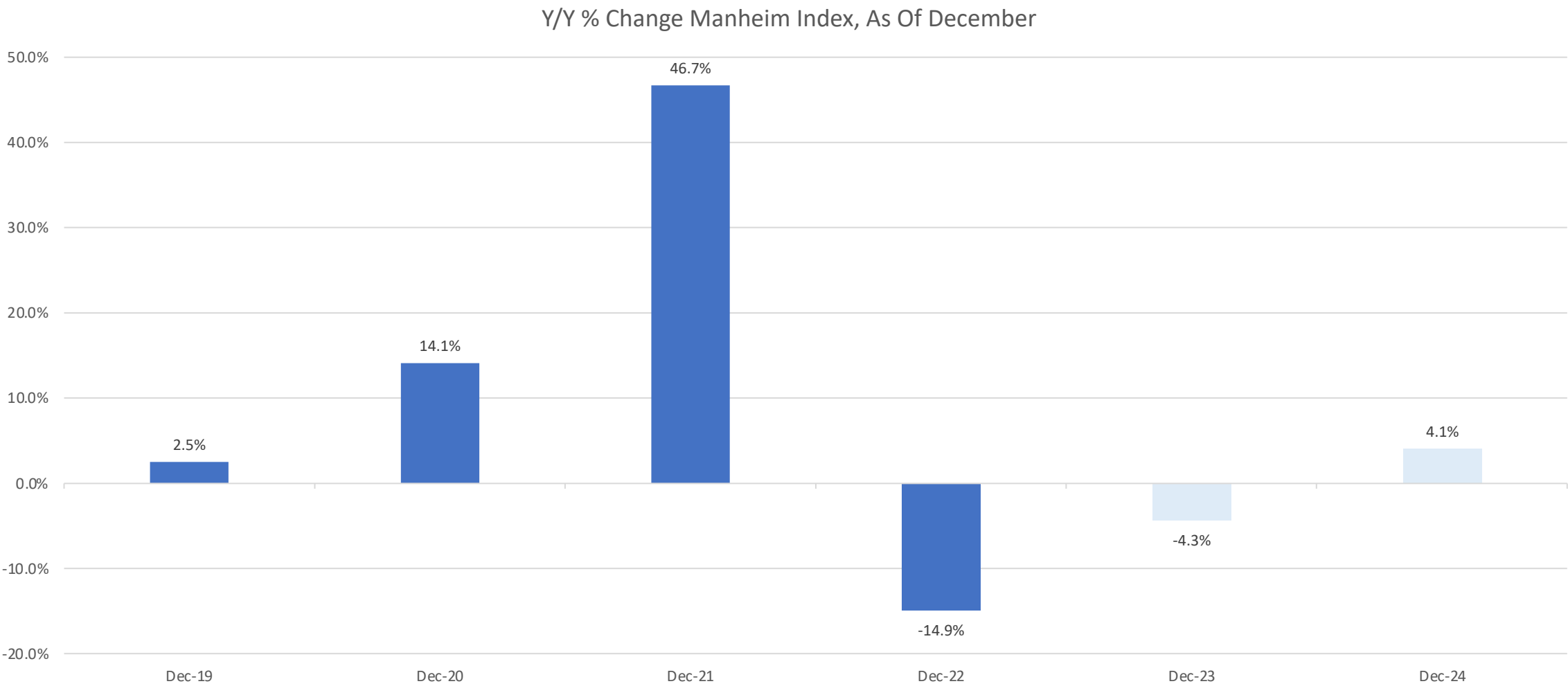
Wholesale Flows to Bottom in 2023

After a 7% decline in 2022, 2023 will decline another 4.5% as dealer consignments slow but commercial grows



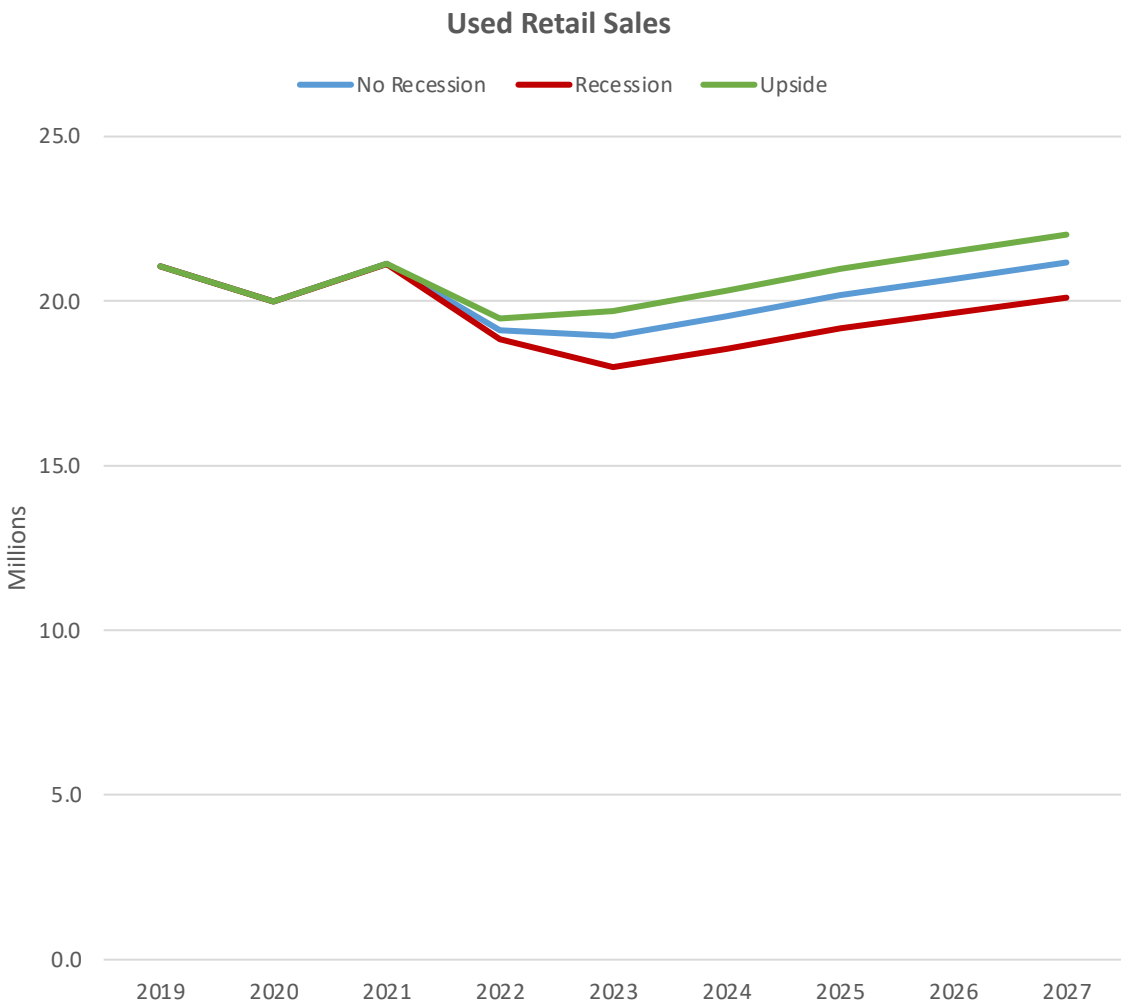
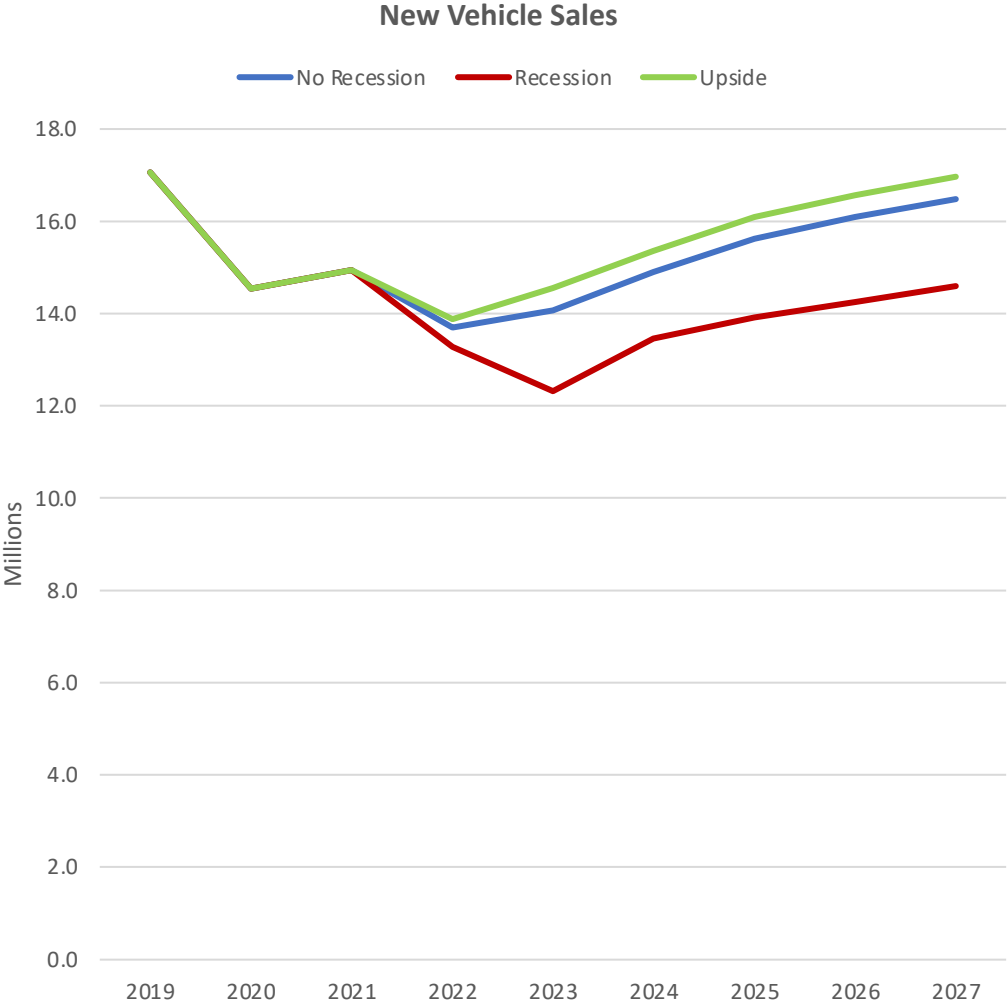
Used Vehicle Value Outlook

Above-normal depreciation expected through spring 2023; Manheim Index to see another down year



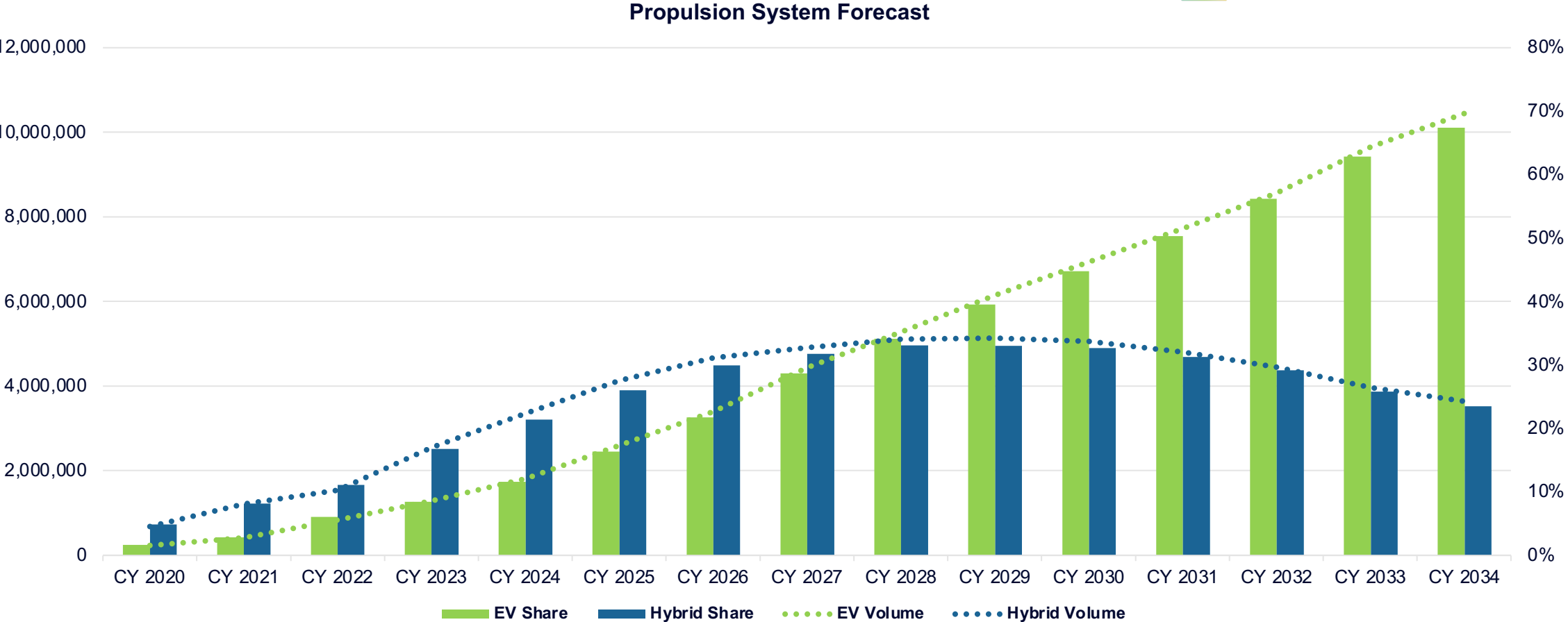
Forecast Range Needed with Recession 50/50

Minimal upside potential with most likely outcome between soft landing and recession



EV and Hybrid Volume Forecast | 4.4 Million BEVs By 2027

Gains in hybrids only temporary as only pure EV growth expected to continue



**2023
FORECASTS**

14.1M
NEW SALES

11.9M
NEW RETAIL SALES

2.2M
FLEET SALES

2.5M
NEW LEASE
VOLUME

21%
LEASE
PENETRATION

2.2M
CPO SALES

35.6M
USED SALES

18.9M
USED RETAIL SALES

-4.3%
DEC 2023 Y/Y MANHEIM
USED VEHICLE
VALUE INDEX

A photograph of a row of cars parked in a lot, with hills in the background. The cars are mostly silver and blue. The background shows rolling hills under a clear blue sky. The image is used as a background for a Q&A section.

Q&A

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More Auto Industry Data and Insights from Cox Automotive

The go-to source for insights based on the largest breadth of first-party data in the automotive ecosystem

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Fresh content from Chief Economist Jonathan Smoke and the Industry Insights team is published regularly.

Auto Market Snapshot: www.coxautoinc.com/marketsnapshot

This dashboard is a one-stop dashboard for the most recent data points our team is tracking.

From the Newsroom: www.coxautoinc.com/signup

The Cox Automotive biweekly newsletter, published every other Tuesday, is a round-up of news from Cox Automotive and perspectives from its analysts and experts on topics dominating the automotive industry.





Thank you for attending!

**Contact us with questions or to speak
with an expert:**

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