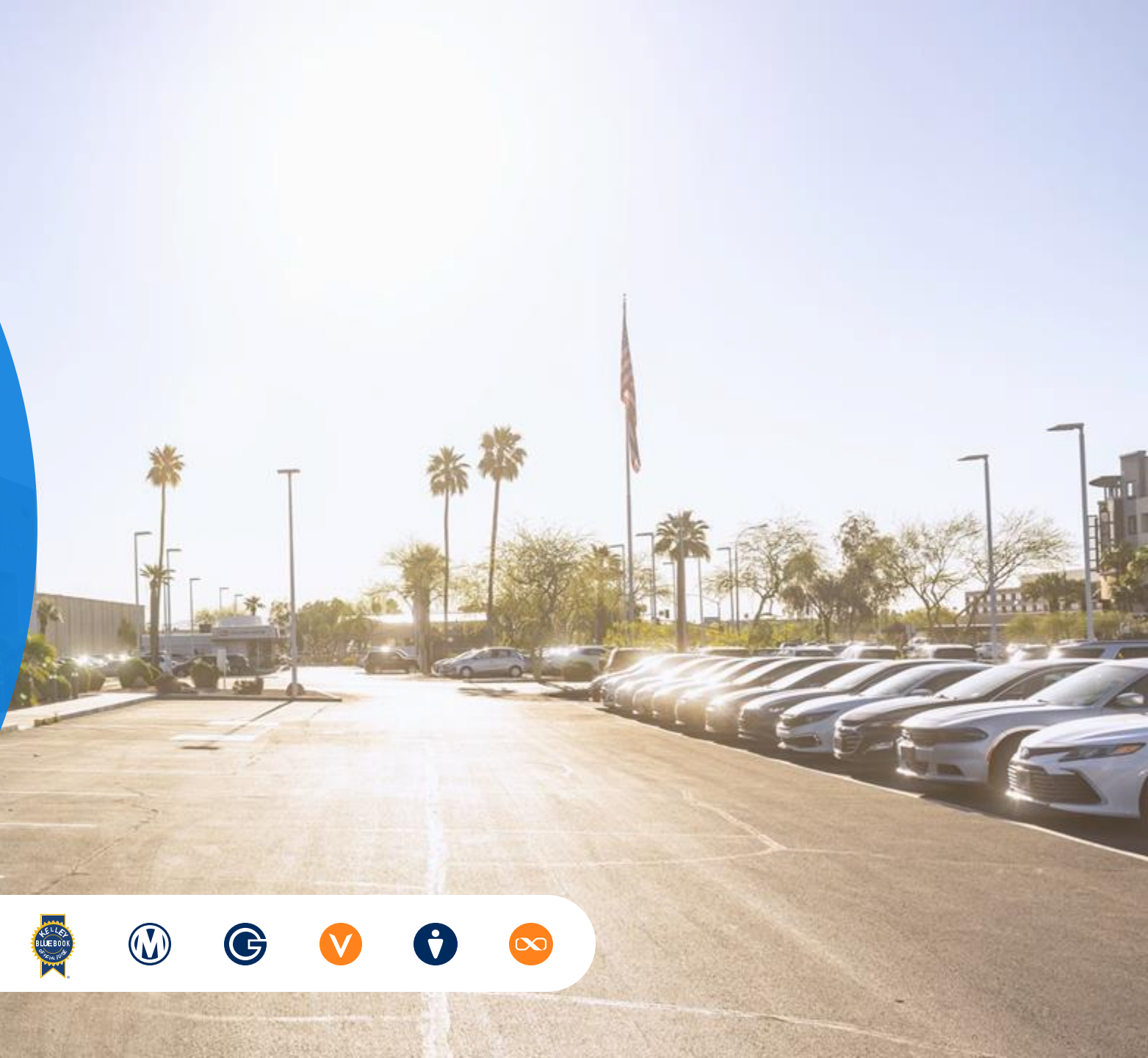


COX AUTOMOTIVE

Q3 MANHEIM USED VEHICLE VALUE INDEX CALL

Oct. 7, 2024



Agenda

Time Check: 60 Minutes

Intro & Cox Automotive

Mark Schirmer, Director, Corporate Communications

The Economy

Jonathan Smoke, Chief Economist

Vehicle Services Update

Alan Lang, Senior Vice President, Physical Services and Auctions

Wholesale Market

Jeremy Robb, Senior Director, Economic and Industry Insights

Used-Vehicle Market

Scott Vanner, Senior Analyst, Economic and Industry Insights

Q&A

The Cox Automotive Ecosystem

Our category-leading portfolio delivers the connected solutions, tools and services that dealers, OEMs, lenders, fleet operators and consumers expect.

COX AUTOMOTIVE



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Q&A

The Economy

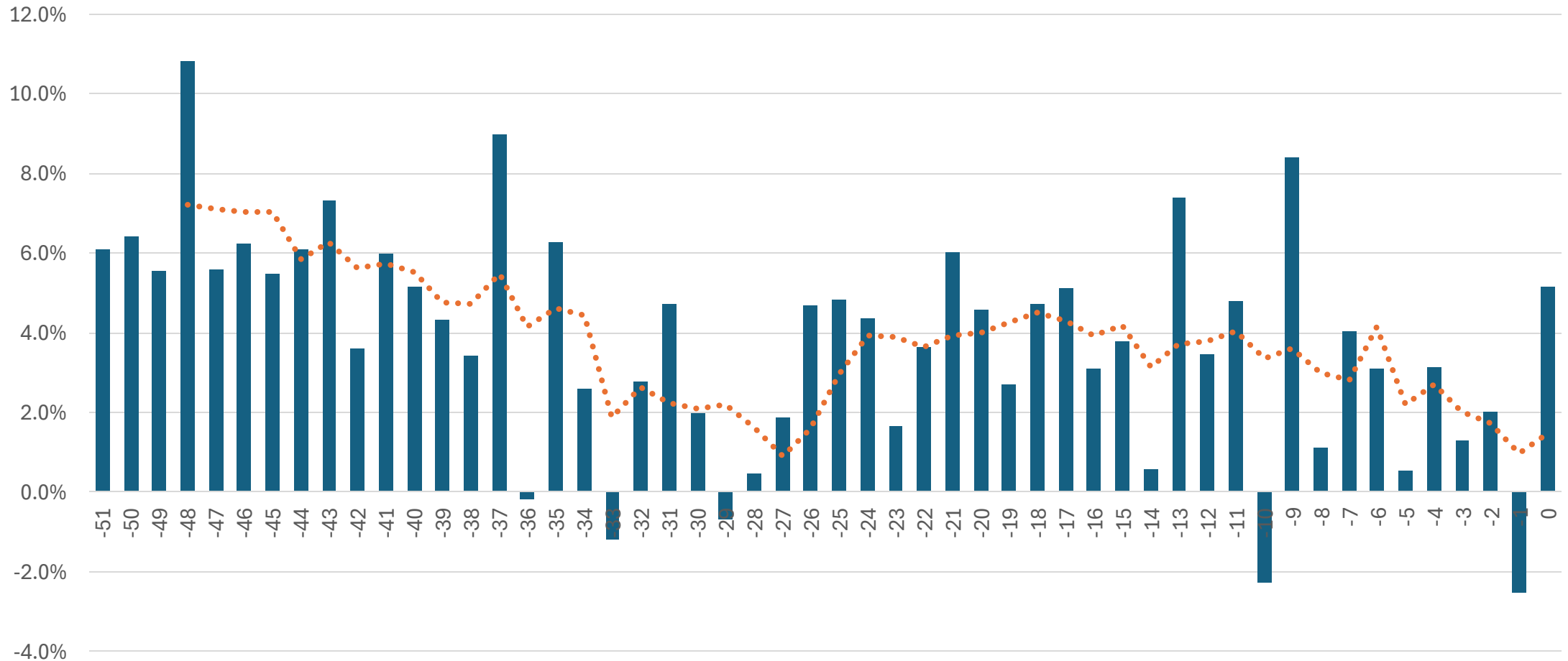
JONATHAN SMOKE
Chief Economist



Consumer Spending Growth Slowed This Summer

Total spending trends turned move negative in the second half of June and has been relatively weak since

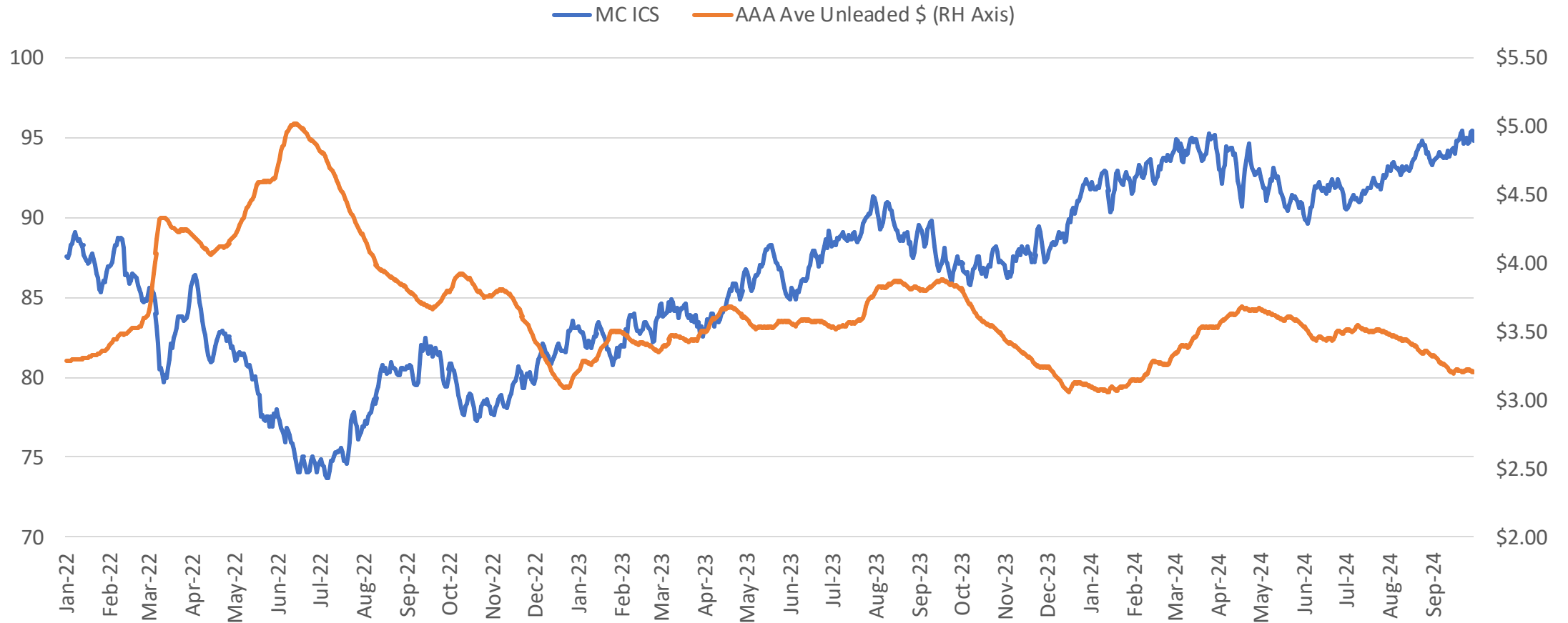
Year-Over-Year Change in Total Spending by Week Trailing 52 Weeks As of September 7, 2024



Consumer Sentiment Up Again in September

The Index of Consumer Sentiment increased 1.4% in September, extending a 4-month up trend

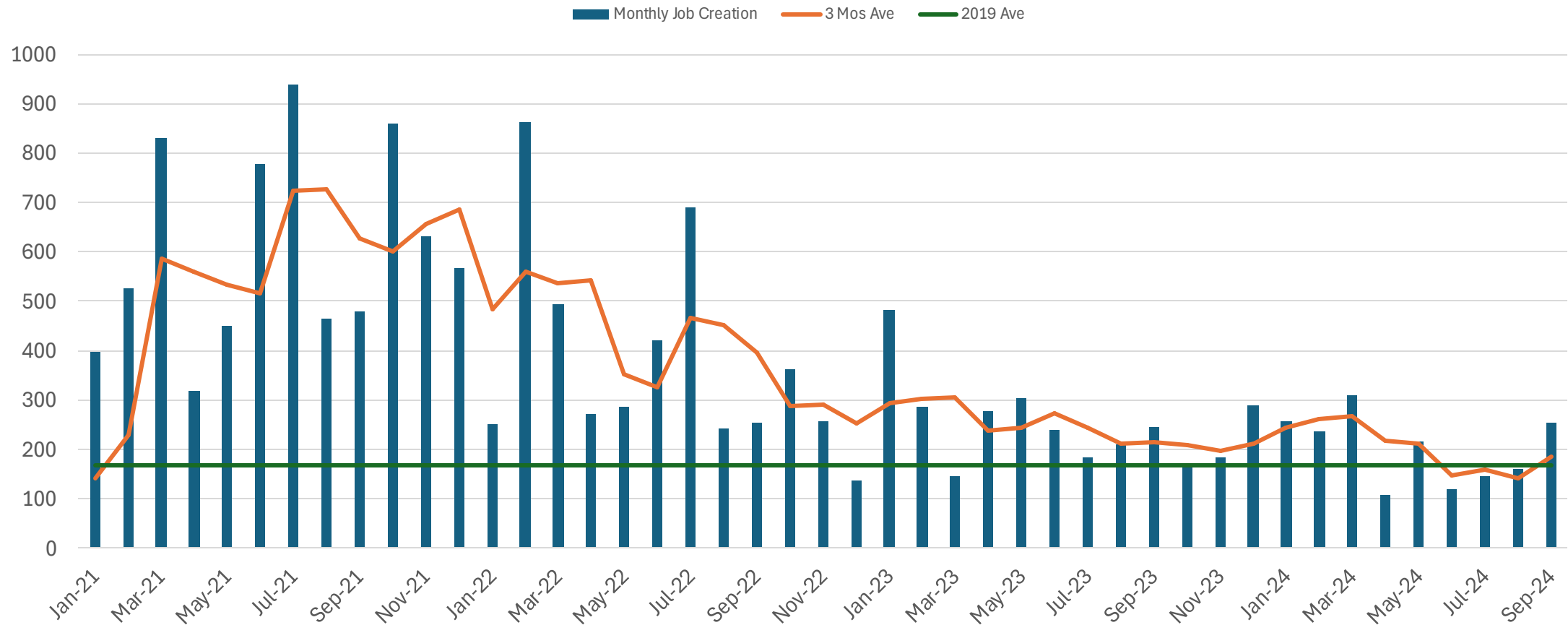
Morning Consult Index of Consumer Sentiment vs. Average Price of Unleaded



Job Growth Appears to Have Stabilized at a Healthy Growth Level

Last three months saw 186,000 new jobs average per month, 2019 averaged 166,000

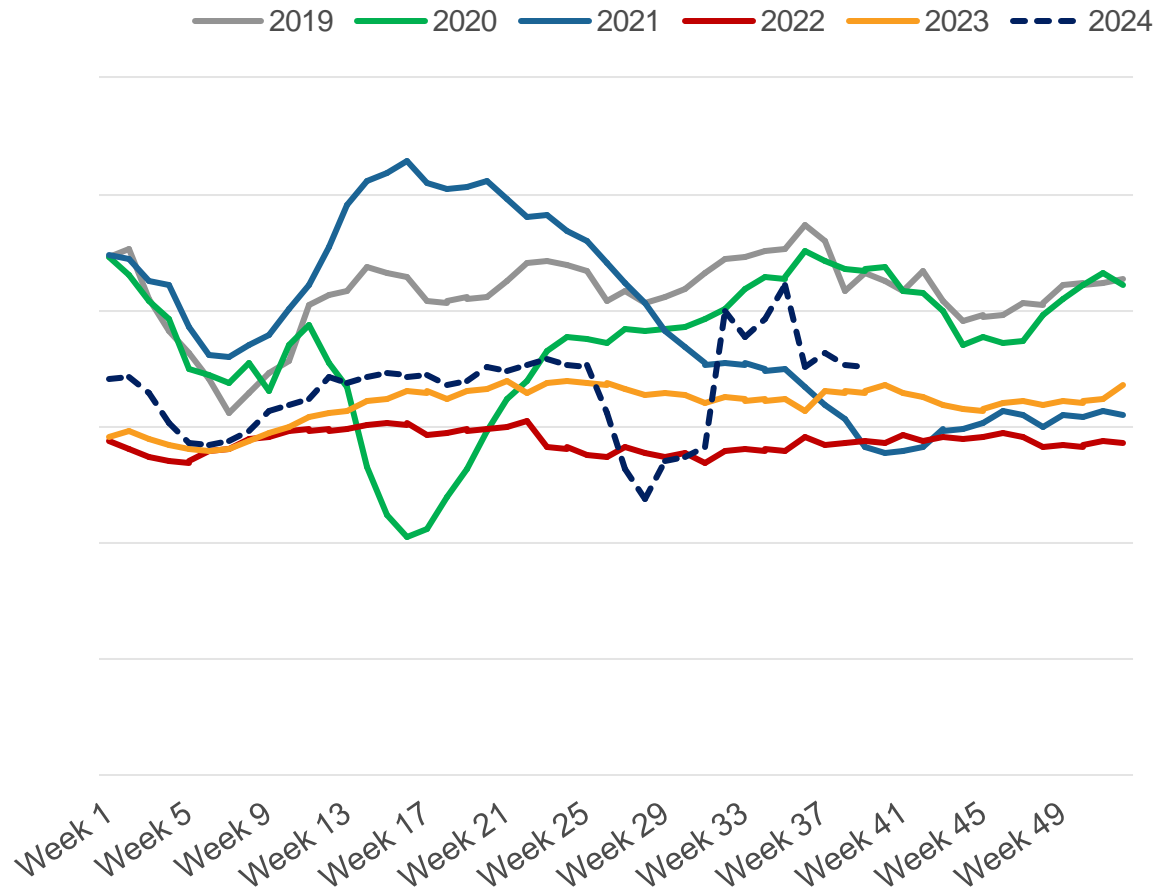
Monthly Job Creation



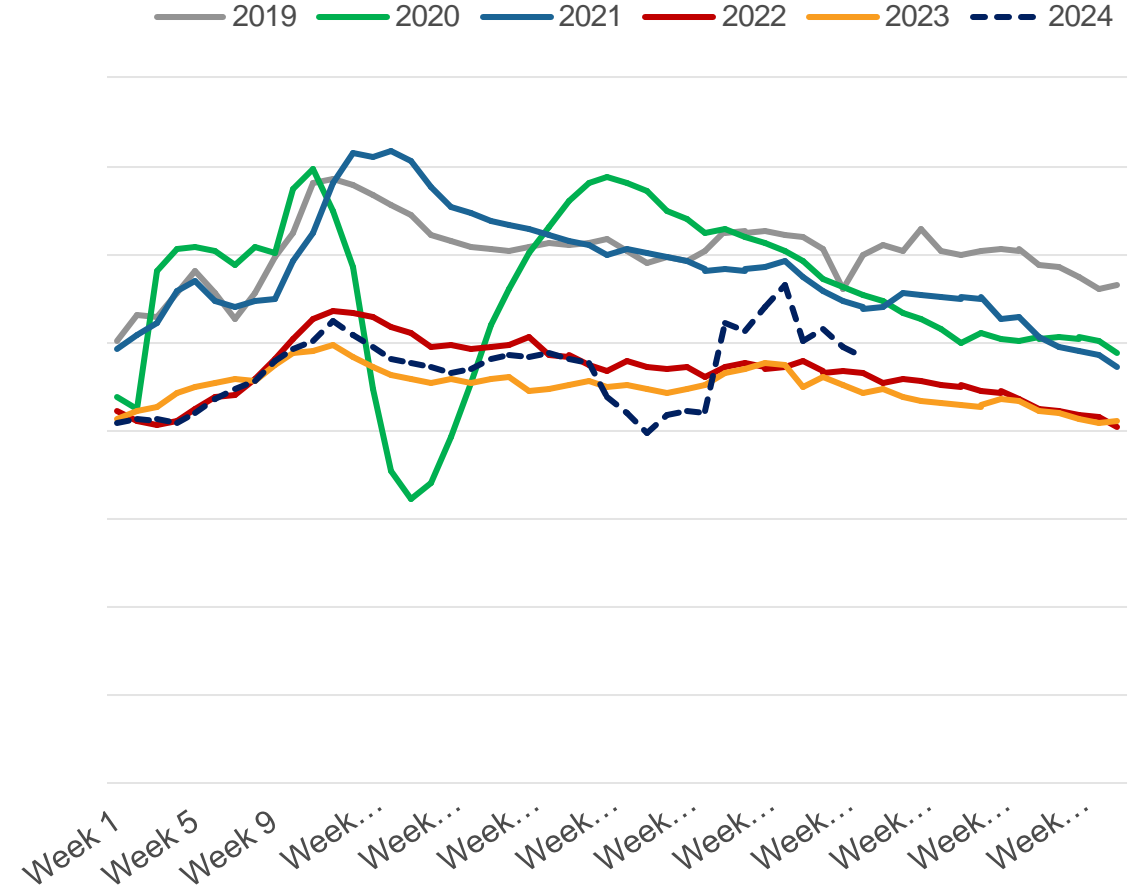
Retail Vehicle Sales Lost Momentum in September

After sales trends normalized from software disruption noise, both new and used declined over the last few weeks

New Retail Sales

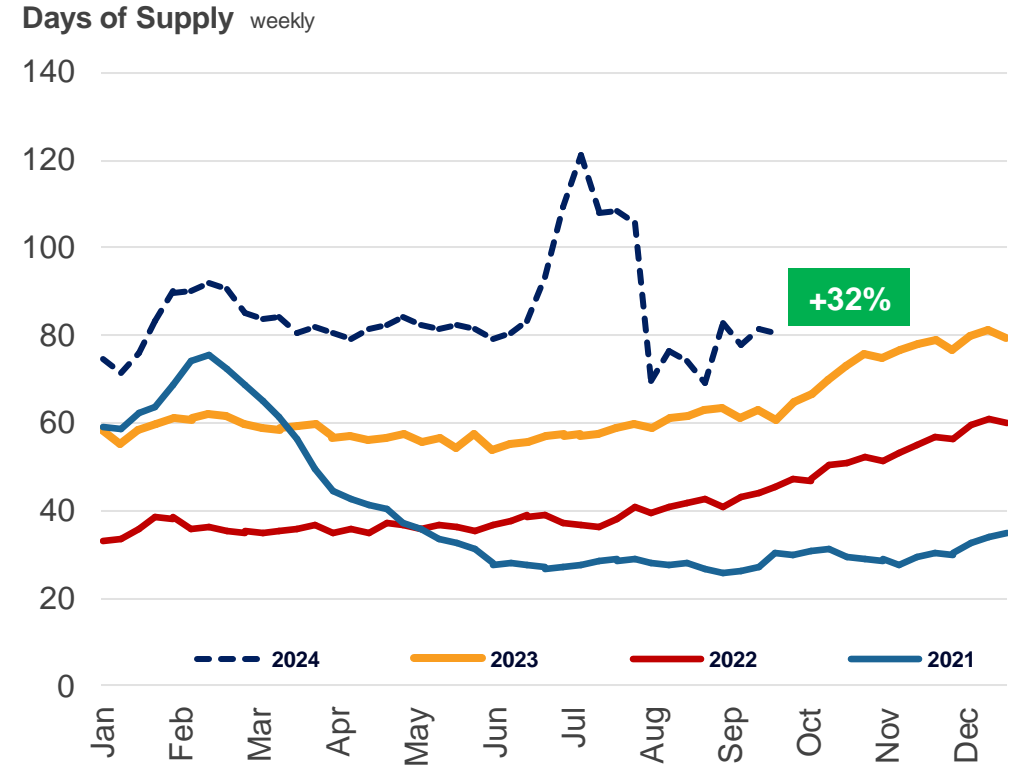
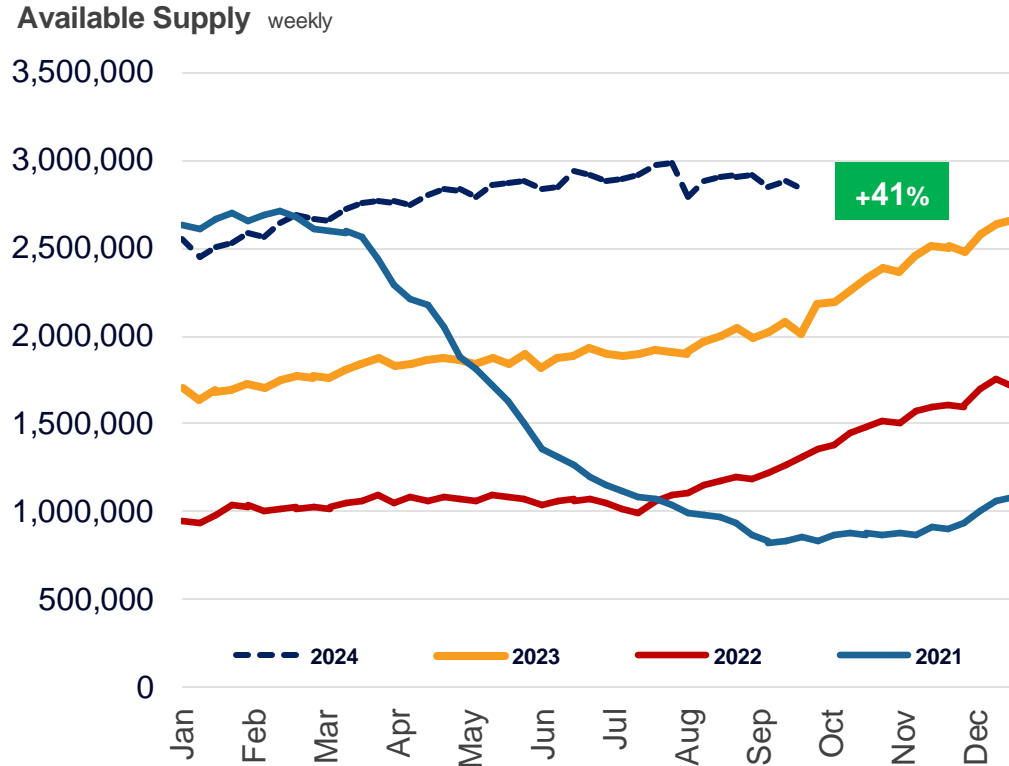


Used Retail Sales



New-Vehicle Supply Up from Last Year But Down From 2024 Peak

Currently 825K more units than last year while Days of Supply stands at 80 Days, up 32% y/y



How Manheim Delivers Scalable Vehicle Solutions

Alan Lang

Senior Vice President,
Physical Services and Auctions



Snapshot: Manheim's Scope and Expertise are Unmatched in the Industry

Industry
Experience

80
Years

Network

75
U.S. Sites

Land

6,500+
Acres

Skilled
Workforce

2,000+
trained auto techs
& recon experts

Population

94%
live within 150
miles of a
Manheim site

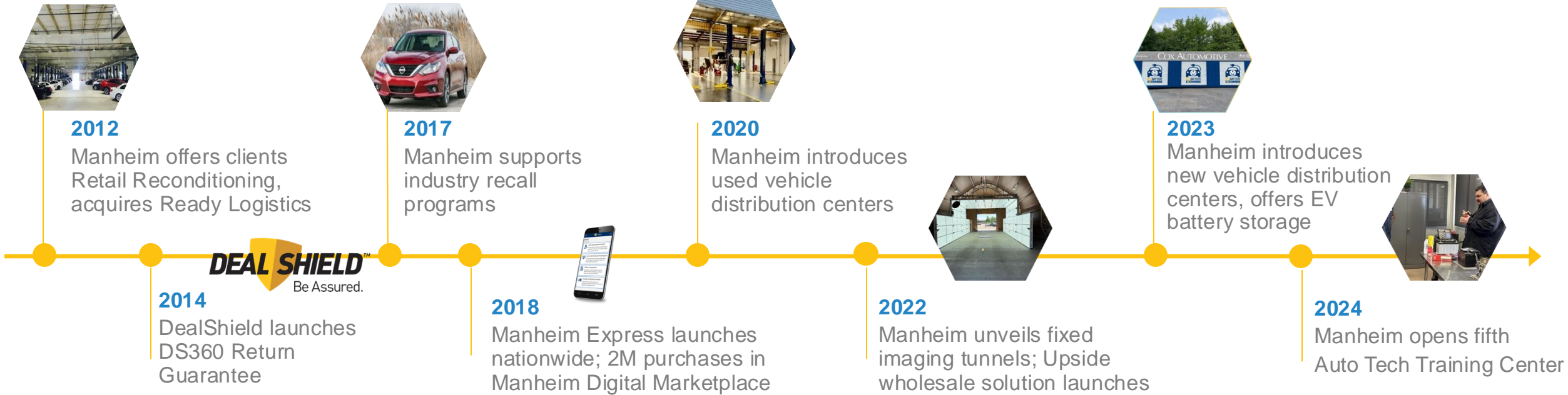
Vehicles
Handled

7M+
annually

Infrastructure

\$500M+

Journey to Solving Clients' Evolving Challenges With Scalable Vehicle Solutions



Investing in Core Capabilities Unlocks New Opportunities

Wholesale Services

Wholesale Reconditioning



Auto Technician Training Centers



Shared Service Centers



Fixed Imaging Tunnels



Retail Services

Retail Reconditioning



Vehicle Recalls



Fleet Services

In-fleeting De-fleeting



In-Service / Active



EV Services

New car distribution



Battery Storage



Leveraging Manheim's Footprint to Provide EV Services



Wholesale Market

Jeremy Robb

Senior Director of Economic and
Industry Insights



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

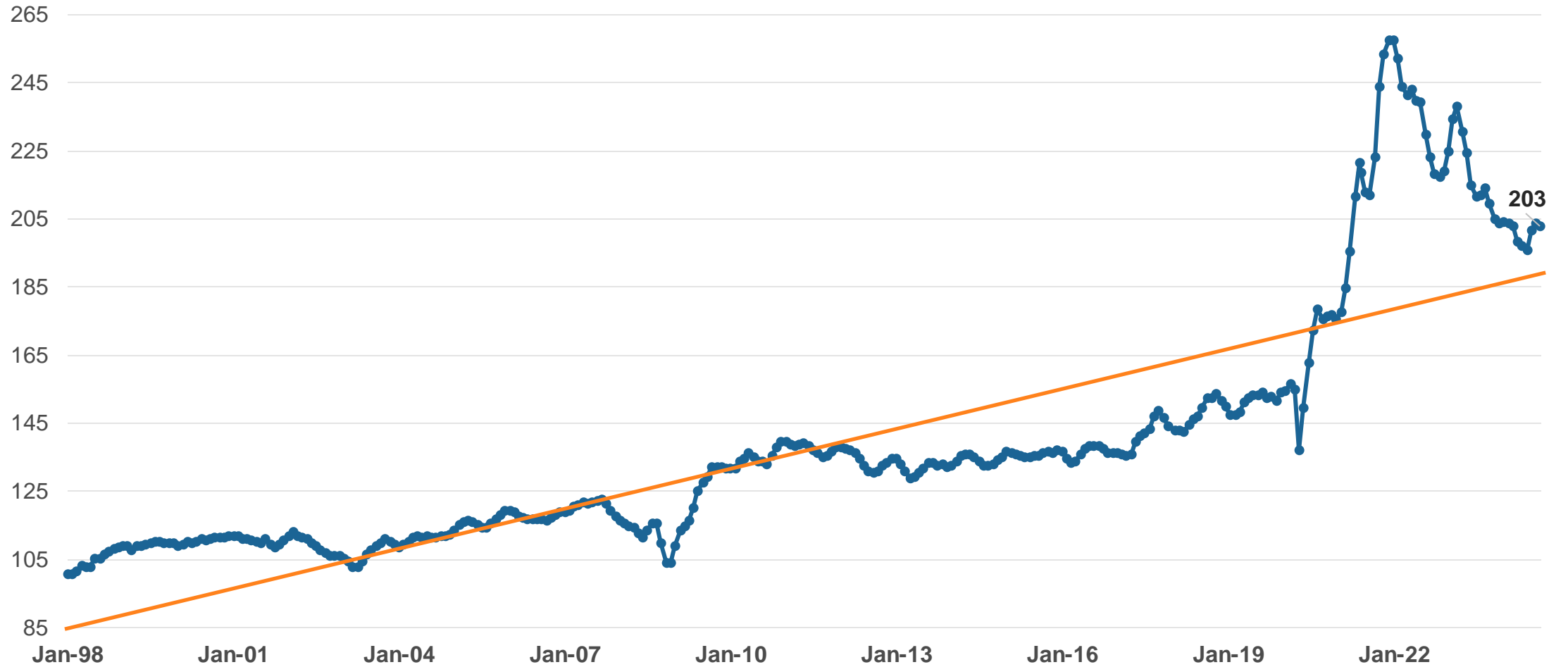
Steps

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



Manheim Used Vehicle Value Index

Prices fell 0.5% from August and were down 5.3% from September 2023

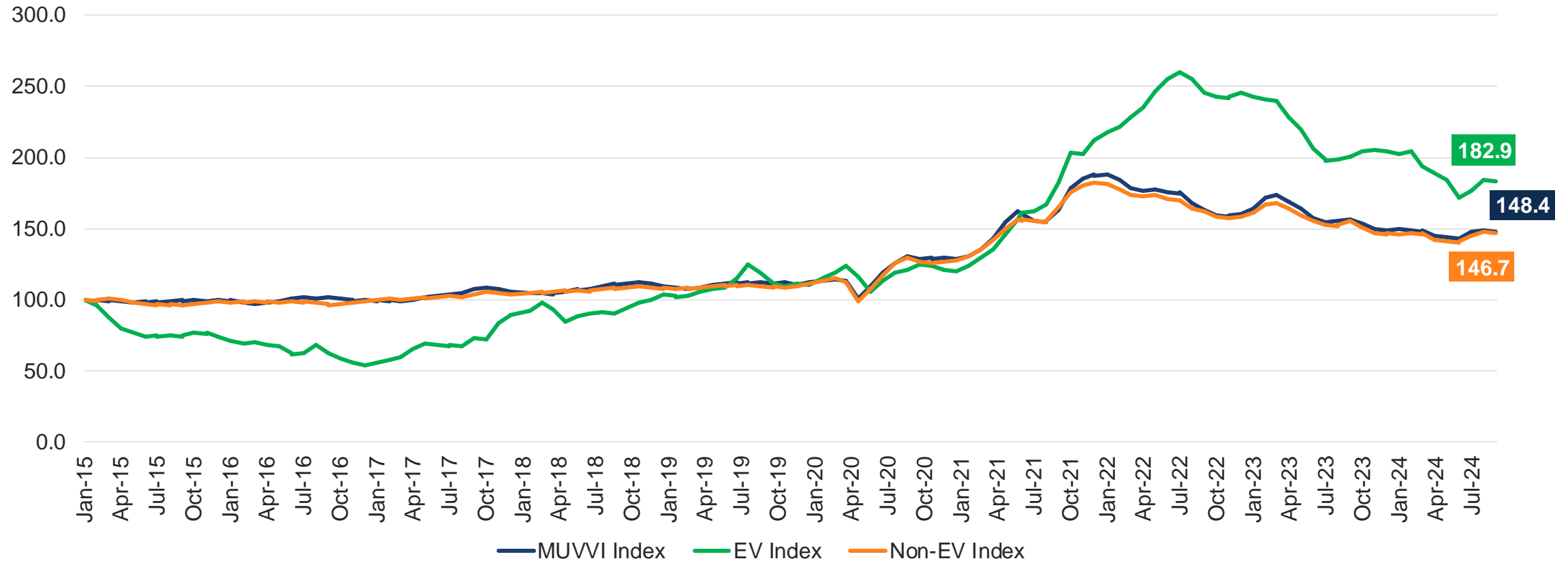


Manheim Index: EV & Non-EV

The EV Index holds higher than Non-EV as it increased substantially in 2021 and 2022

Rebased MUVVI Index: EV & Non-EV

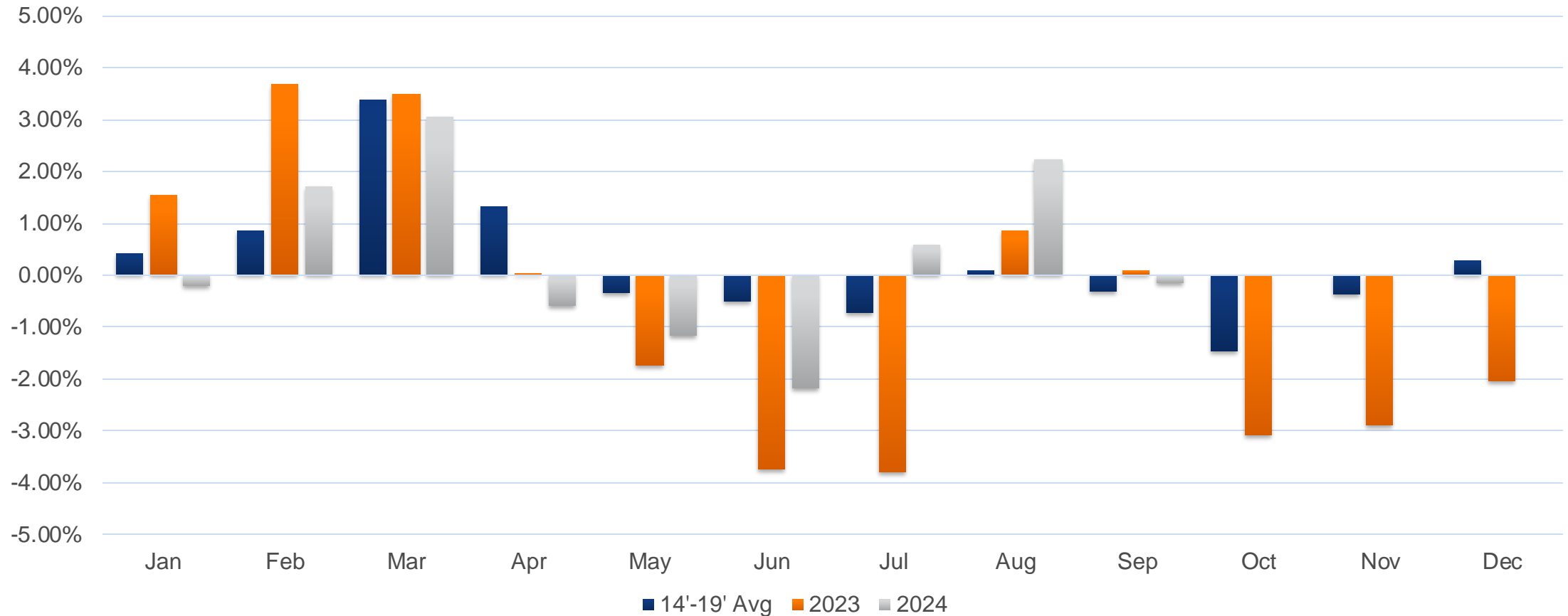
Jan-2015 = 100



Month-Over-Month Performance Trend

Changes in values were muted to the upside then declined more in Q2 before flipping higher in July & August

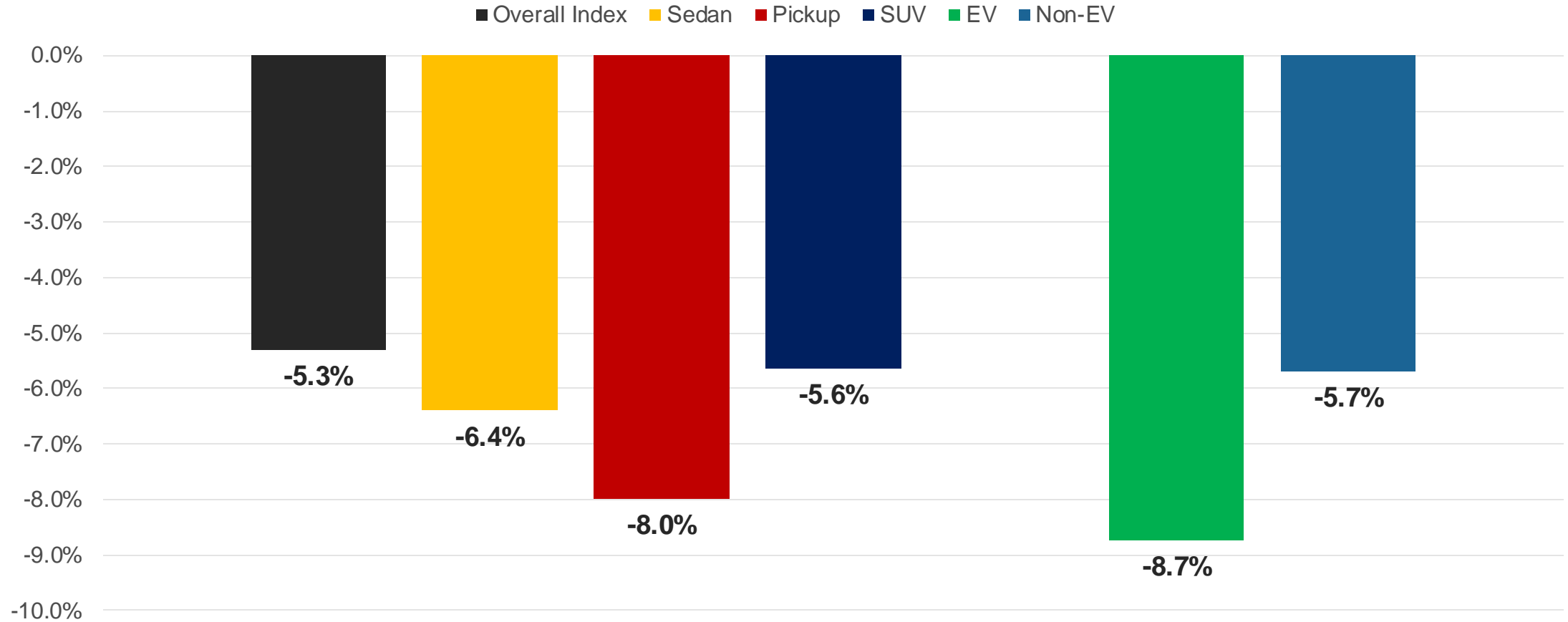
Non-Seasonally Adjusted Price Change M/M



MUVVI Index Trends By Key Segment

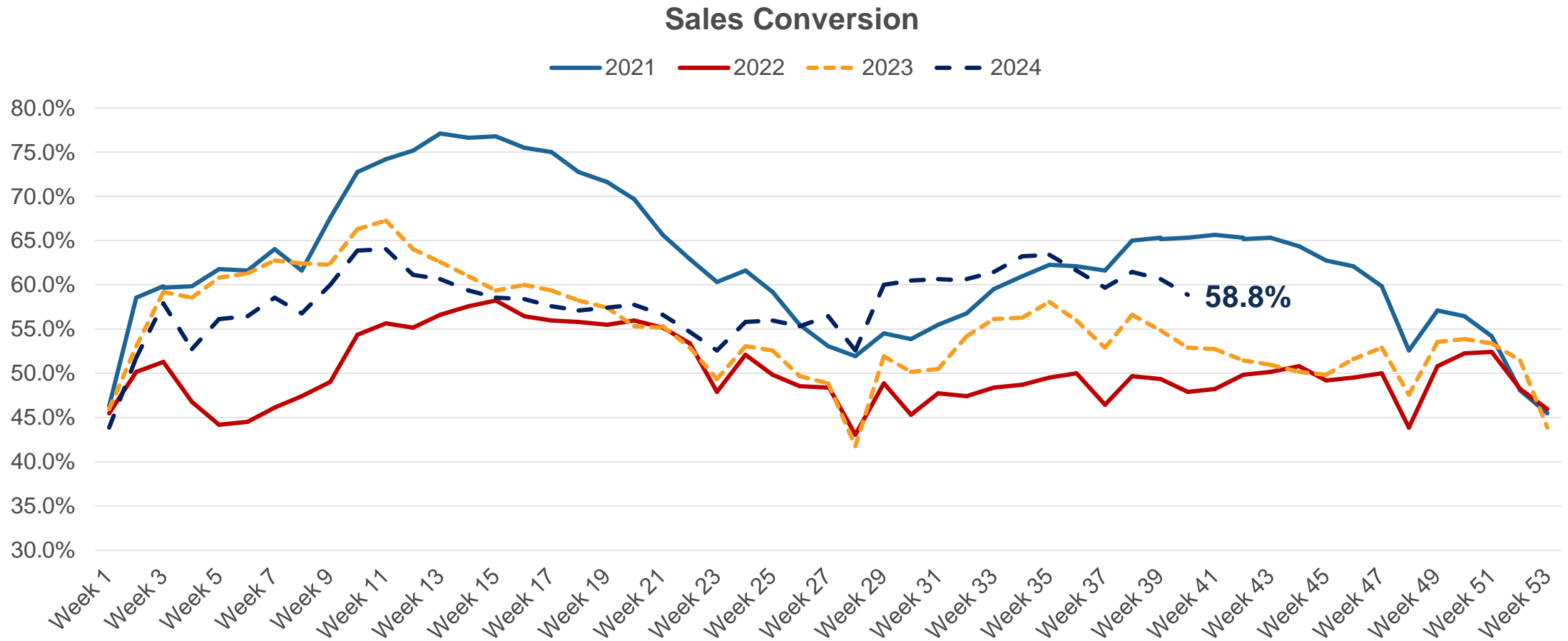
Value declines against last year were a little stronger in September but were muted through the summer

Annual Change by Index Segment



Wholesale Sales Conversion

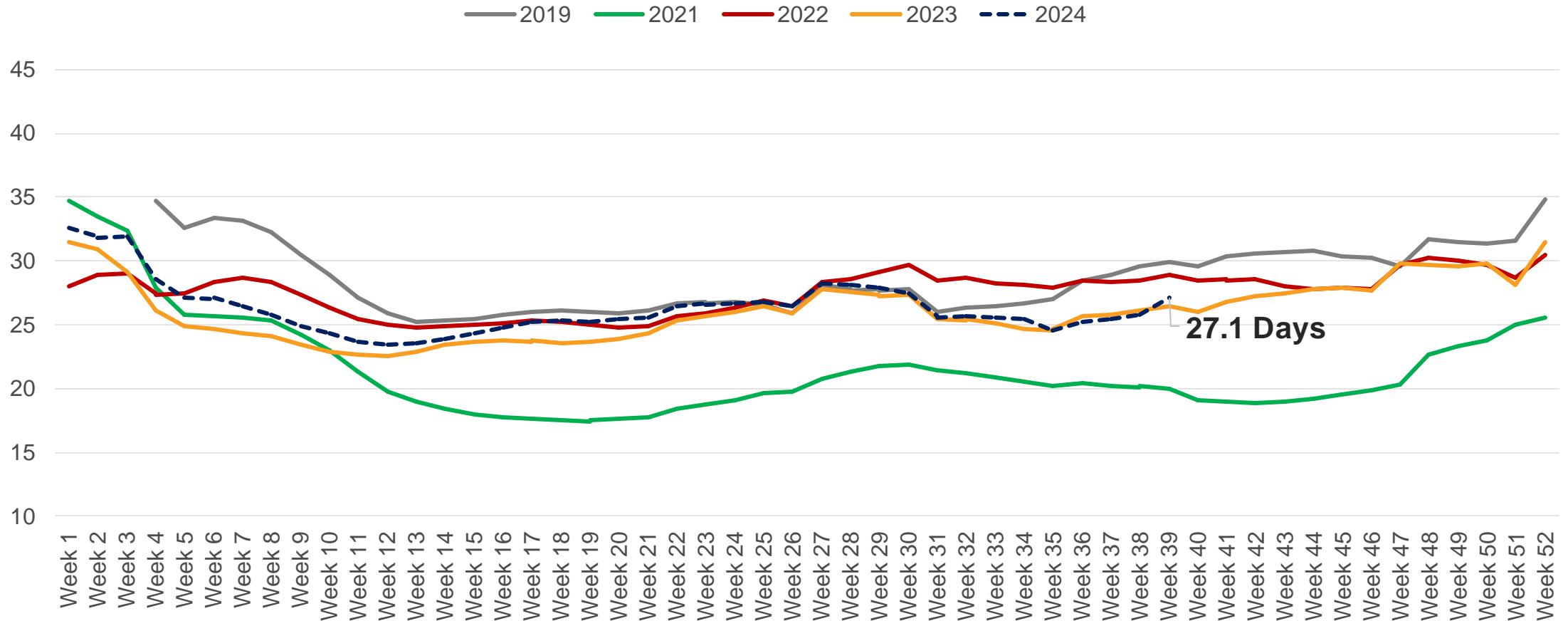
Sales Conversion declined slightly last week but remains several points ahead of the last few years



Wholesale Supply Has Slowly Risen Over The Last Month

Inventory is +16% Y/Y and Sales are +15% as Days Supply rises to 27.1 Days, 2% above than 2023

Wholesale Days of Supply

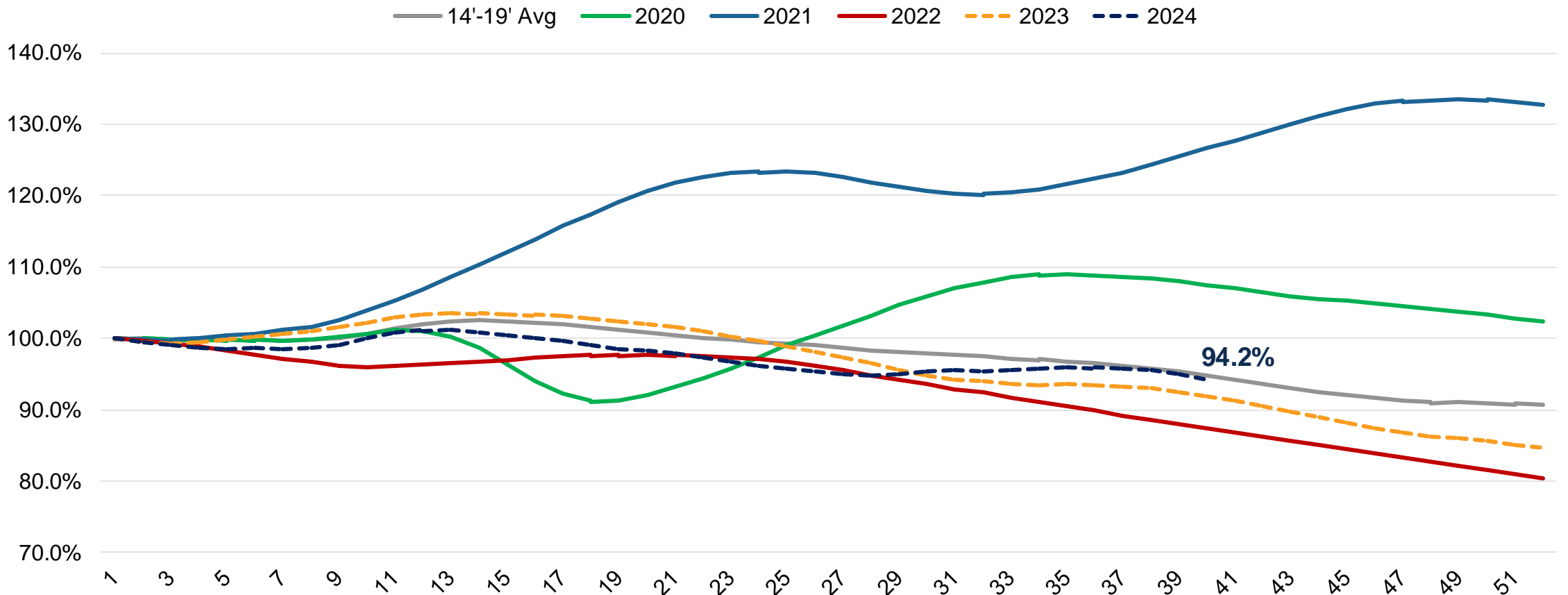


Overall Wholesale MMR Value Trends

Year to date wholesale values are less than 1% below the long-term trend but the path has varied

Overall MMR Index Trends

All Model Years

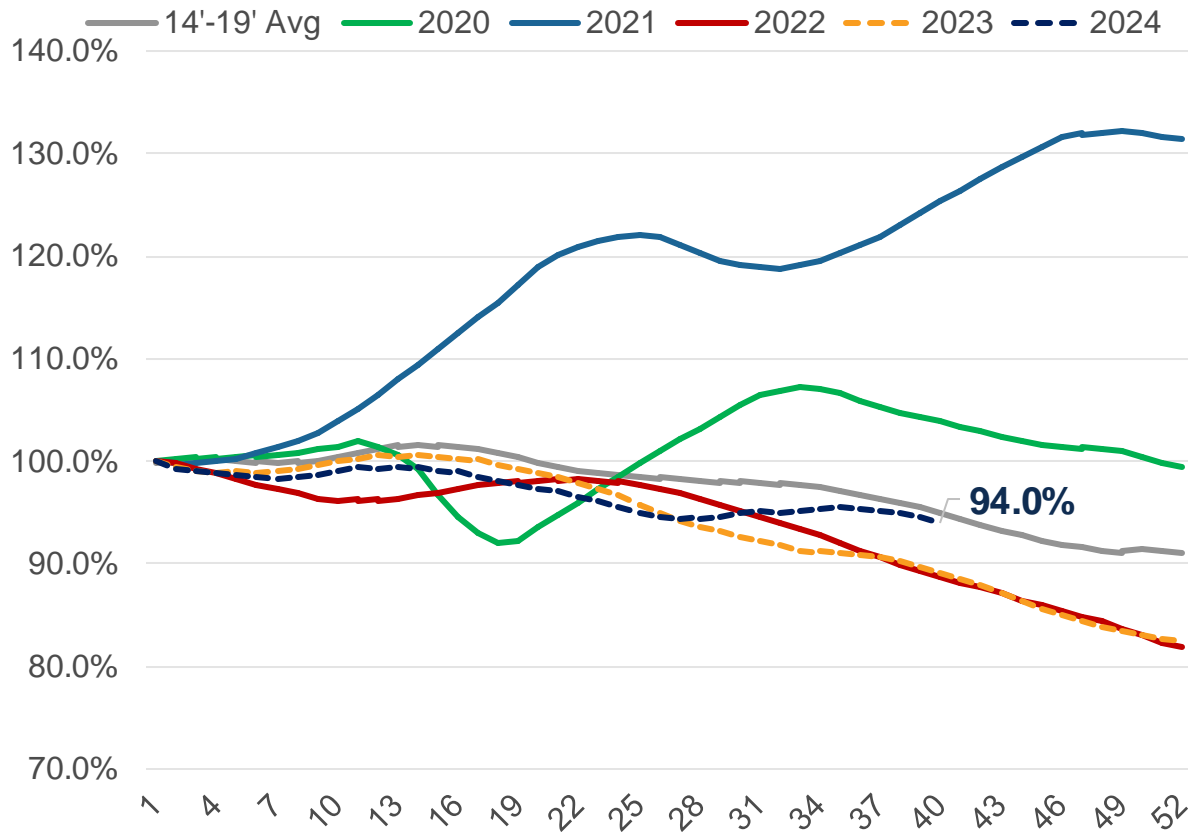


1YO MMR Index With Resale Values By Calendar Year

The 1YO is down a bit more overall than other groups as new vehicle incentives grow

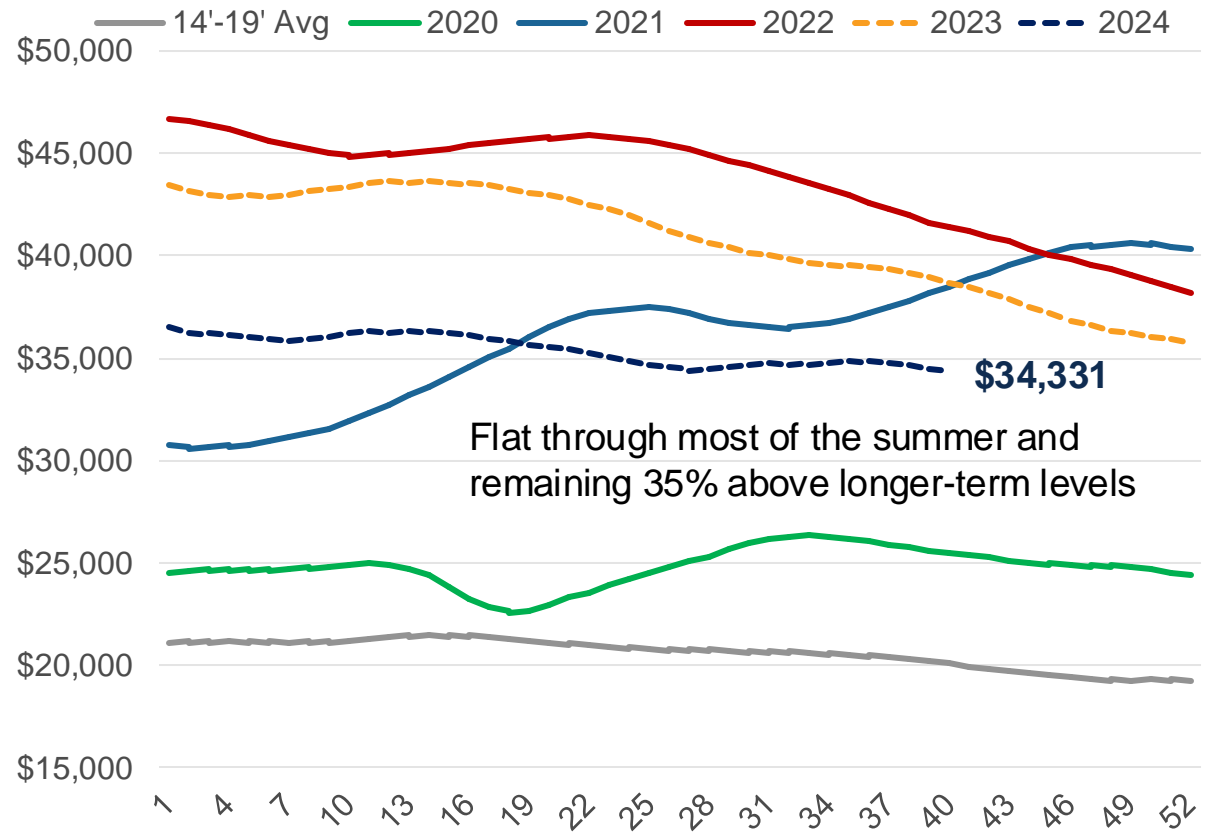
MMR Index Trends

1YO



MMR Resale Value Trends

1YO

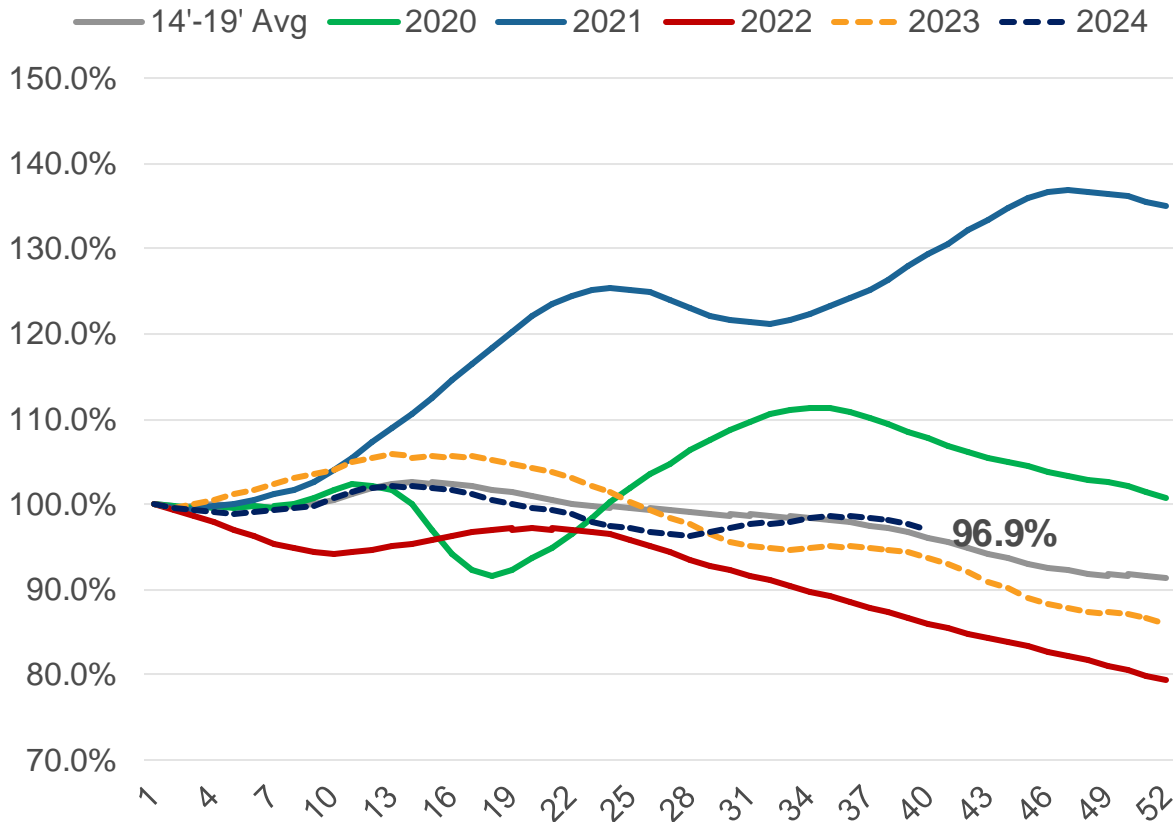


3YO MMR Index With Resale Values By Calendar Year

3YO values have appreciated in early summer and fell in September but total depreciation is below normal

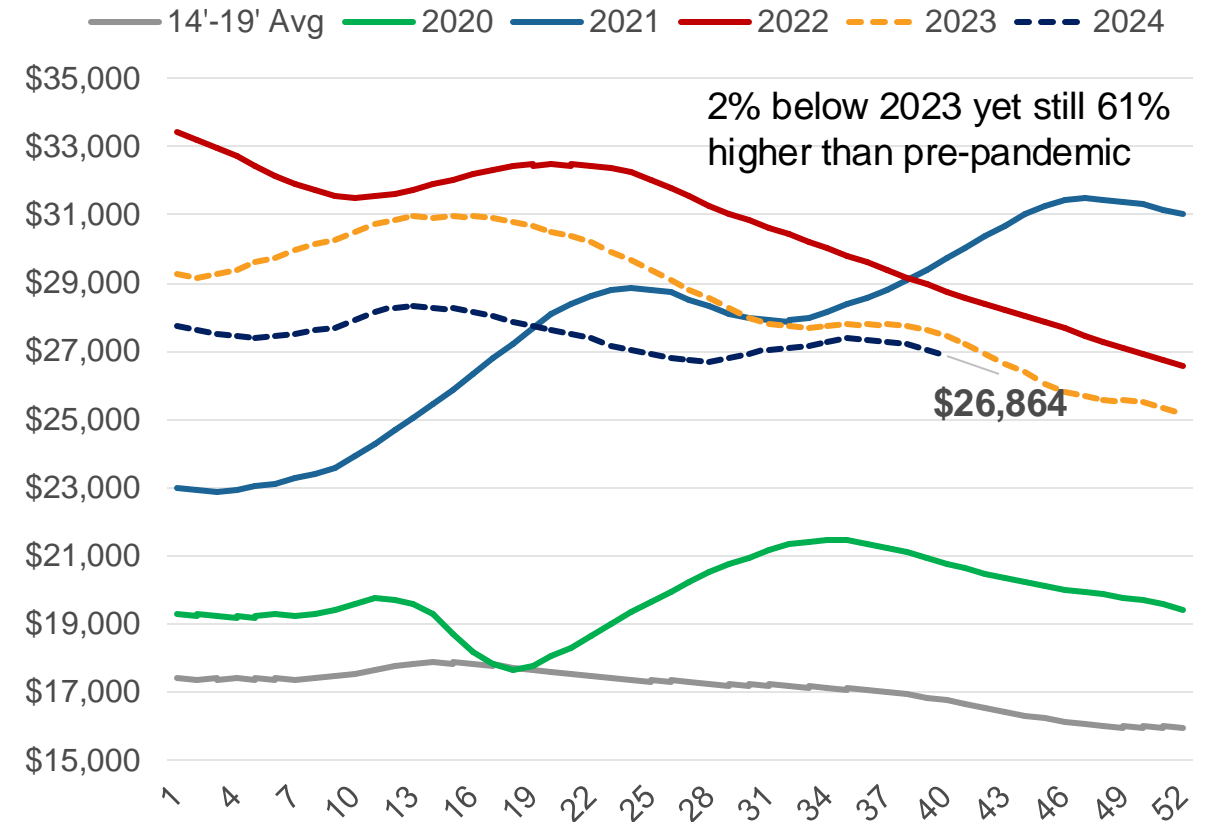
MMR Index Trends

3YO



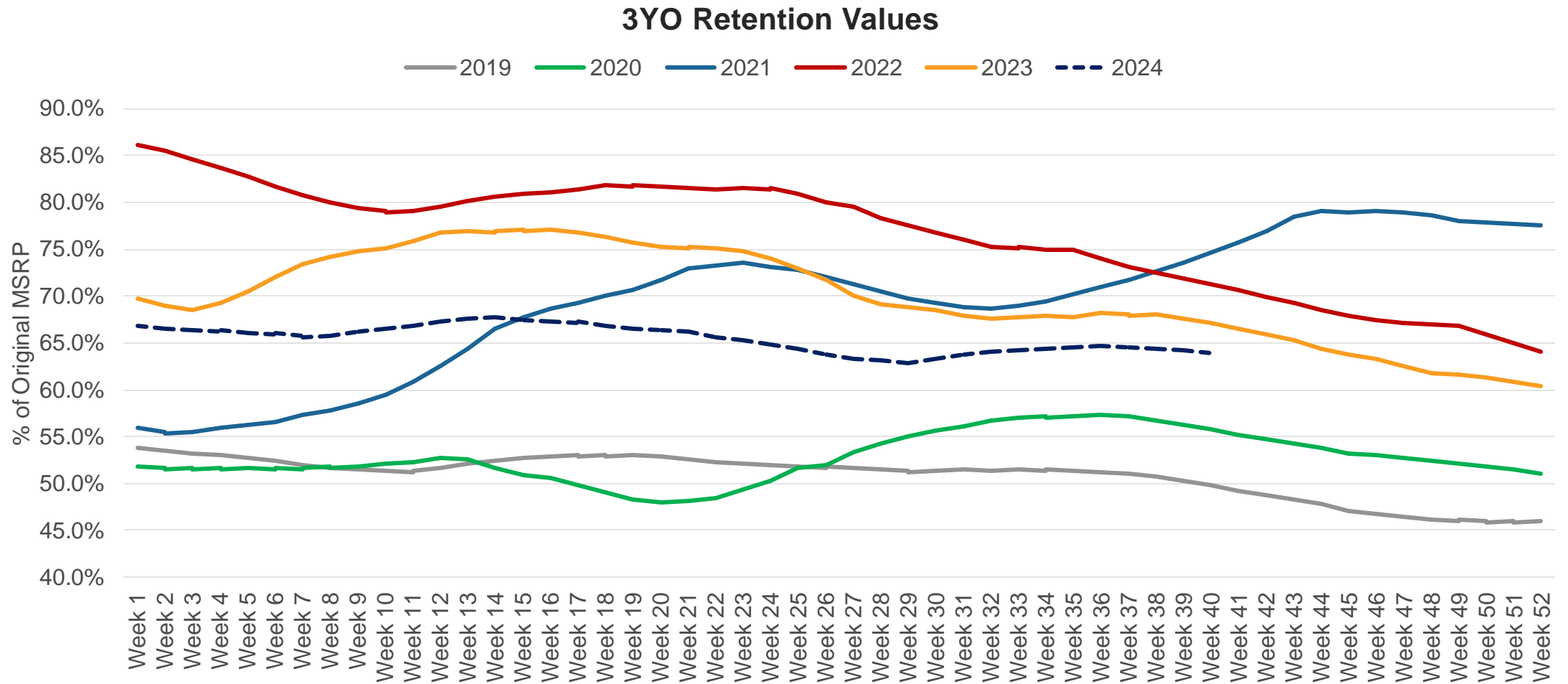
MMR Resale Value Trends

3YO



Retention Values at Auction

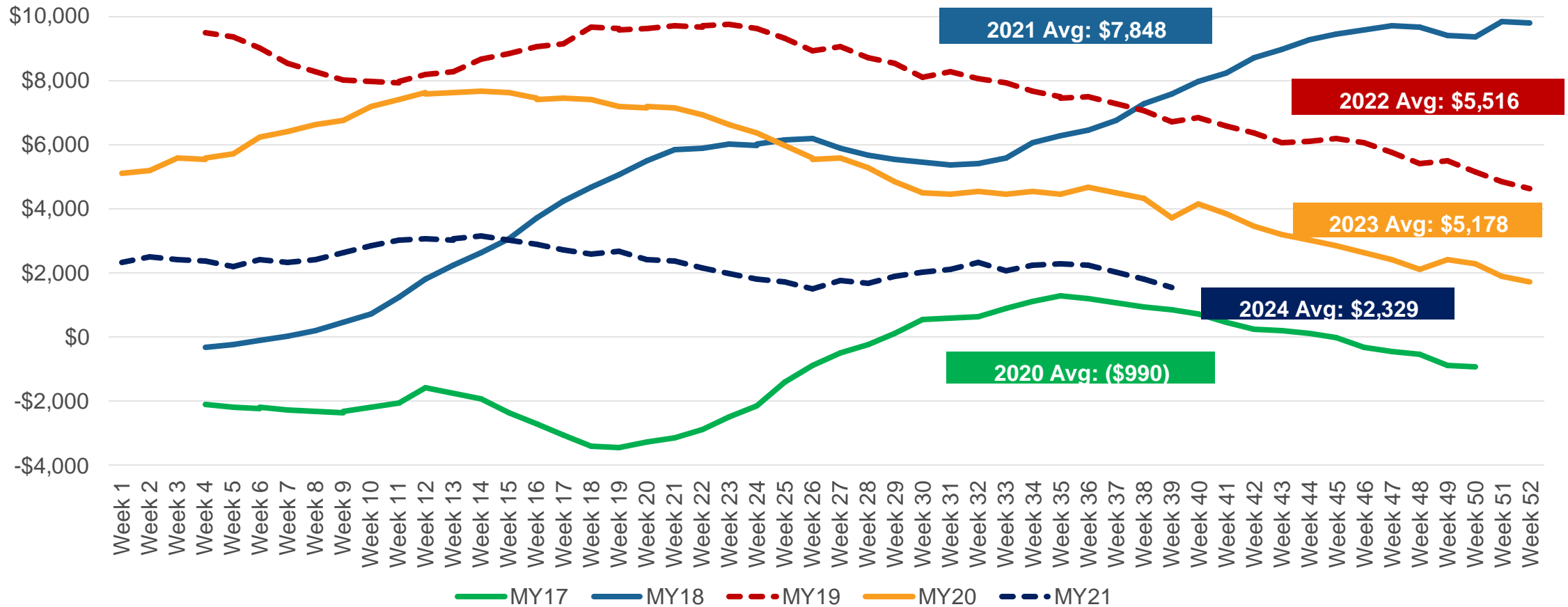
Retention values remain lower than the last few years yet elevated against historical standards



CALE: Lease Equity Has Fallen Over The Last Month

Lease equity held steady in early summer but declined in September as 3YO values declined

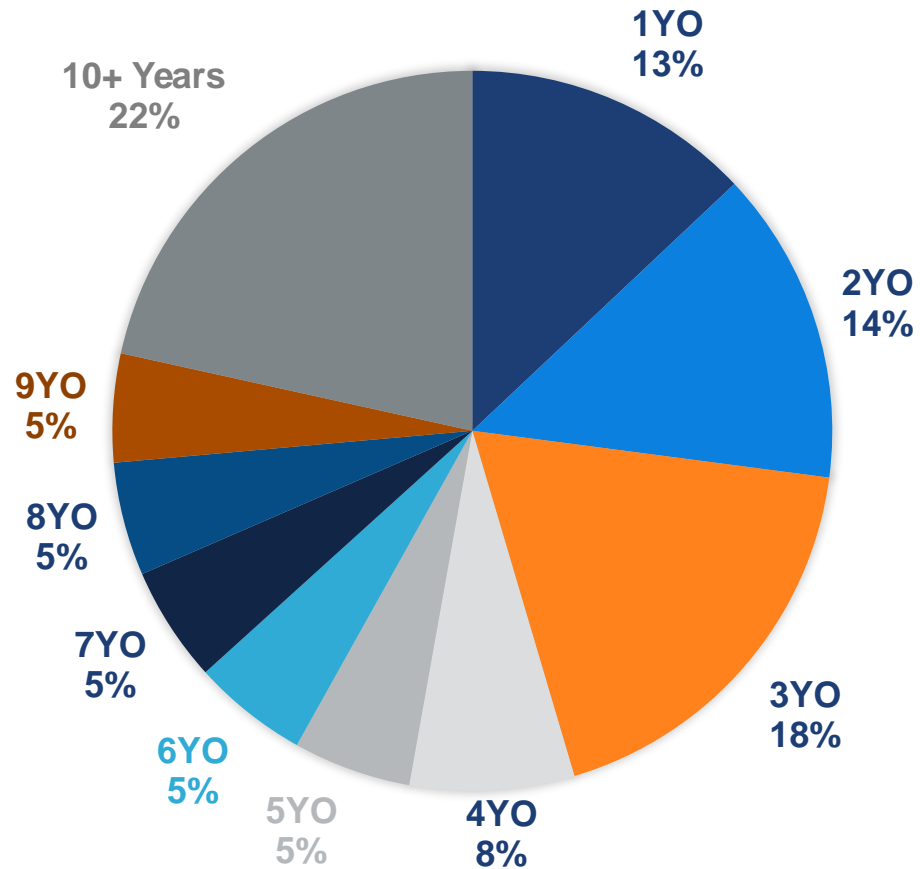
CALE Historical View (36-month term)



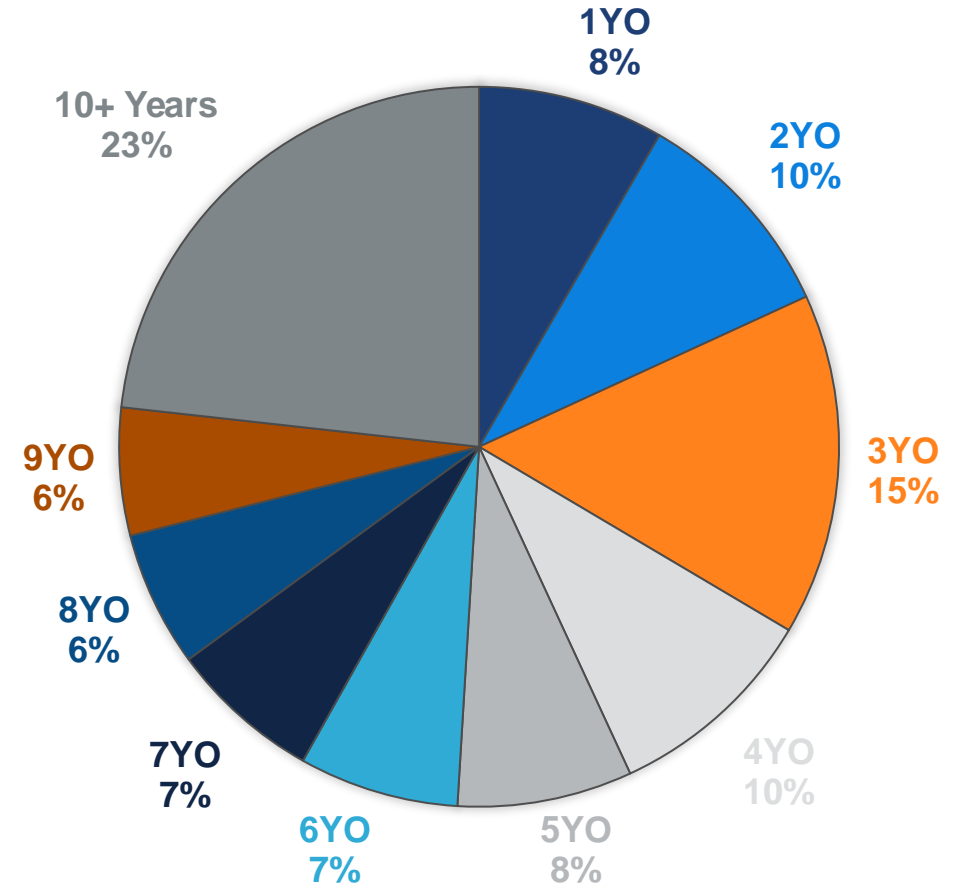
Sales Mix At Manheim

The average age of units sold at Manheim has risen as segments less than 4 years old contract

Long-term Age Mix At Manheim



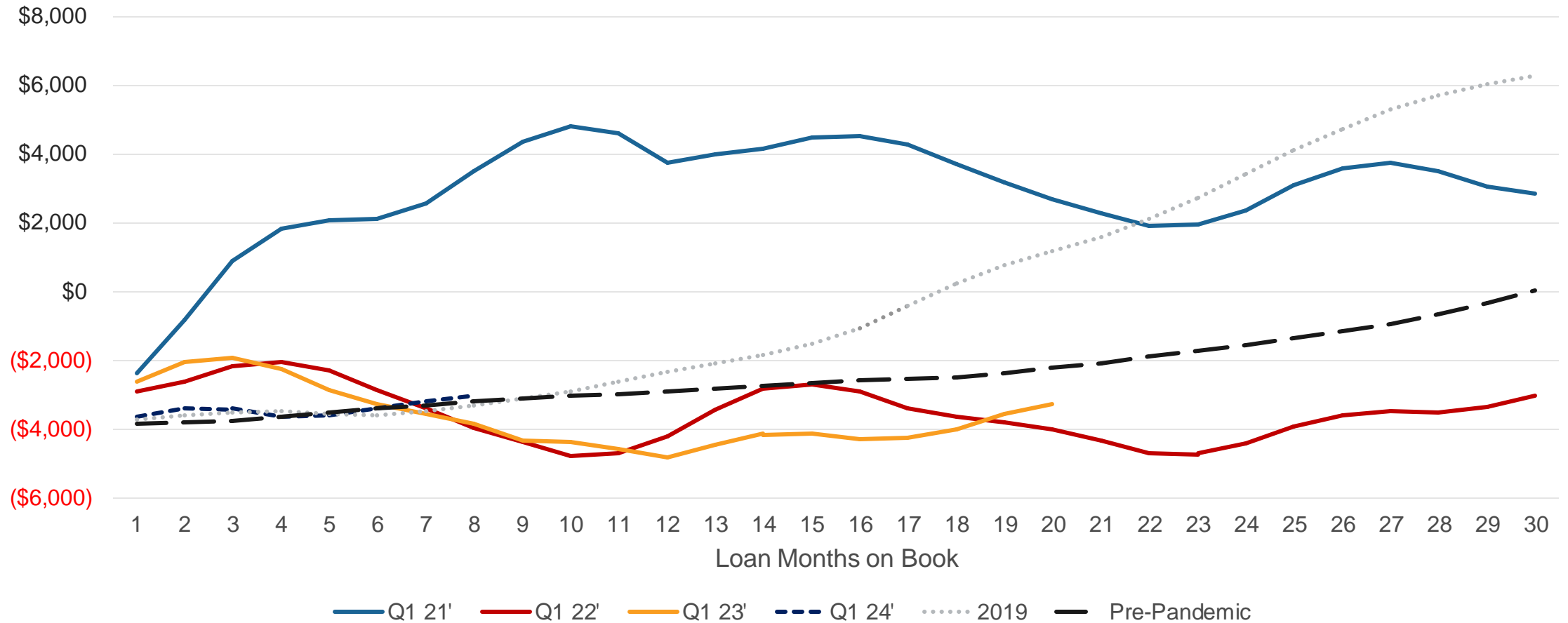
Current Age Mix At Manheim



CARE: Loan Equity Has Improved A Bit

Current 2024 vintages demonstrate improvement in loan equity vs the last two years, inline with long term levels

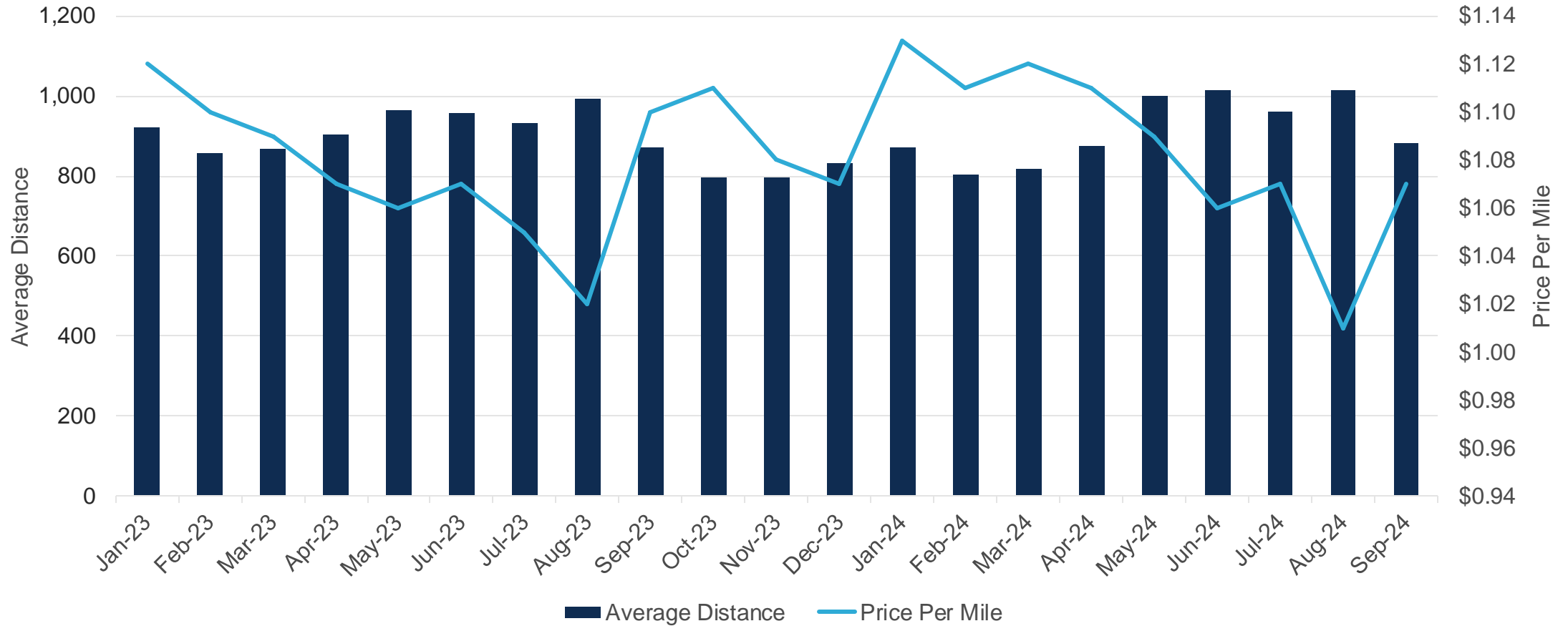
CARE: Cox Auto Retail Loan Equity (Vintage Analysis)



Transportation Metrics: Prices and Mileage

Average miles moved was up 1.3% Y/Y while the Price Per Mile declined 2.7% against September 2023

Central Dispatch Marketplace Metrics



Auction Data and Rental Market

Scott Vanner

Senior Analyst of Economic and
Industry Insights

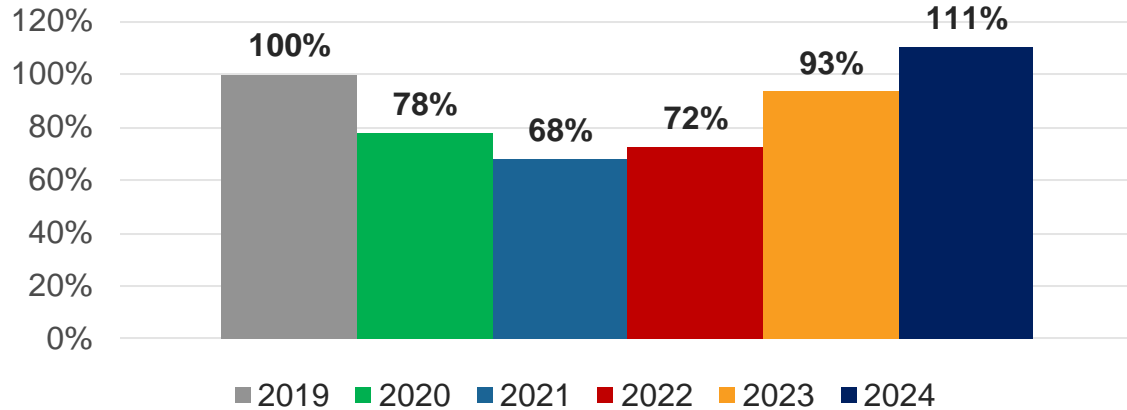


Auction Check-Ins for Commercial Segments

Repo continues to remain higher against 2019, yet the pace is lower recently as lease may have peaked

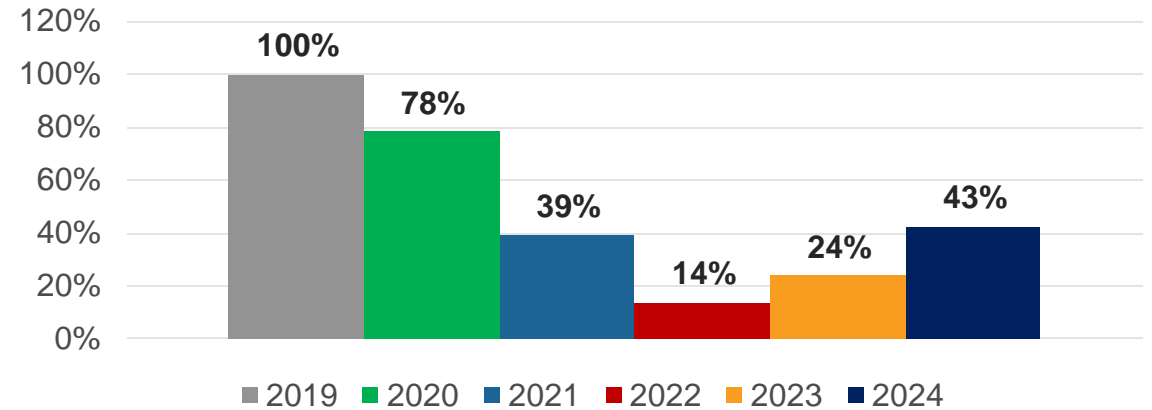
Repo Check-In Index

2019=100



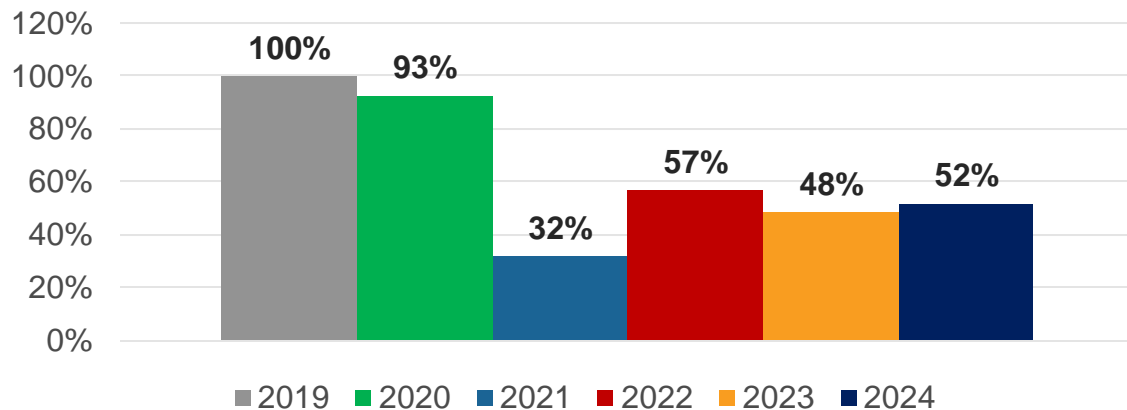
Lease Check-In Index

2019=100



Rental Check-In Index

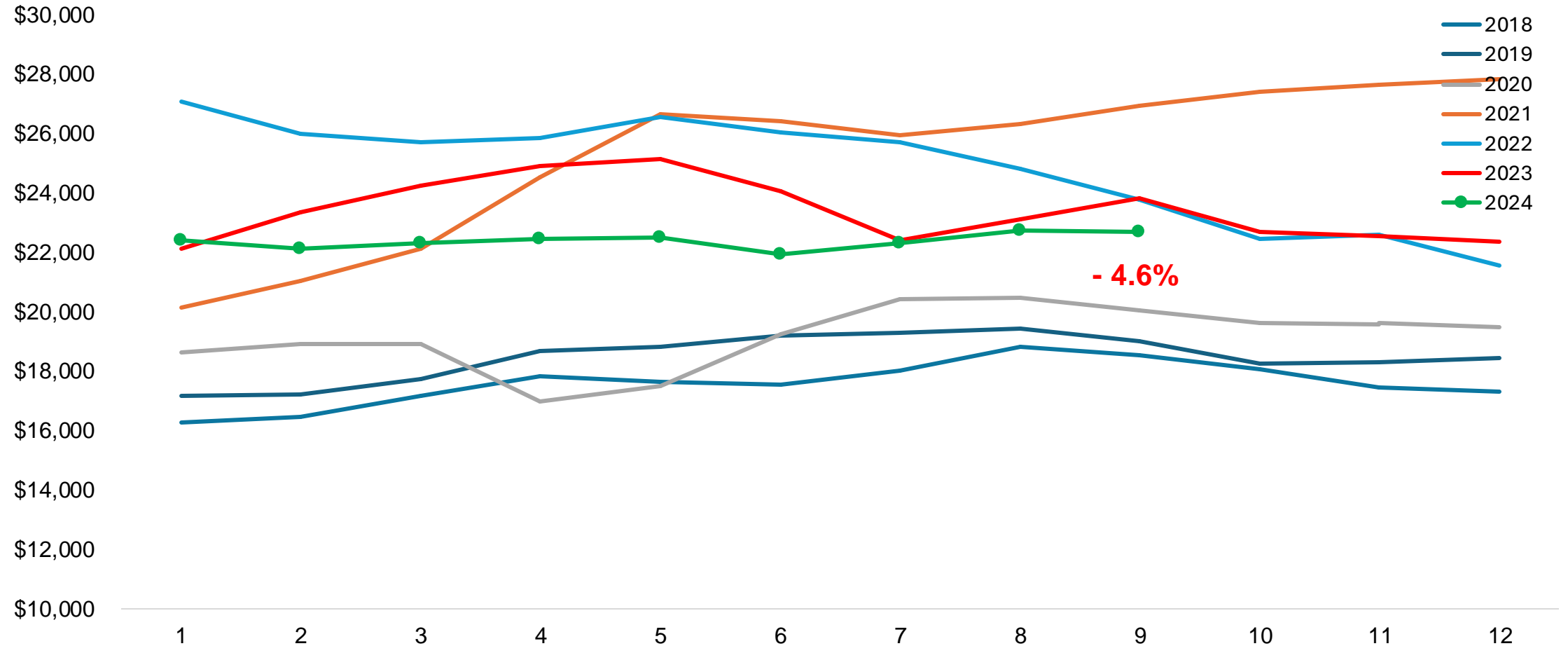
2019=100



- Repo +18% vs 23' & up +11% vs 19'
- Lease +78% vs 23' yet down (57%) vs 19'
- Rental up 7% vs 23' and down (48%) vs 19'

Rental Risk Average Auction Prices

Prices for units sold in September were down 4.6% year-over-year and down 0.1% from August



Rental Risk Vehicle Variety Increasing

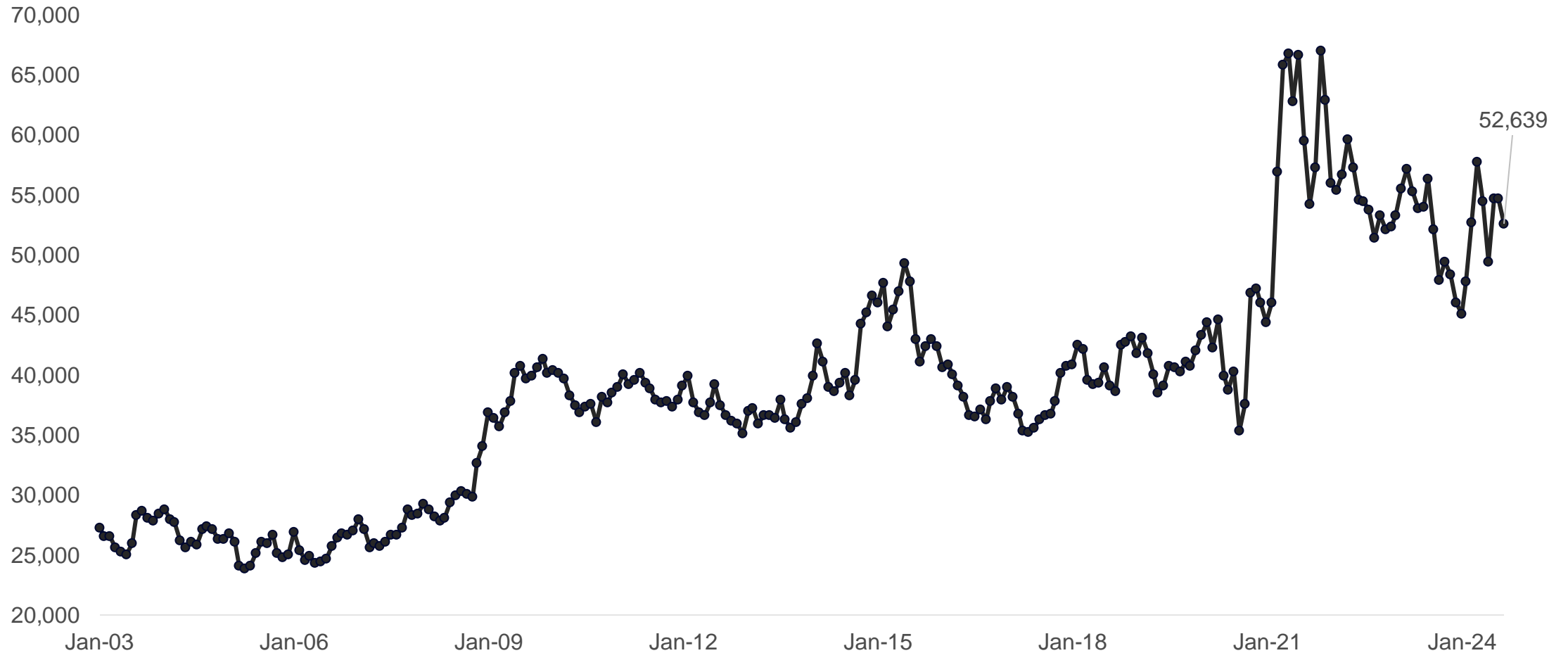
Auctions see higher concentration of rental units sold from a configuration perspective

Rank	2022 Q3	2023 Q3	2024 Q3
Number of unique year, make, model, body configurations sold	3,892	4,502	4,795
Share accounted for top 10 YMMB	10.9%	10.7%	21.5%
Share accounted for top 25 YMMB	19.7%	19.4%	32.4%
Number of YMMB to reach 50% share	128	150	65



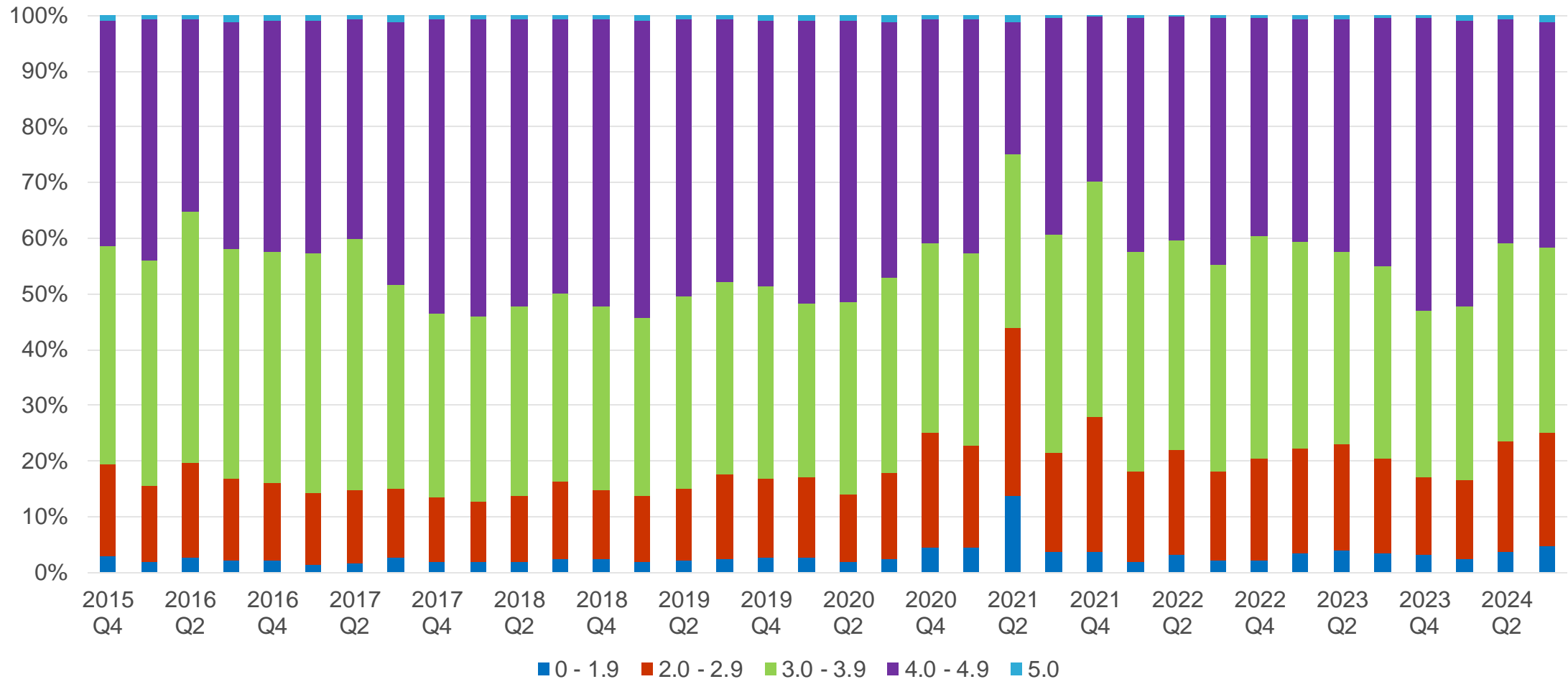
Rental Risk Average Mileage

Average mileage was down 4% from August but up 10% from September 2023



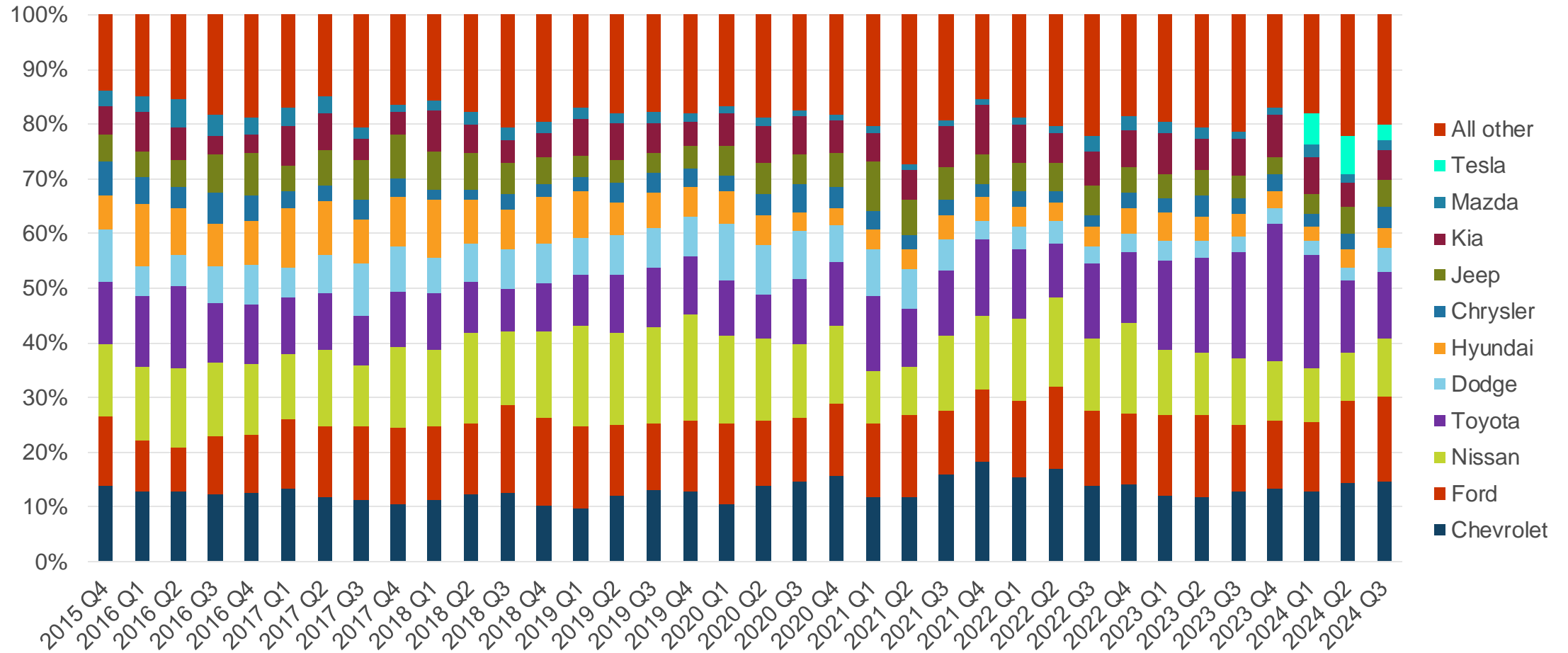
Rental Risk Sales Condition

Little change in share of higher graded units from previous quarter as share of lower graded units grow



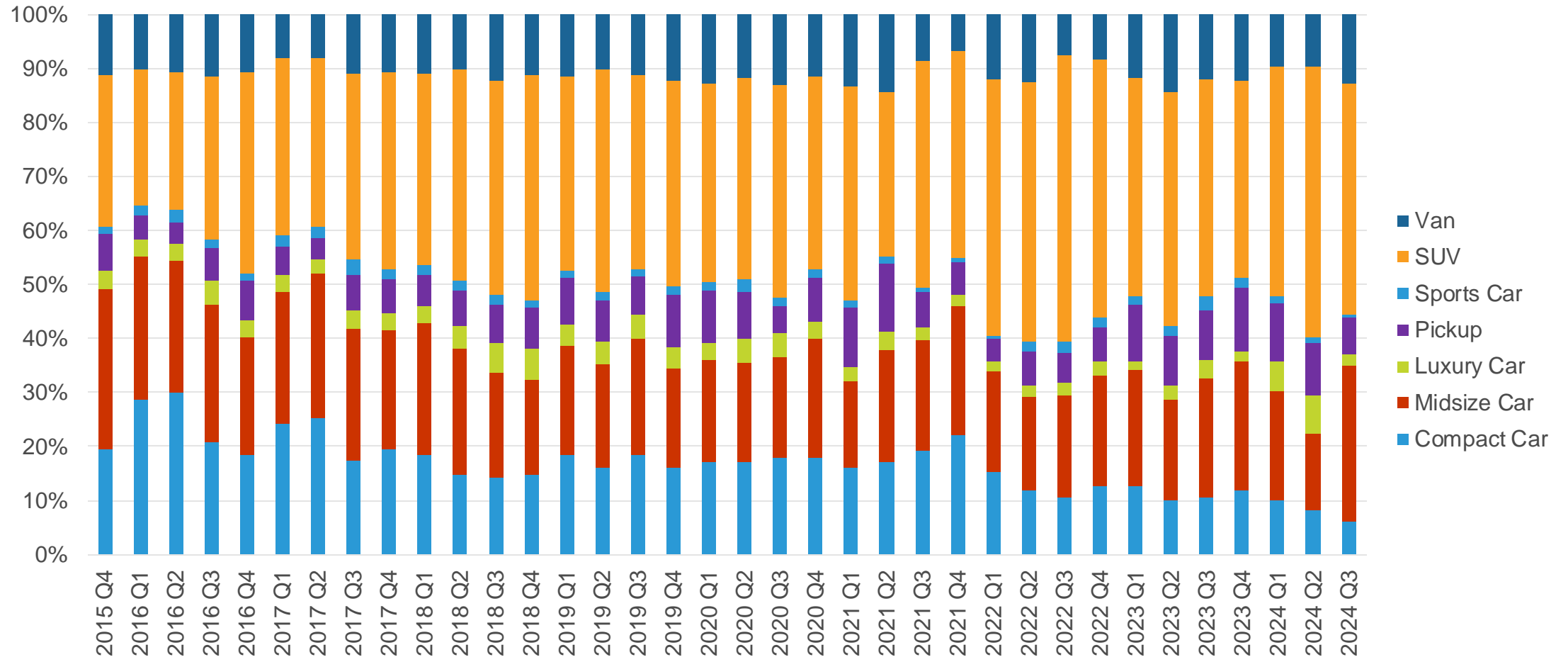
Rental Risk Sales By Make

Tesla's share drops as Ford, Nissan, Dodge, Chrysler and Kia make gains



Rental Risk Sales by Vehicle Segment

Van and Midsize Cars are up, while all other segments are down from Q2 2024



Manheim Insights on Top Volume Vehicles

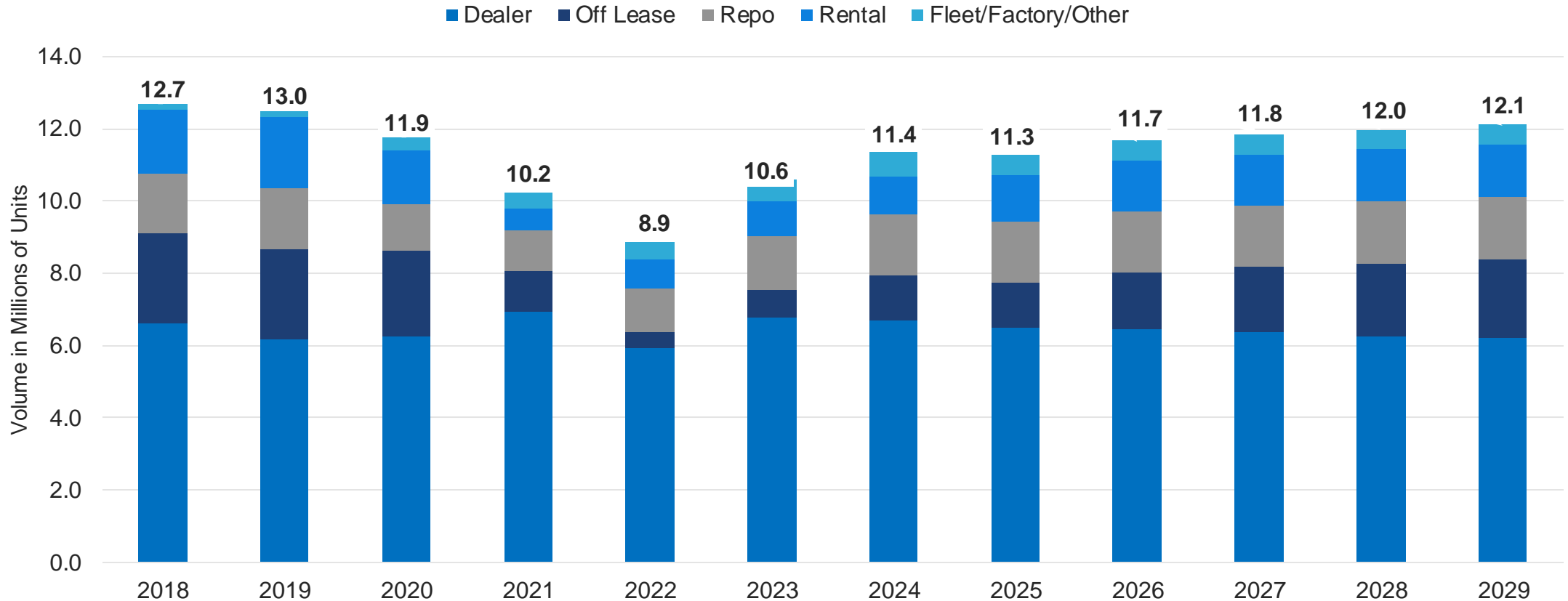
Price trends on top selling vehicles in September were mixed for top models with SUVs holding the top 4 seller spots

Rank	Source(Rank)	Category	Subcategory	Vehicle	1-Aug	Past 30 Days	Last Year	Current Dep	L12M Dep/Mo
1	All	SUV	SUV MIDSIZE	2021 FORD EXPLORER 4WD 4C 4D SUV XLT	\$26,456	\$26,467	\$32,392	0.0%	-1.5%
2	All	SUV	SUV MIDSIZE	2023 NISSAN ROGUE AWD 3C 4D SUV SV	\$22,403	\$22,970	\$28,342	-2.5%	-1.7%
3	All	SUV	SUV MIDSIZE	2022 FORD EXPLORER 4WD 4C 4D SUV XLT	\$29,752	\$29,859	\$33,797	-0.4%	-1.0%
4	All	SUV	SUV MIDSIZE	2023 NISSAN PATHFINDER 4WD 4D SUV SL	\$31,039	\$31,948	\$39,423	-2.8%	-1.8%
5	All	PICKUP	PICKUP LITE DUTY FULLS	2021 FORD F150 4WD V6 CREW CAB 2.7L XLT	\$33,299	\$33,006	\$40,063	0.9%	-1.4%
1 Dealer	Dealer	MIDSIZE CAR	MIDSIZE CAR ENTRY	2023 CHEVROLET MALIBU 4D SEDAN 1LT	\$16,904	\$17,880	\$22,197	-5.5%	-2.0%
1 Lease	Lease	SUV	SUV MIDSIZE	2021 FORD EXPLORER 4WD 4C 4D SUV XLT	\$26,456	\$26,467	\$32,392	0.0%	-1.5%
1 Rental	Rental	VAN	VAN COMPACT	2022 CHRYSLER PACIFICA FWD MINIVAN TOURING L	\$24,211	\$24,726	\$31,029	-2.1%	-1.8%

Wholesale Flows Bottomed in 2022

After 13% decline in 2022, the wholesale market is recovering but will decline overall next year

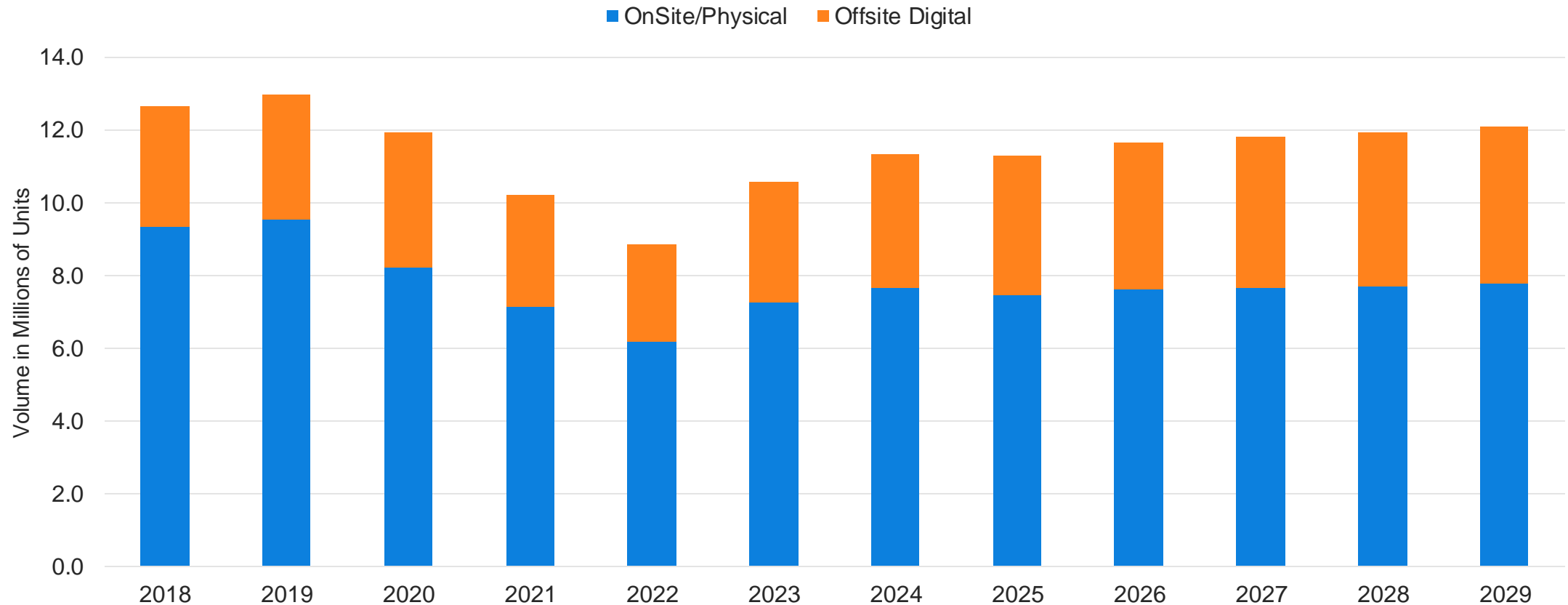
Estimated Wholesale Volumes by Inflow Channel (Annual Volume)
(millions)



On-site Physical Auction Market Does Not Fully Recover

With gradual shift to more transactions offsite and fully digital, onsite volume in 2029 is expected to be down 18% vs 2019

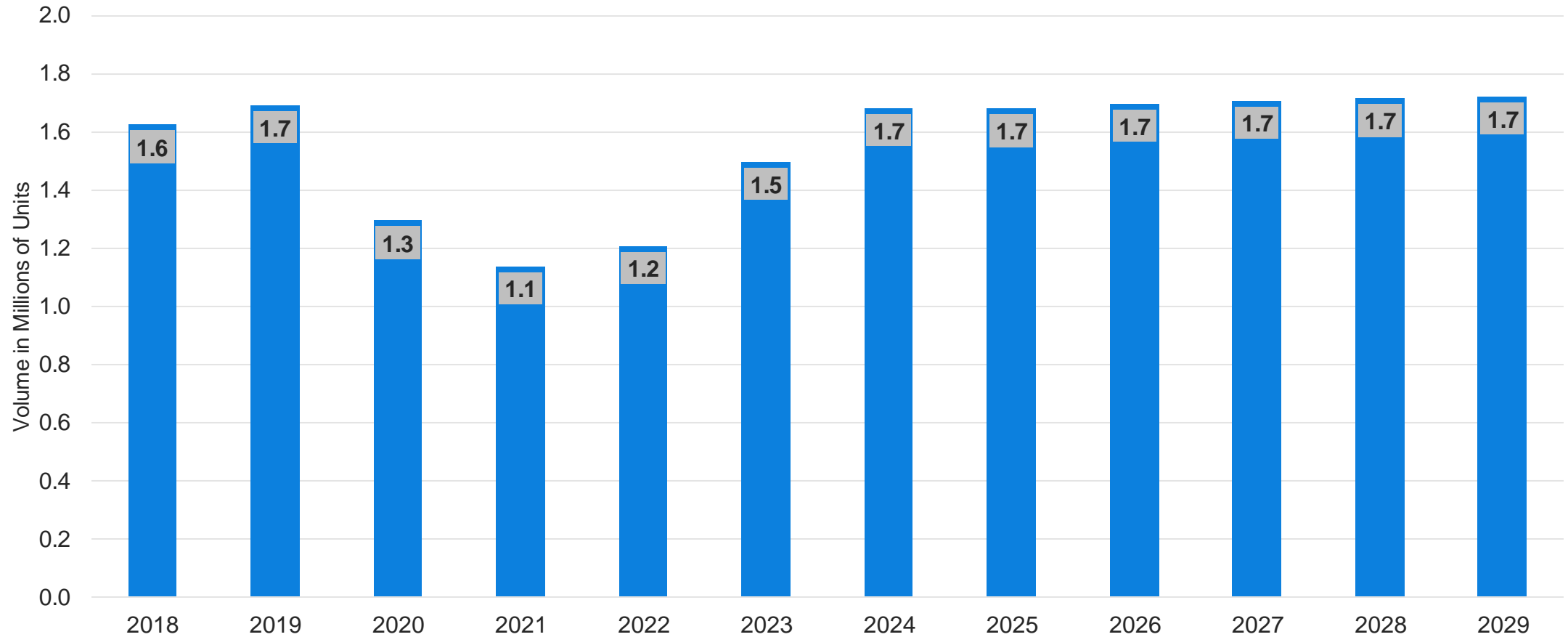
Wholesale Onsite/Physical vs Offsite
(millions)



Repo Recovery Will Be More Normal

Longer term expect normalized default rates but lower loan growth over the next few years

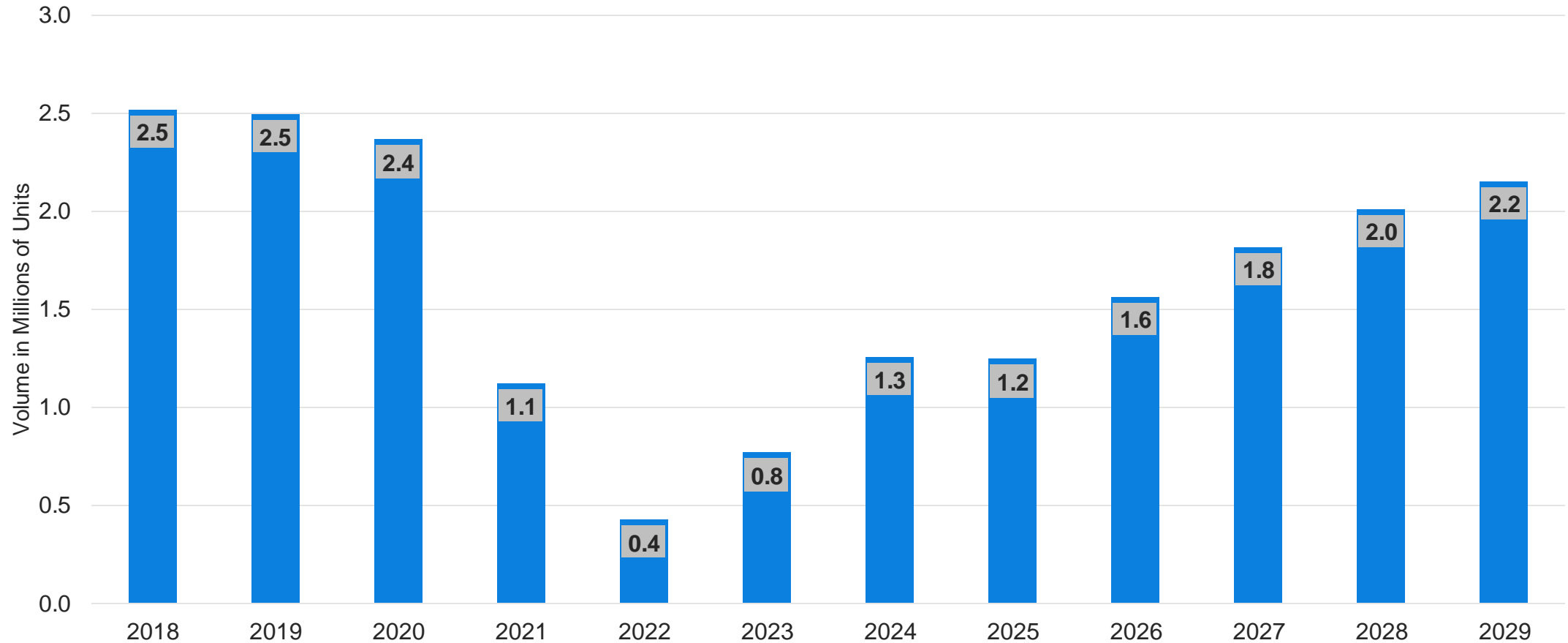
Estimated Repossession Volume



Off Lease Return Rate Will Grow But Maturities Lower

Return rate hit historical low of 11% in 2022 vs. 62% in 2019 and now lease equity and maturities are declining

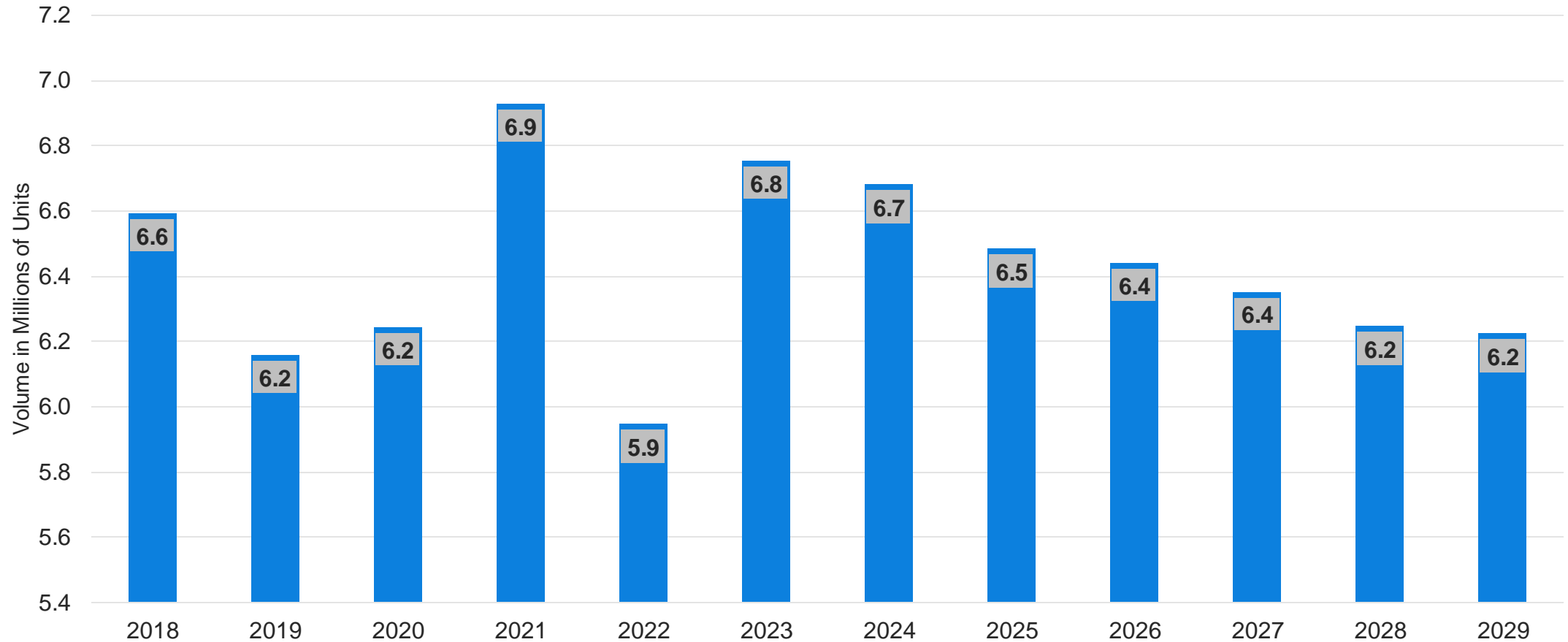
Off Lease Returns



Dealer Volumes Peaked in 2021: Slowly Declining

Off-lease arbitrage and record retail sales powered 2021 but higher retail rates lower wholesale offloading

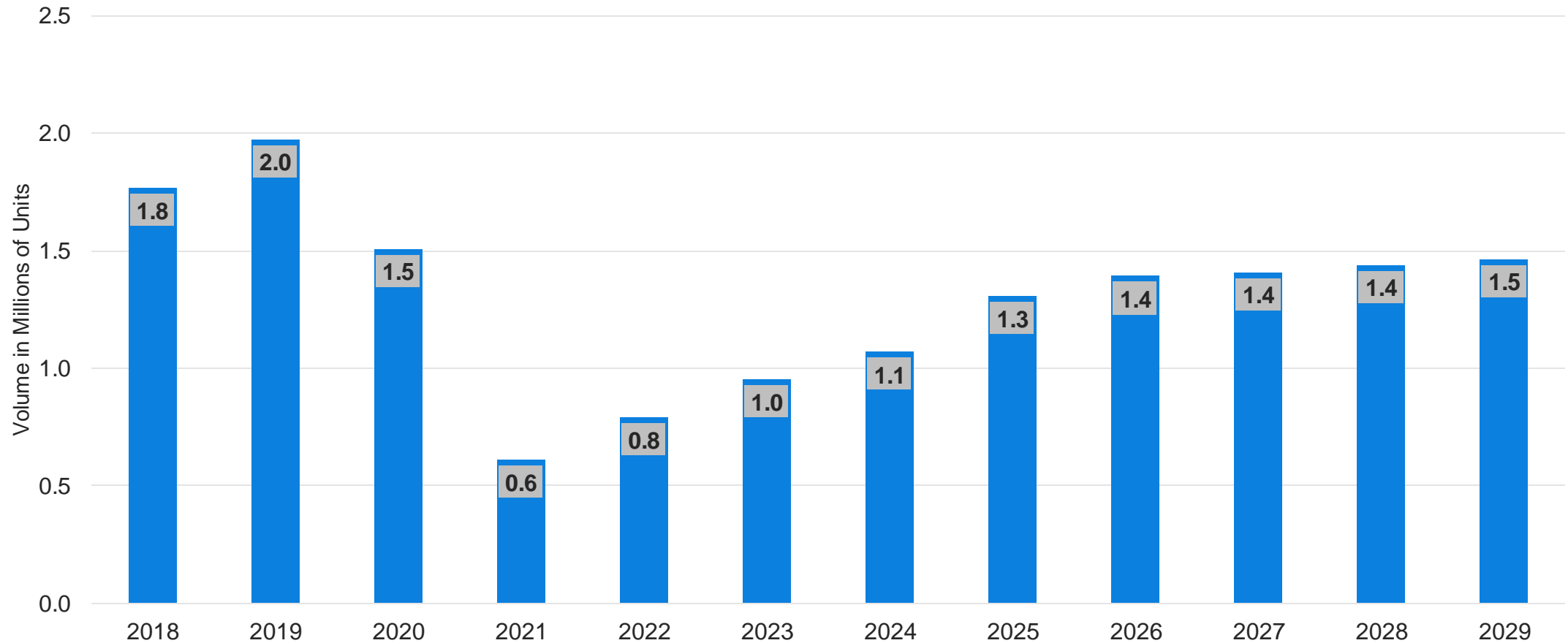
Estimated Dealer Volumes



Rental Volumes Improve But Recovery Is Slower

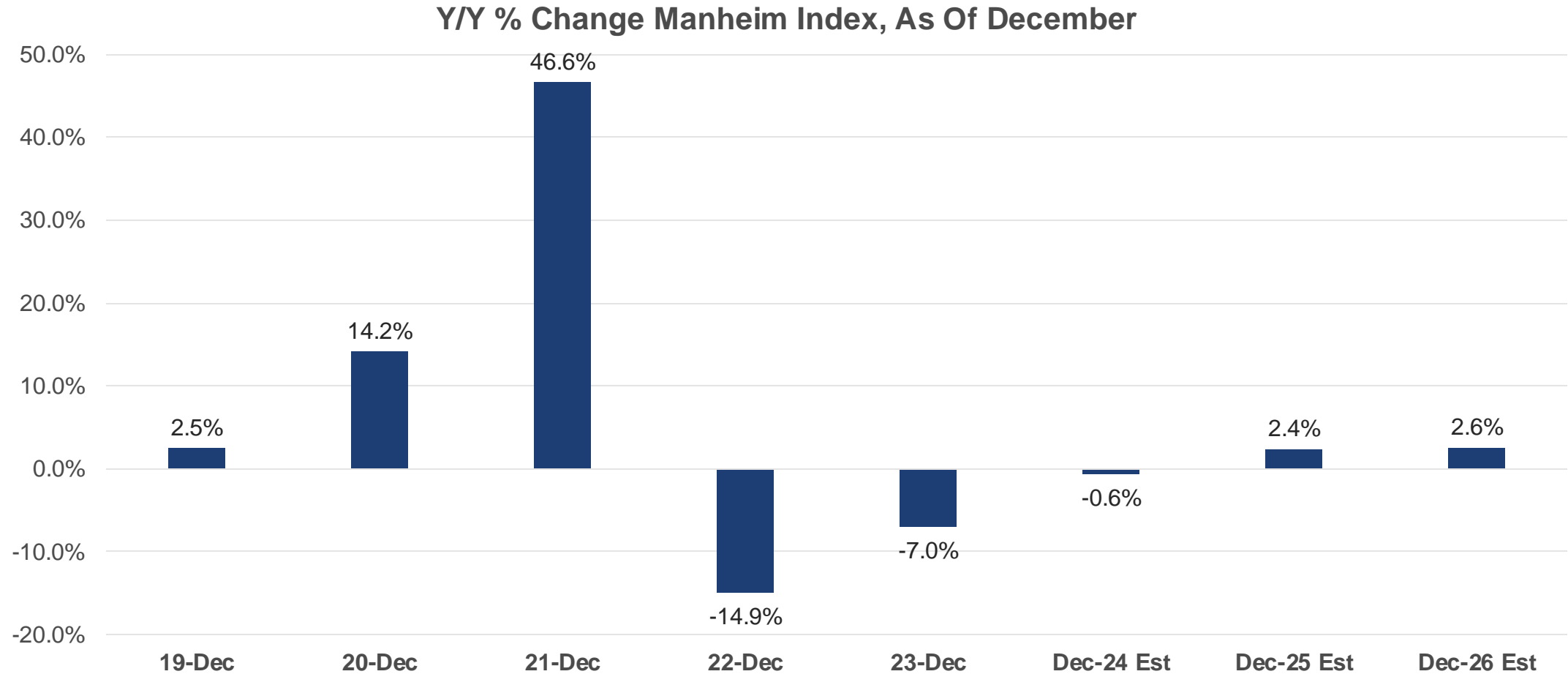
Total fleet size will expand but still fall short of pre-pandemic levels as share of new market recovers slowly

Estimated Rental Volumes



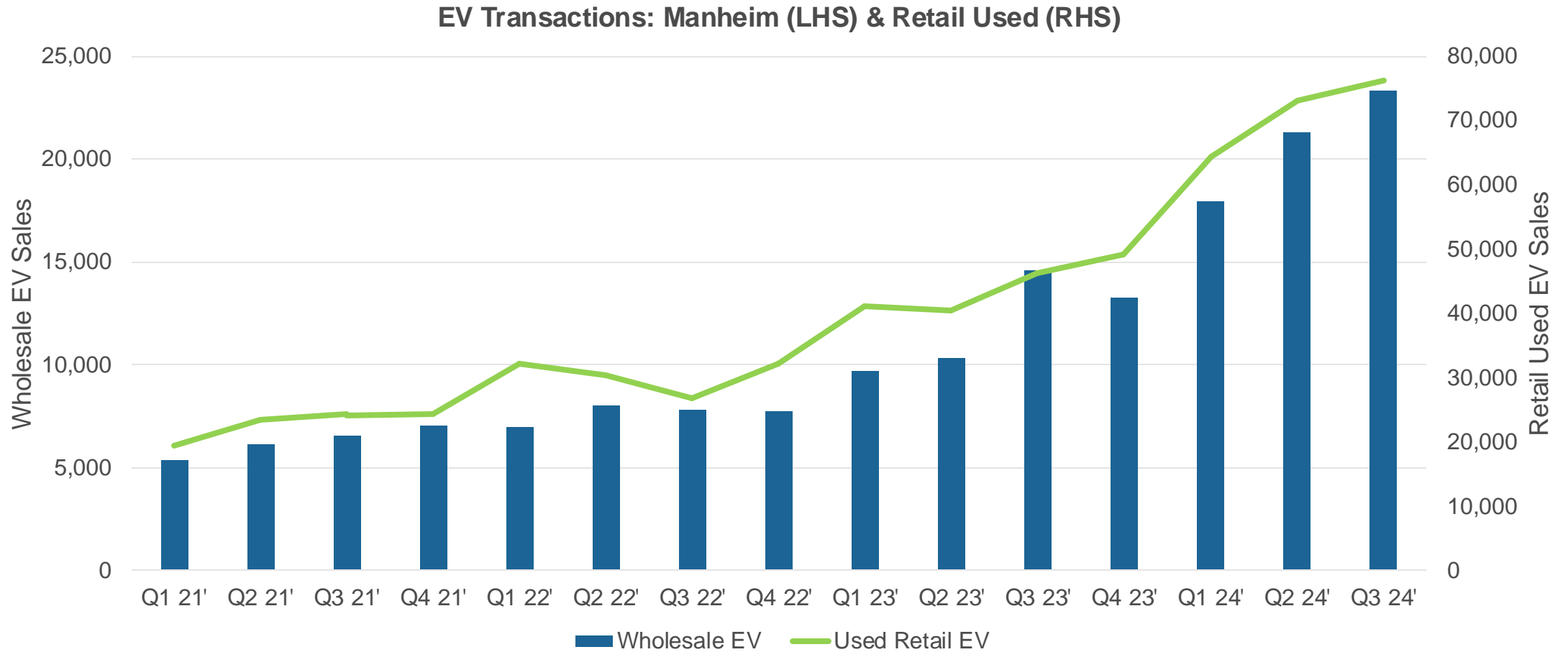
Used Vehicle Value Outlook Sees Return To Normal

2024 will see a smaller decline than previous years then move back to appreciation overall in 2025



EV Transactions

Manheim EV sales are up 60% in Q3 Y/Y as used retail EV growth is up 65%



2024 Forecasts

Updated Oct. 7, 2024

15.7M
NEW SALES
(2023: 15.5M)

12.7M
NEW RETAIL SALES
(2023: 12.7M)

3.0M
FLEET SALES
(2023: 2.8M)

3.1M
**NEW LEASE
VOLUME**
(2023: 2.7M)

25%
**LEASE
PENETRATION**
(2023: 21%)

2.6M
CPO SALES
(2023: 2.6M)

37.3M
USED SALES
(2023: 36.4M)

19.9M
USED RETAIL SALES
(2023: 19.3M)

-0.6%
**DEC 2024 Y/Y MANHEIM
USED VEHICLE
VALUE INDEX**
(2023: -7.0%)

COX AUTOMOTIVE

Q&A



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

Cox Automotive Newsroom: www.coxautoinc.com/newsroom/

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.



COX AUTOMOTIVE

THANK YOU FOR ATTENDING!

Contact us with questions or
to speak with an expert:

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Director

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