Q1 MANHEIM USED VEHICLE VALUE INDEX CALL

April 7, 2023



THE POWER OF COX AUTOMOTIVE



Harnessing the power of connected data for game-changing results



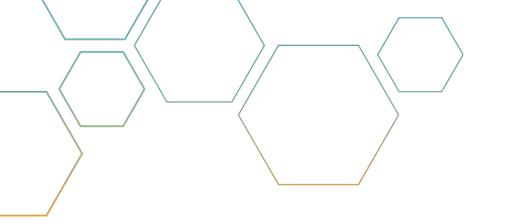


PRESENTERS

Mark Schirmer, Director, Corporate Communications Jonathan Smoke, Chief Economist Jeremy Robb, Senior Director, Economic and Industry Insights Chris Frey, Senior Manager, Economic and Industry Insights

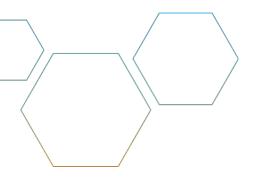






JONATHAN SMOKE

Chief Economist

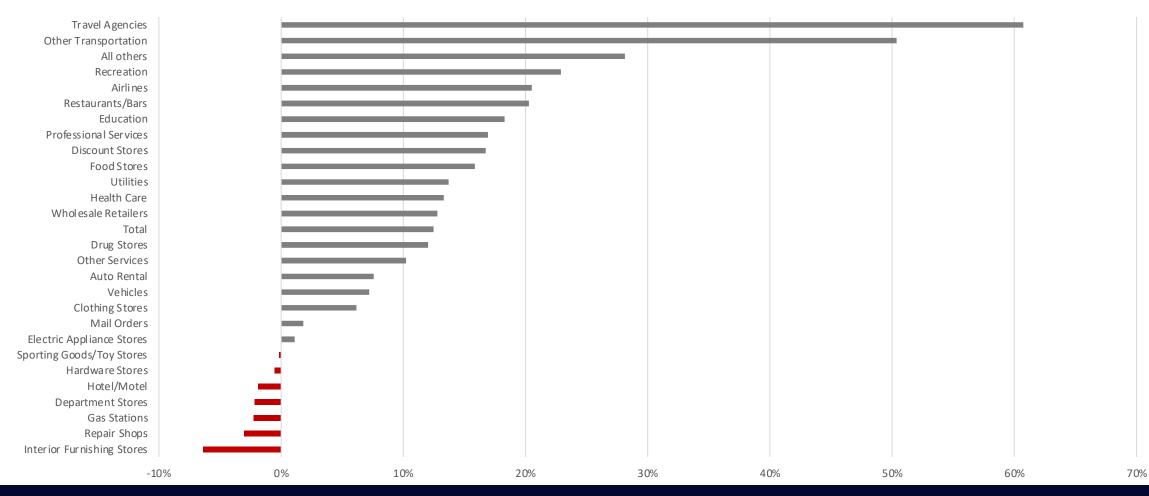




CONSUMER SPENDING SLOWING BUT STILL STRONG IN TRAVEL

Total spending in mid-March was up 12% y/y with strength in travel, dining out, and services

Y/Y Spending % Change for Week Ending March 18, 2023



CONSUMER SENTIMENT DECLINED IN MARCH

The Index of Consumer Sentiment increased 3.2% in February but declined 2.2% in March

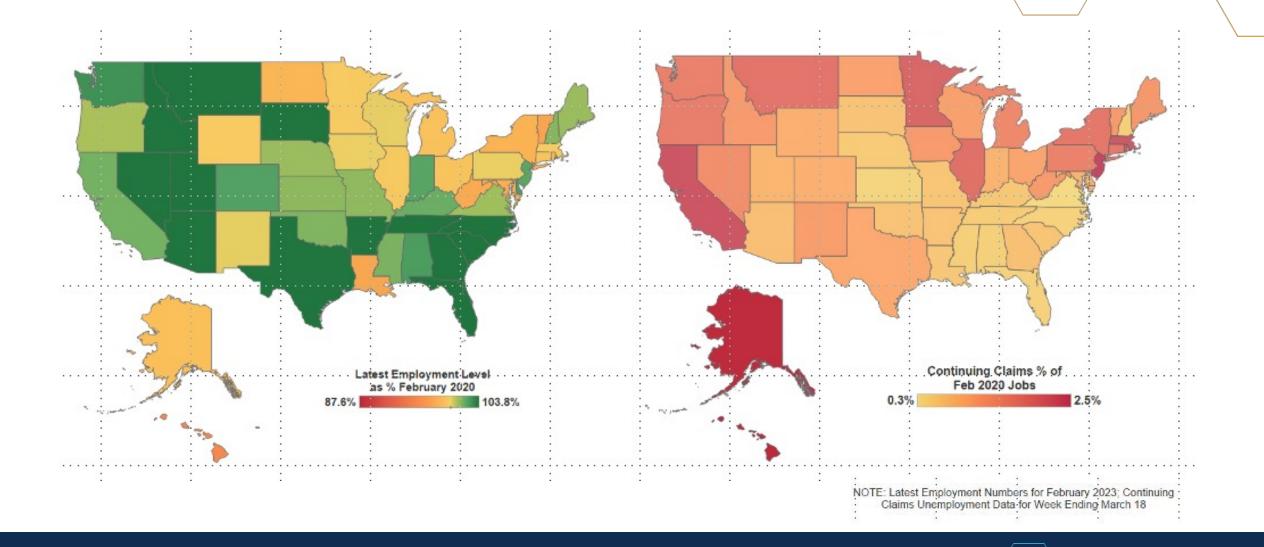
Morning Consult Index of Consumer Sentiment vs. Average Price of Unleaded

——MC ICS ——AAA Ave Unleaded \$ (RH Axis)



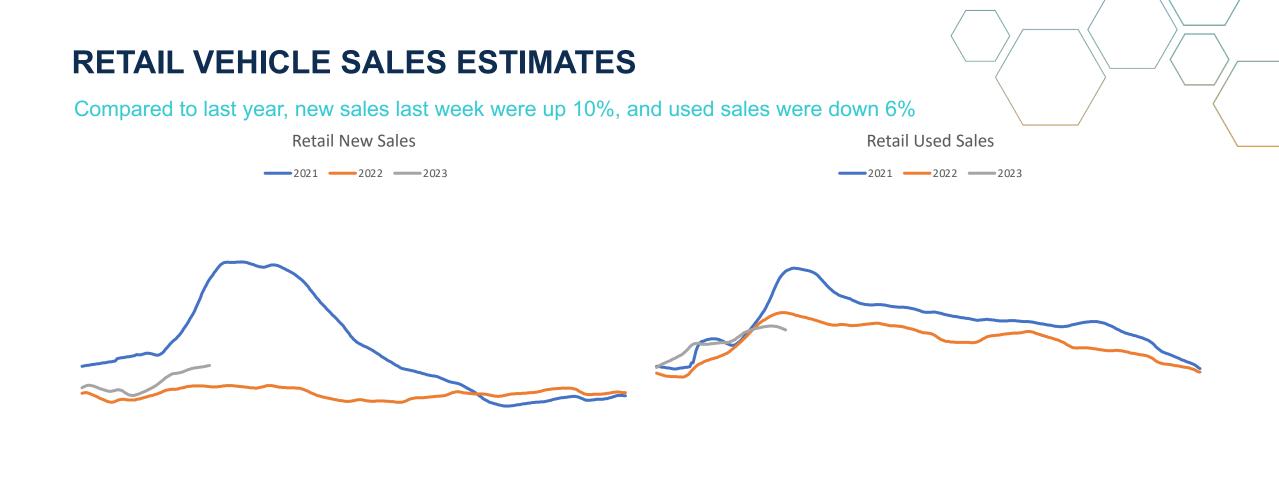
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CONTINUING CLAIMS AT 1.82 MILLION NATIONALLY



COX AUTOMOTIVE

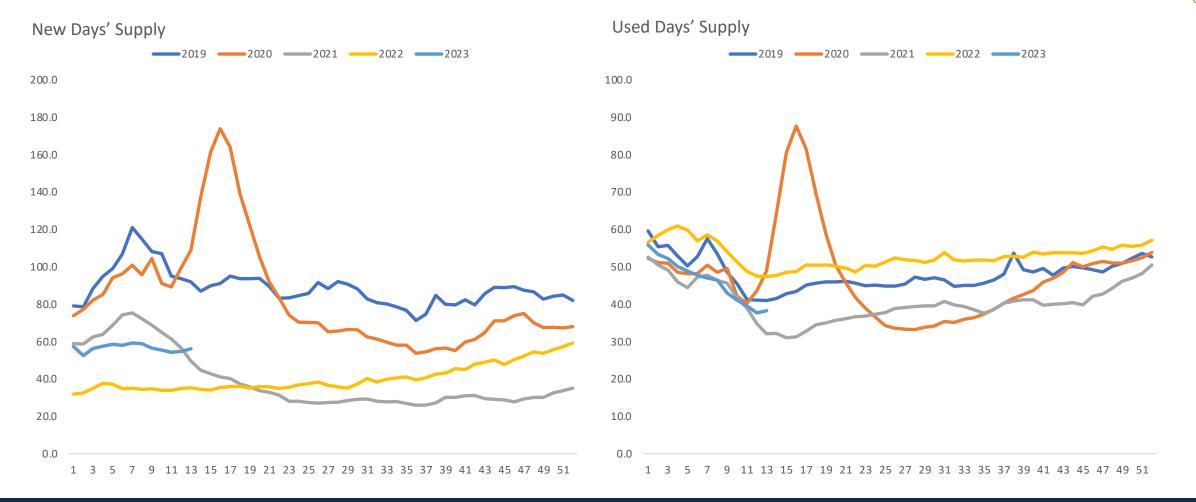
Source: Moody's Analytics, U.S. Department of Labor





SUPPLY TIGHTER SO FAR IN 2023

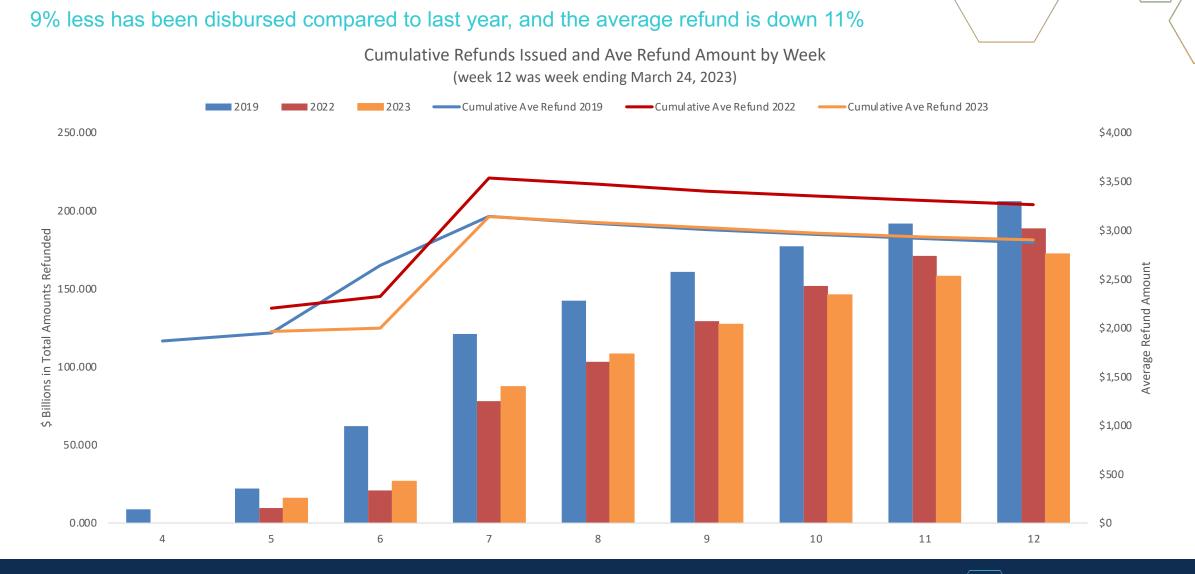
New supply up 21 days y/y and unchanged from February; used supply down 9 days y/y and down 3 days from February



days y/y and unchanged from February; used

Cox Automotiv<u>e</u>

TAX REFUND AMOUNTS DOWN SUBSTANTIALLY

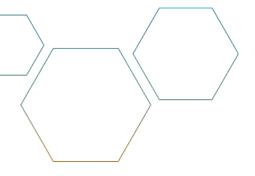


COX AUTOMOTIVE

Source: Internal Revenue Service, Cox Automotive Analysis



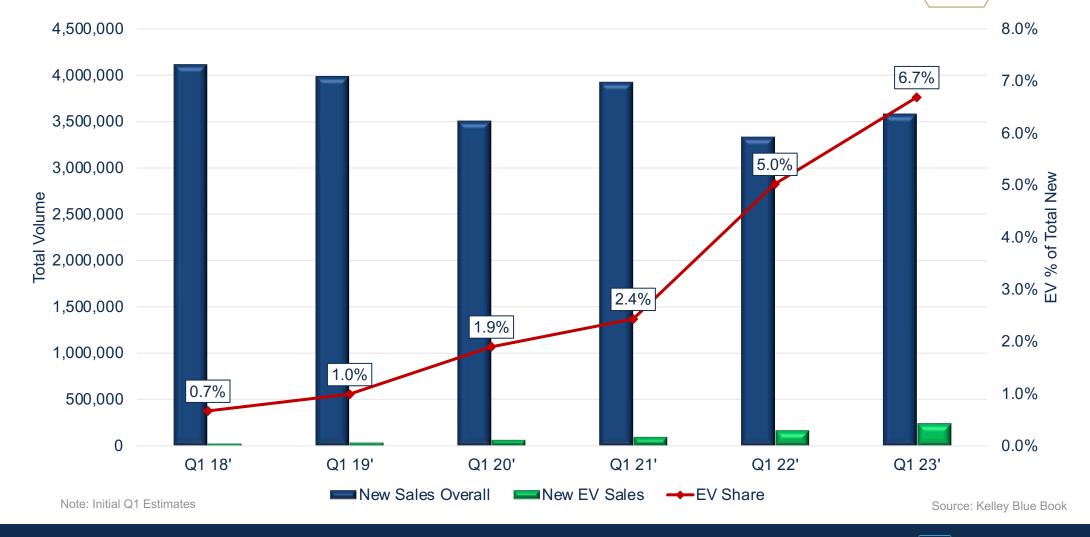
Senior Director, Economic and Industry Insights





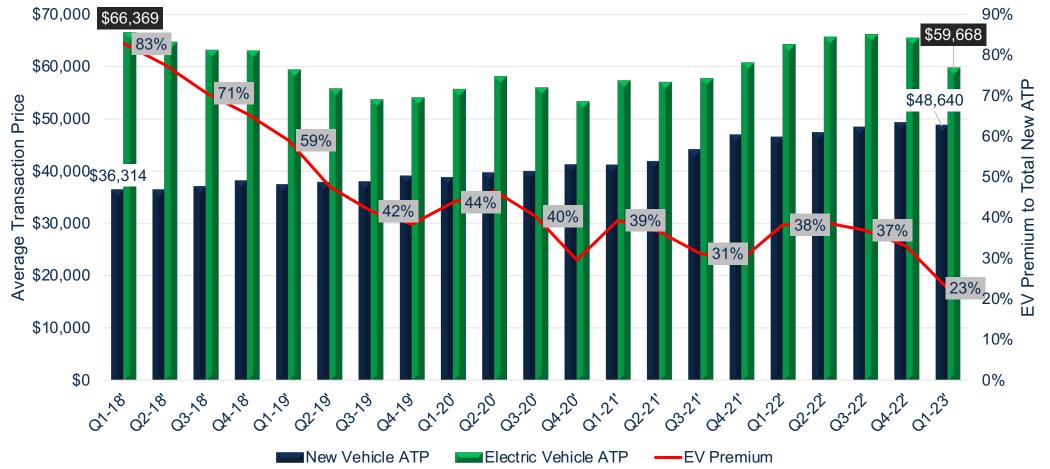
NEW EV SALES HIT CRITICAL MASS

Through Q1, EV sales are 6.7% of all New Vehicle Sales, rapidly increasing as a segment



EV PRICE PREMIUM DECLINES AGAINST INDUSTRY

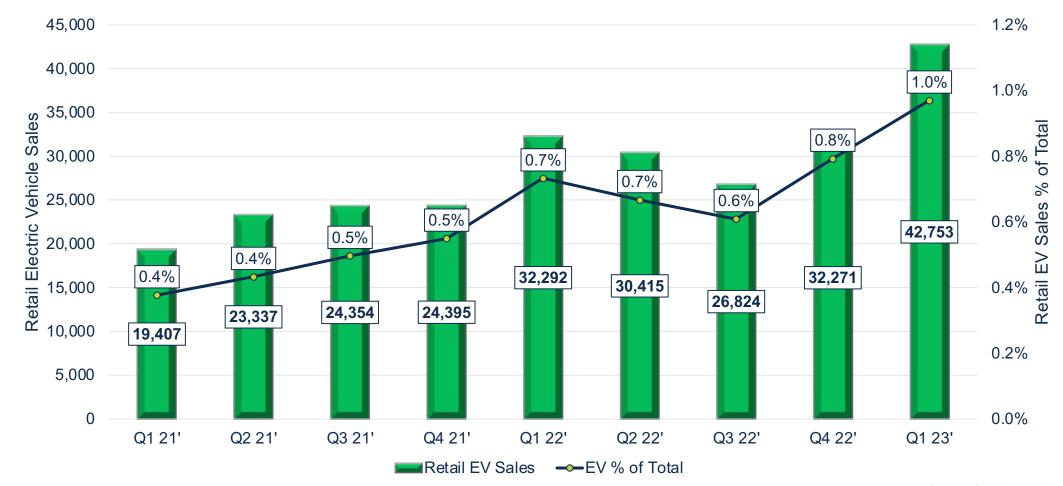
The EV premium continues to decline, as overall new vehicle prices increase



Source: Kelley Blue Book

CONSUMER PURCHASES OF RETAIL USED EVS

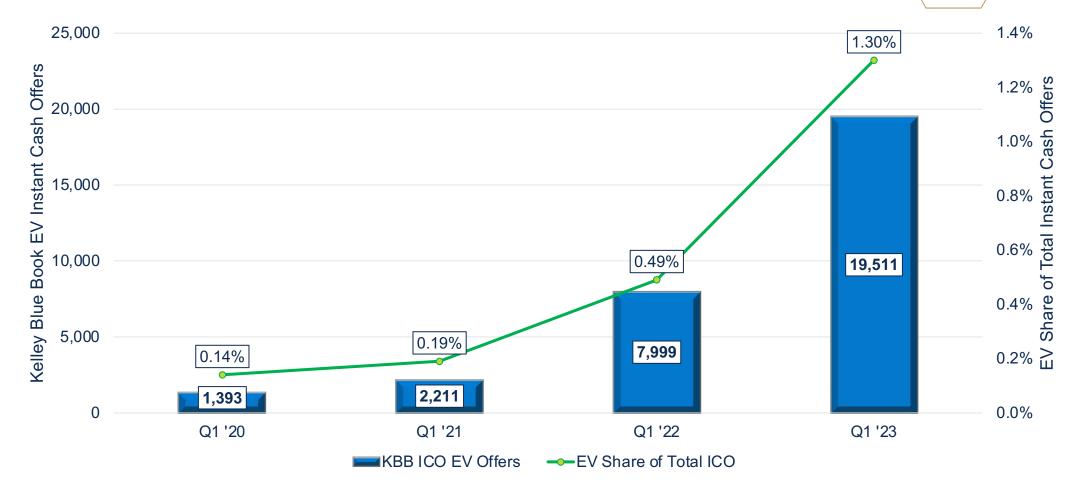
Retail EV sales increase rapidly with consumer adoption, +32% Y/Y and +120% vs Q1 2021



Source: Cox Automotive

KELLEY BLUE BOOK INSTANT CASH OFFERS: EV'S

Interest in EV valuations is on the rise as market increases



Source: Cox Automotive / Kelley Blue Book



WHOLESALE EV TRANSACTIONS

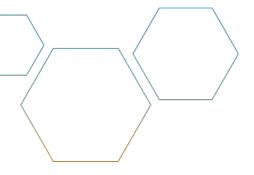
EV sales at wholesale continue to grow rapidly, +40% Y/Y and +82% vs Q1 2021



Source: Manheim



Senior Manager, 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

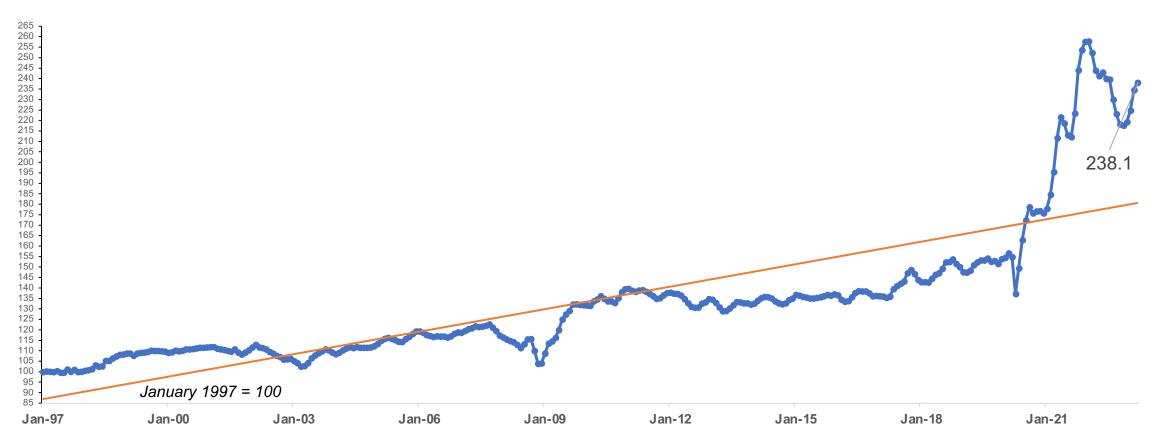
- 1. All Manheim U.S. sales
- 2. Classify by market segment
- 3. Account for differences in mileage
- 4. Weight to provide smoother segment mix
- 5. Seasonally adjust

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AVENDER

WHOLESALE VEHICLE VALUES RISE IN MARCH, BUT ARE SLOWING

Prices in March increased 1.5% from February but were down 2.4% from March 2022.

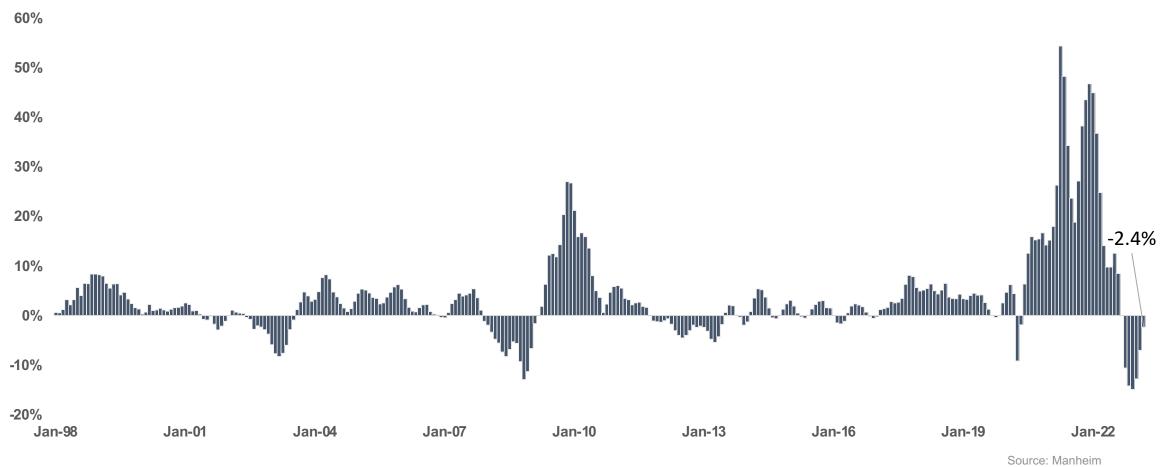


Source: Manheim

YEAR-OVER-YEAR PERFORMANCE NEARING PARITY WITH 2022

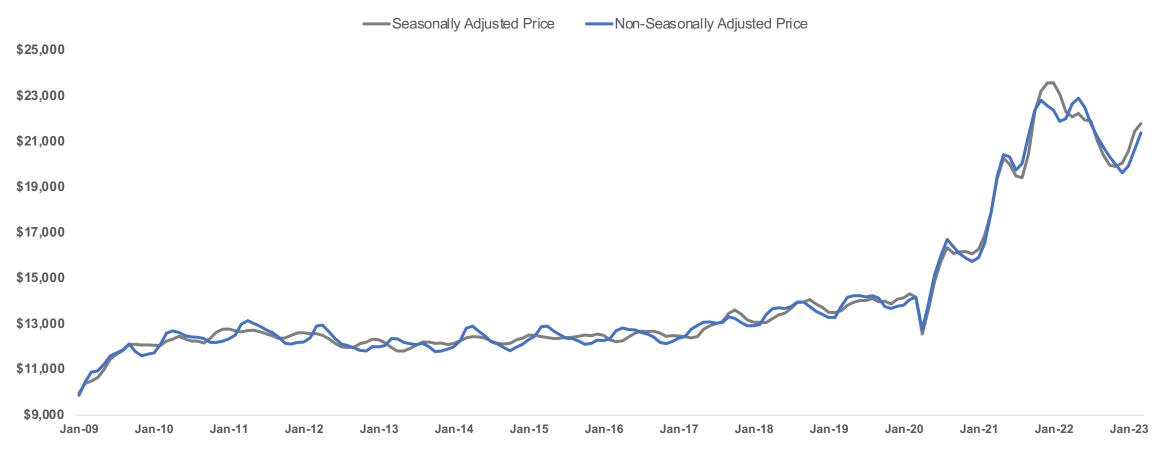


Year-over-year price differences have been shrinking in 2023 with strong Q1 at auction.



SEASONALLY ADJUSTED PRICE LOSING STEAM AT START OF CALENDAR SPRING

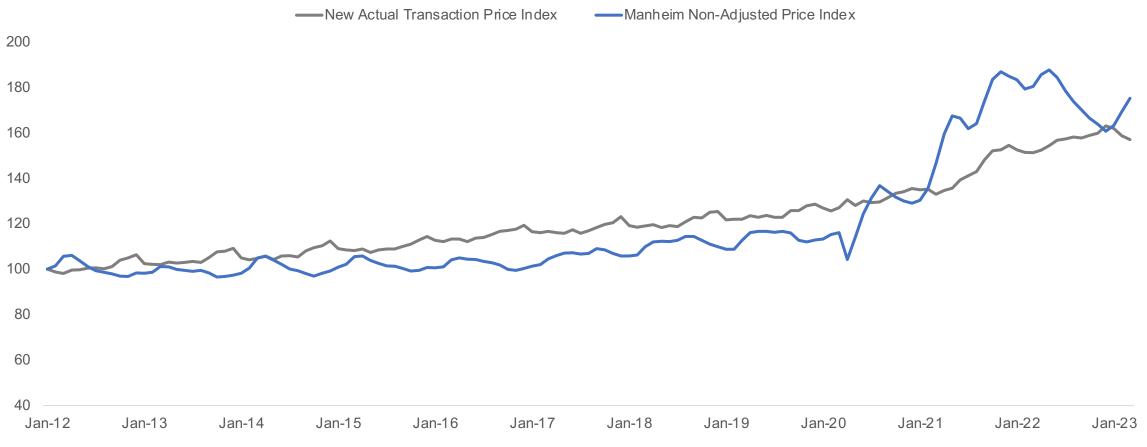
While adjusted prices led non-adjusted since December, adjustment impact is narrowing.



Source: Manheim

WHOLESALE PRICE VS. KBB NEW ATP

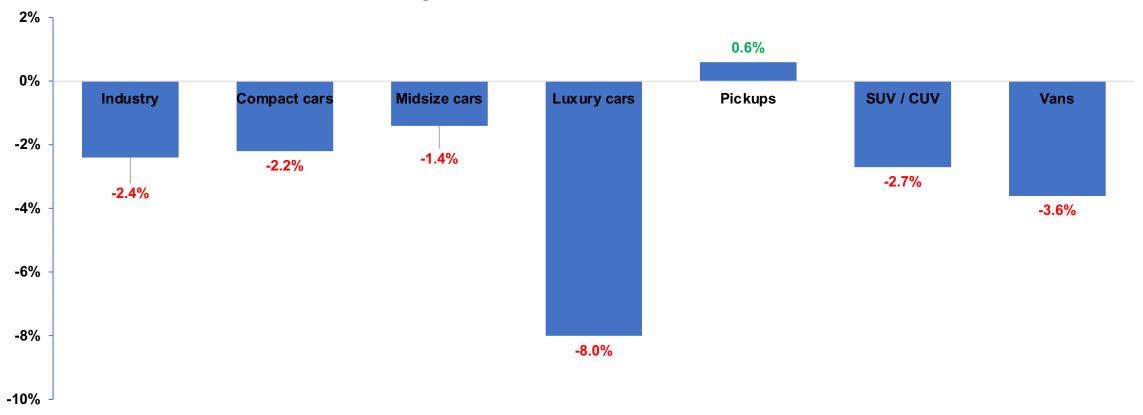
Divergence in prices began in December and has accelerated this spring.



Source: Manheim, KBB

AFFORDABILITY STILL SUPPORTING CARS, WITH PICKUPS SURPRISING TO THE UPSIDE

Spring Market strength a reversal from Q4 2022 declines; Luxury cars have largely lagged other segments.

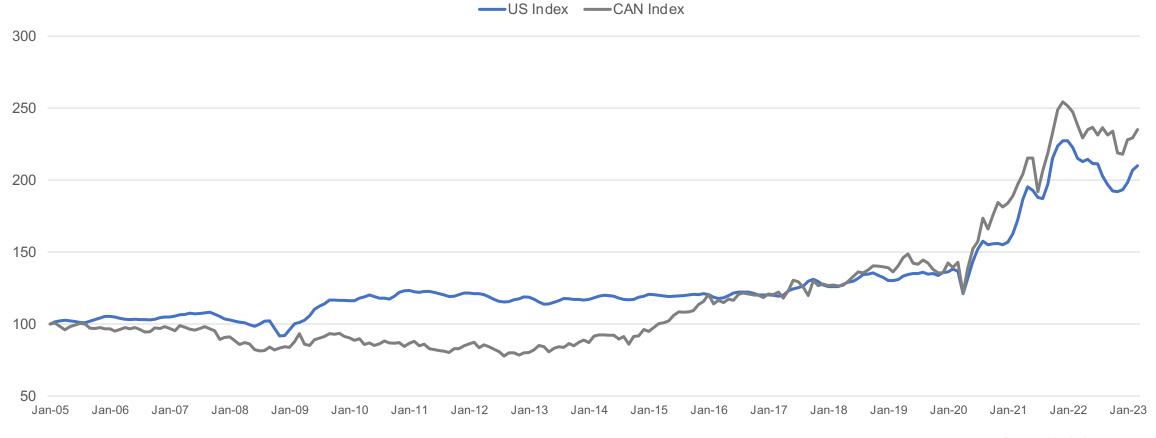


Percent Change in Manheim Index Year Over Year March 2023

Source: Manheim

WHOLESALE PERFORMANCE, U.S. VERSUS CANADA

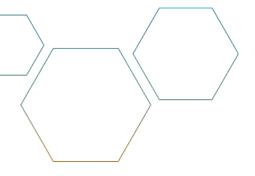
Since December, U.S. Index outpacing Canada Index by 0.8% through March.



Source: Manheim



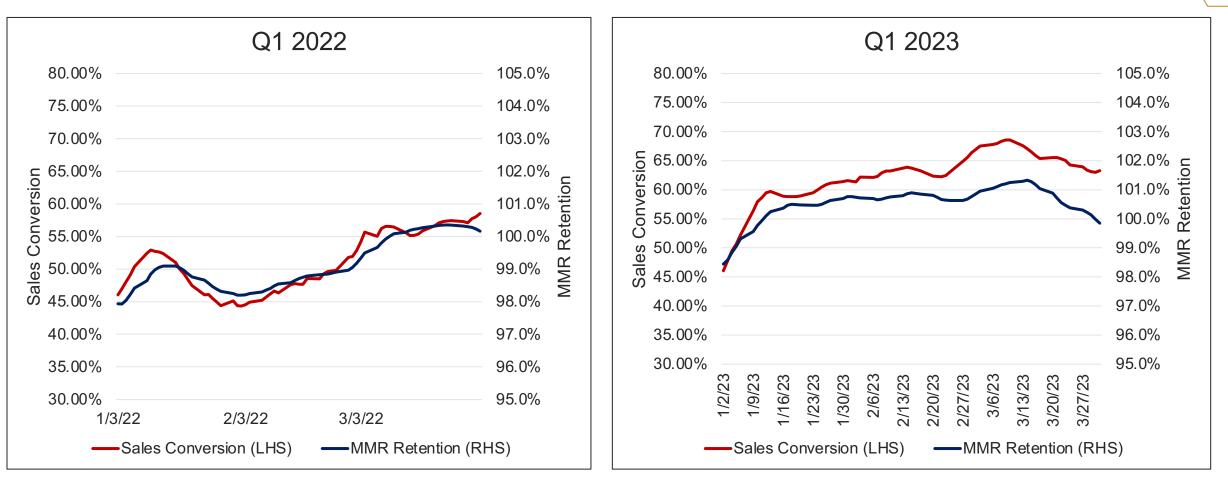
Senior Director, Economic and Industry Insights





MMR RETENTION & SALES CONVERSION

Sales Conversion peaked in early March as MMR Retention hit a high one week later



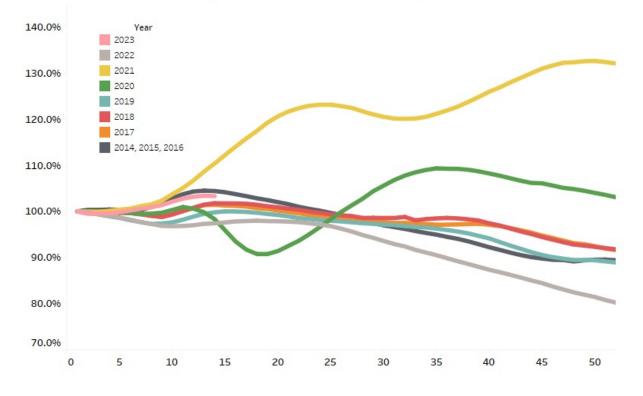
Source: Manheim

OVERALL WHOLESALE MMR VALUE TRENDS

Values began rising more quickly at the start of the year then tapered

Overall MMR Index Trends

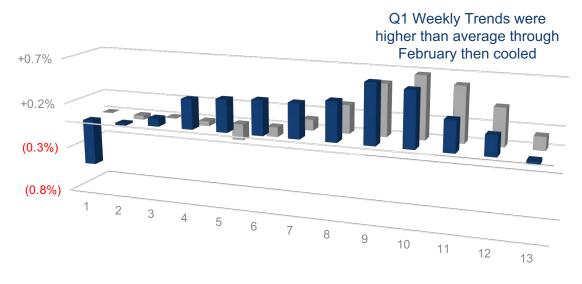
(All Model Years)





Weekly Change in Resale Value

All Model Years

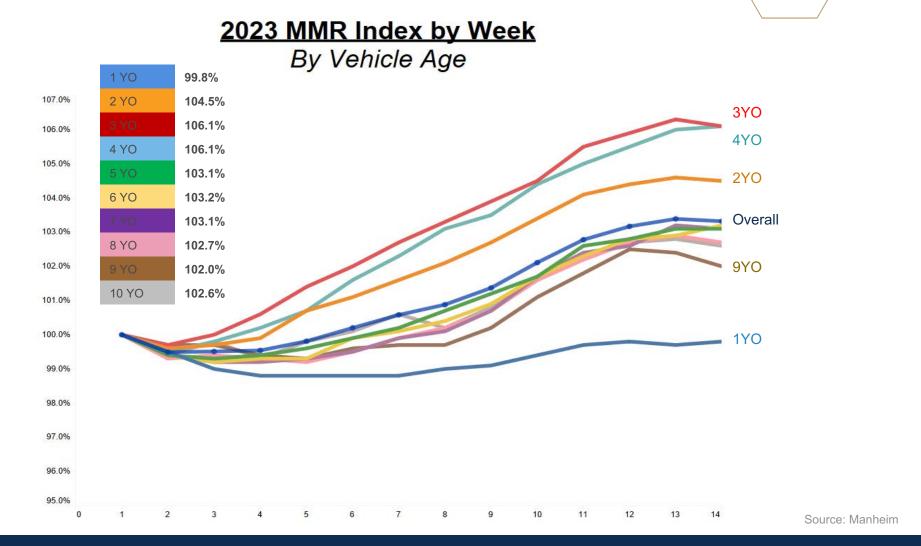


■2023 ■14-19 Avg

Source: Manheim

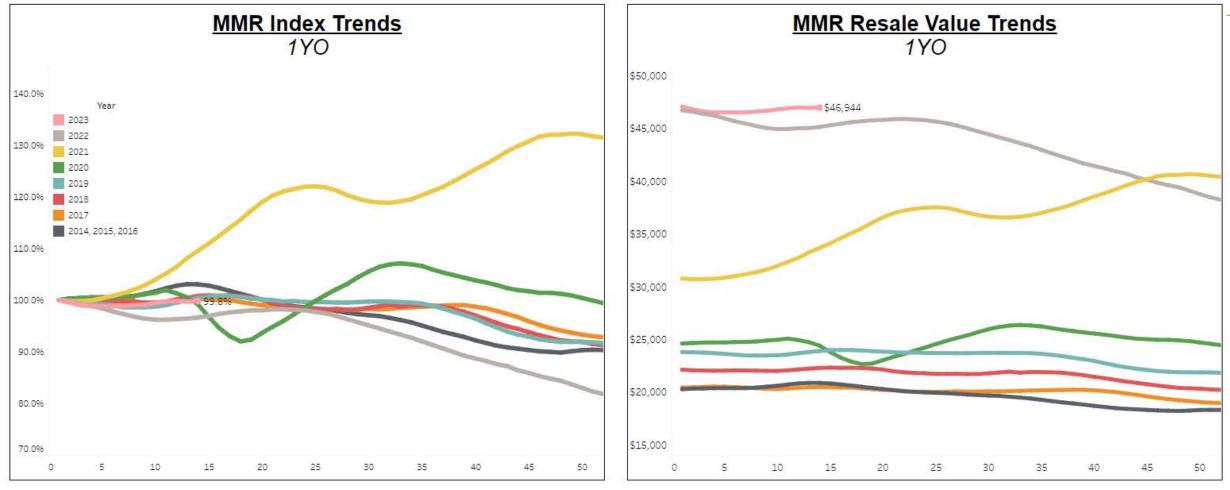
MMR RESALE VALUE TRENDS BY AGE

In 2023, appreciation in the 3YO and 4YO outpace other age groups



1YO MMR INDEX & RESALE VALUE TRENDS

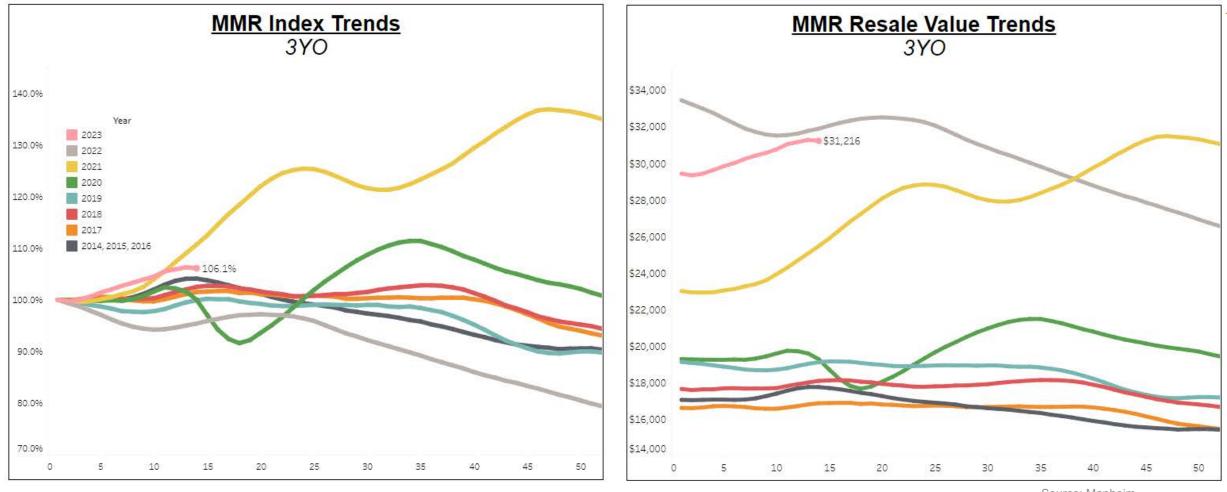
Resale Values for the near new unit are higher than any point in history



Source: Manheim

3YO MMR INDEX & RESALE VALUE TRENDS

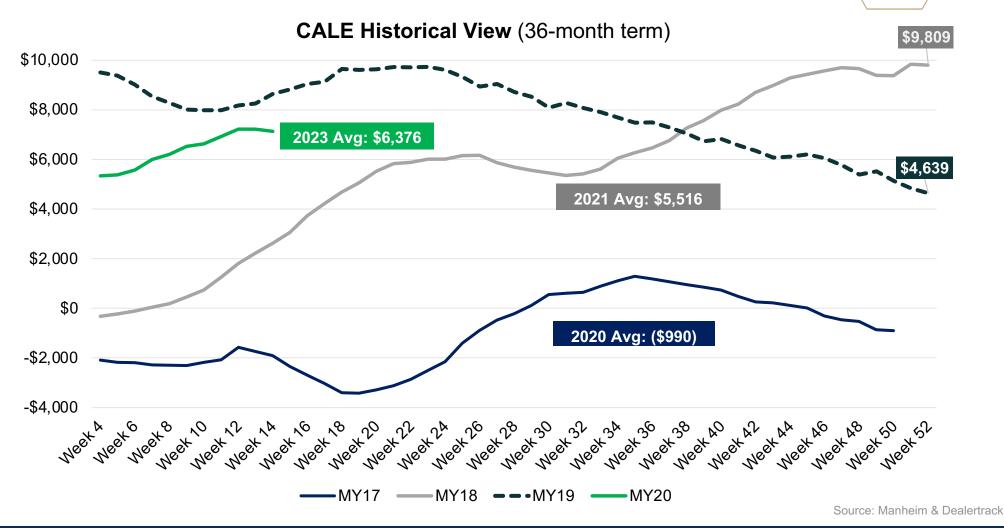
3 YO resale values have been rising steadily and are just under 2022 values



Source: Manheim

CALE CLIMBS HIGHER IN Q1 WITH VALUES

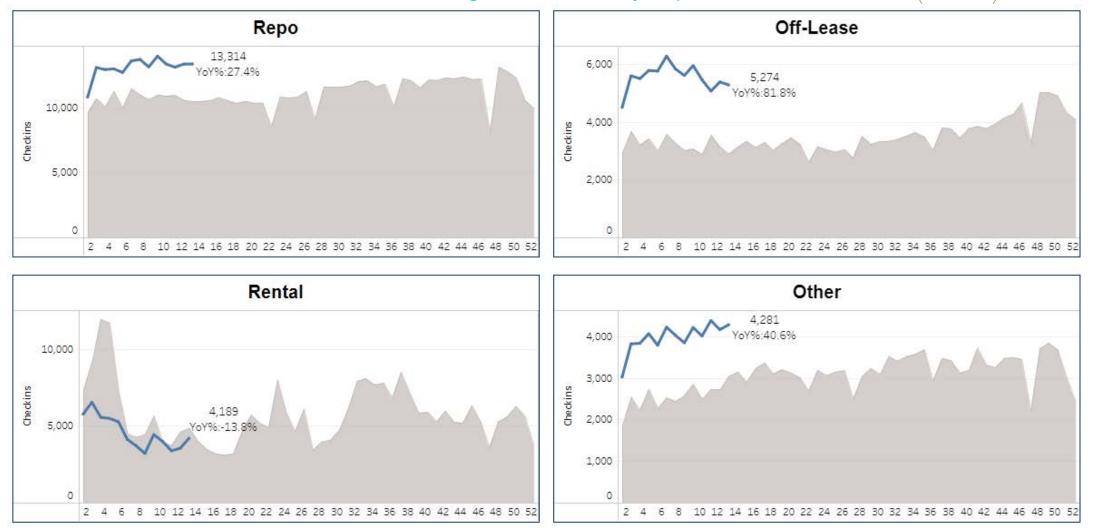
Lease equity continues to remain elevated, giving lease customers options



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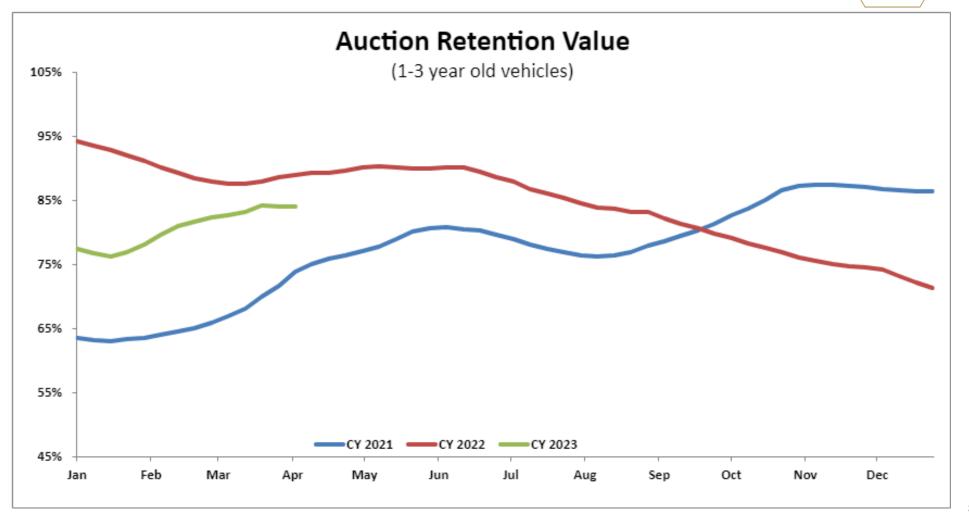
COMMERCIAL SUPPLY INCREASES

Commercial Check-Ins to Auction continue to run higher Y/Y driven by Repo and Off-Lease



RETENTION VALUES AT AUCTION

While retention values are below last year, they continue to remain elevated

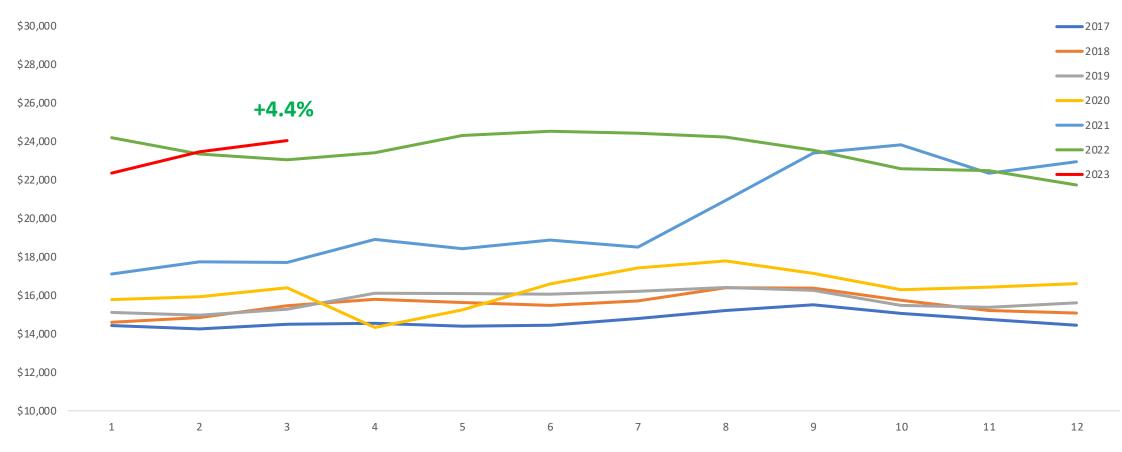


Source: Kelley Blue Book

RENTAL RISK AVERAGE AUCTION PRICES



Prices for units sold in March were up 4.4% year-over-year and up 2.5% from February.



Source: Manheim

RENTAL RISK VEHICLE VARIETY REPRESENTED IN SALES

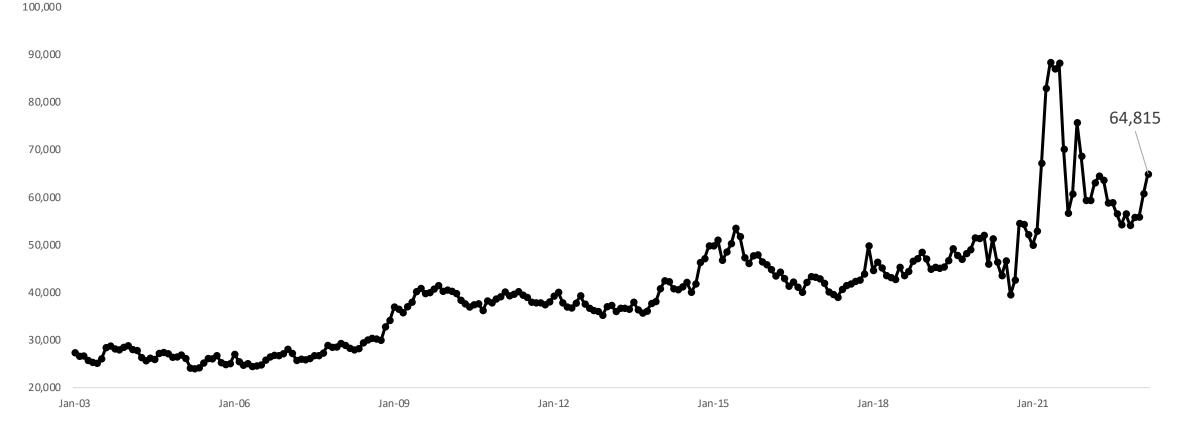
Configuration count much higher as de-fleeting of older, auction-purchased units return.

	2021 Q1	2022 Q1	2023 Q1
Number of unique year, make, model, body configurations sold	3,149	2,976	4,263
Share accounted for top 10 YMMB	12.0%	18.1%	11.4%
Share accounted for top 25 YMMB	22.6%	30.8%	20.5%
Number of YMMB to reach 50% share	117	68	145

Source: Manheim

RENTAL RISK AVERAGE MILEAGE

Average mileage in March was up 2.9% from a year ago and up 6.8% from February.



Source: Manheim



RENTAL RISK SALES CONDITION

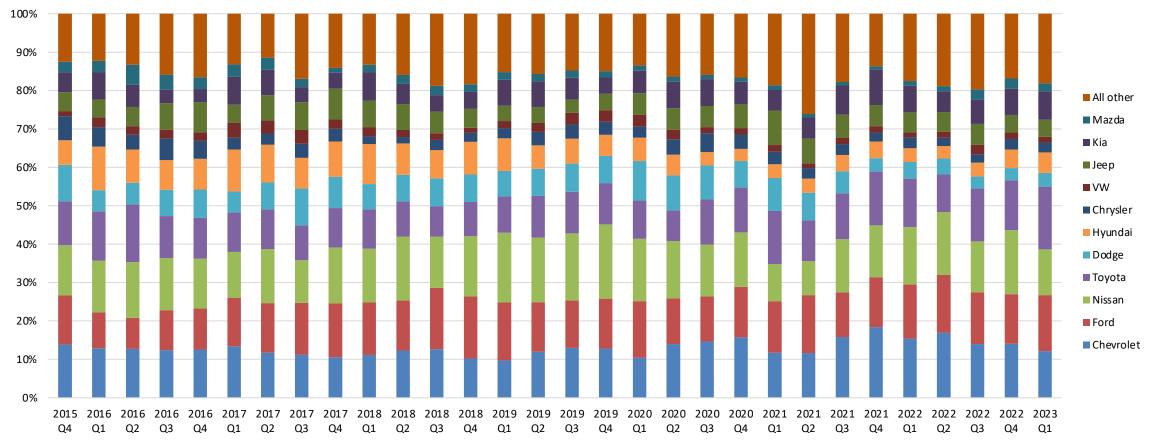
Very similar to Q2 of 2022, with little change from Q4 2022 to Q1 2023. 100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% 2015 Q4 2016 Q2 2016 Q4 2017 Q2 2017 Q4 2020 Q2 2020 Q4 2021Q2 2021Q4 2022Q2 2018 Q2 2018 Q4 2019 Q2 2019 Q4 2022Q4

■ 0 - 1.9 ■ 2.0 - 2.9 ■ 3.0 - 3.9 ■ 4.0 - 4.9 ■ 5.0

Source: Manheim

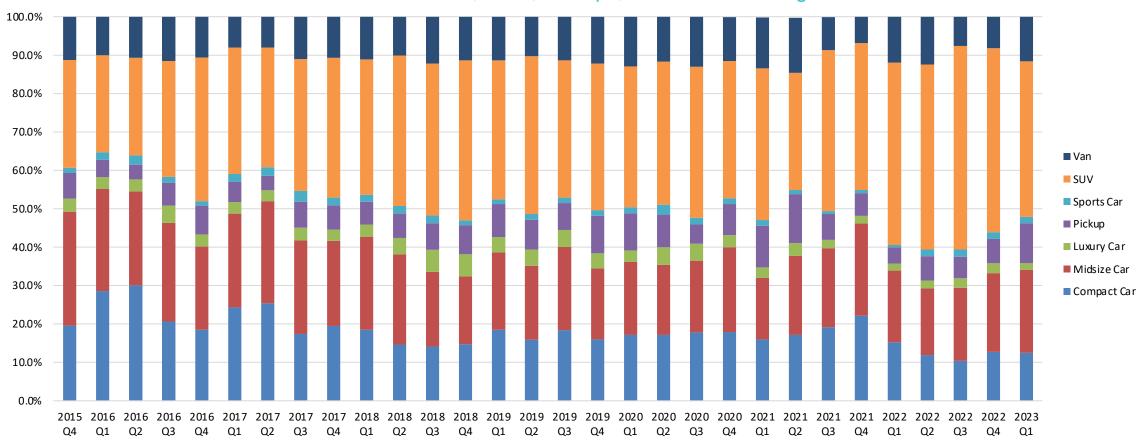
RENTAL RISK SALES BY MAKE

Toyota had largest share in Q1 2023, with a big drop in Nissan from Q4 2022.



Source: Manheim

RENTAL RISK SALES BY VEHICLE SEGMENT



Trend from Q3 2022 remains intact – SUVs down, Vans, Pickups, and Midsize cars gain.

Source: Manheim

MANHEIM INSIGHTS ON TOP VOLUME VEHICLES

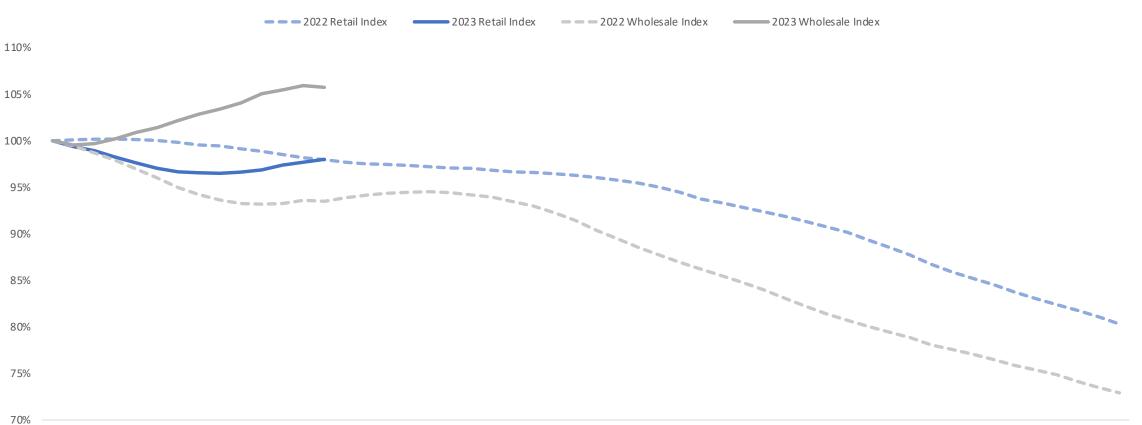
Price trends on top-selling vehicles in March at Manheim showed mostly increasing values for the month

Rank	Source(Rank)	Category	Subcategory	Vehicle	3-Apr	Past 30 Days	Last Year	Current Dep	L12M Dep/Mo
1	All	SUV	SUV Midsize	2020 FORD EXPLORER 4WD 4C 4D SUV XLT	\$32,300	\$31,900	\$38,400	1.3%	-1.3%
2	All	SUV	SUV Midsize	2020 CHEVROLET EQUINOX FWD 4D SUV 1.5 LT	\$21,500	\$21,700	\$24,300	-0.9%	-1.0%
3	All	Compact Car	Compact Car Premium	2020 TOYOTA COROLLA 4D SEDAN LE	\$17,950	\$17,650	\$19,850	1.7%	-0.8%
4	All	Compact Car	Compact Car Premium	2021 TOYOTA COROLLA 4D SEDAN LE	\$20,600	\$20,300	\$22,700	1.5%	-0.8%
5	All	Compact Car	Compact Car Premium	2020 HYUNDAI ELANTRA 4D SEDAN SEL	\$16,250	\$16,200	\$18,800	0.3%	-1.1%
1 Dealer	Dealer	Compact Car	Compact Car Premium	2021 TOYOTA COROLLA 4D SEDAN LE	\$20,600	\$20,300	\$22,700	1.5%	-0.8%
1 Lease	Lease	SUV	SUV Midsize	2020 FORD EXPLORER 4WD 4C 4D SUV XLT	\$32,300	\$31,900	\$38,400	1.3%	-1.3%
1 Rental	Rental	Midsize Car	Midsize Car Premium	2020 TOYOTA CAMRY 4C 4D SEDAN LE	\$20,100	\$19,700	\$23,500	2.0%	-1.2%



WHOLESALE USED PRICES NOW DECLINING, RETAIL INCREASING

The average MY 2020 wholesale price declined 0.2% last week, average retail price increased 0.3%



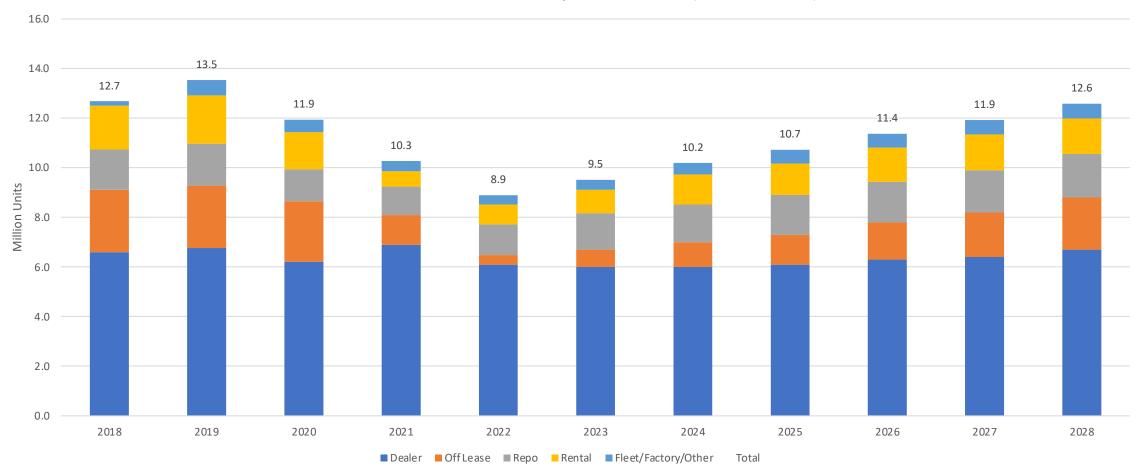
MY 2020 Retail and Wholesale Price Indices

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

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WHOLESALE FLOWS BOTTOMED IN 2022

After 13% decline in 2022, the wholesale market should see a slow and gradual recovery to 2018 levels by 2028



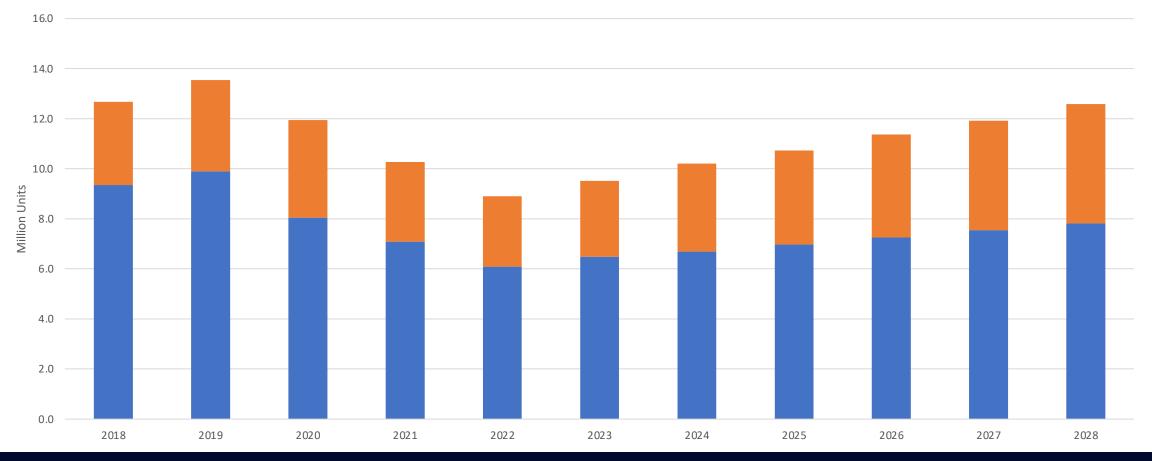
Estimated Wholesale Volumes by Inflow Channel (Annual Volume)

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ON-SITE PHYSICAL AUCTION MARKET DOES NOT FULLY RECOVER

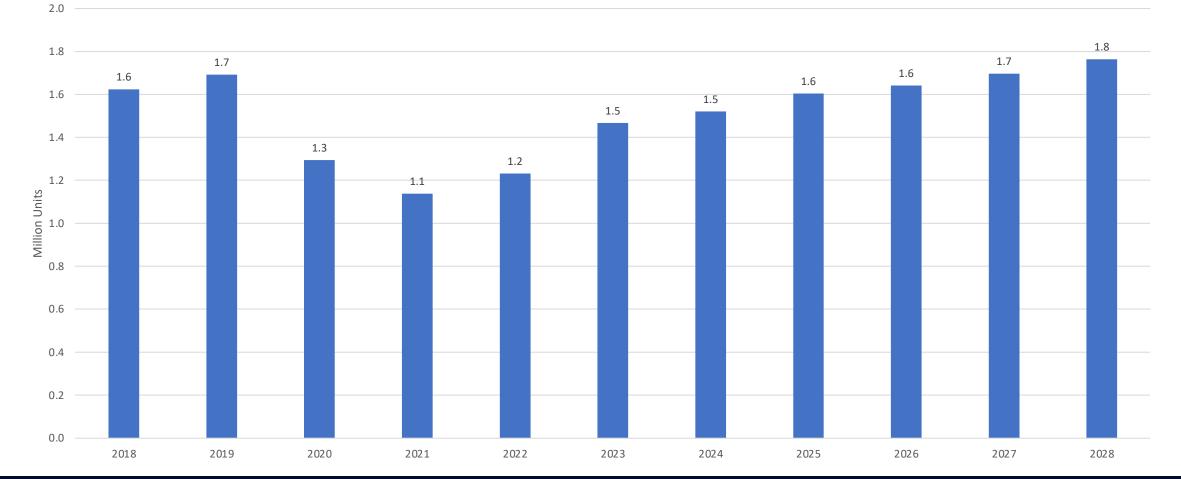
With gradual shift to more transactions offsite and fully digital, onsite volumes in 2028 expected to be 20% below 2019 Wholesale Onsite/Physical vs. Offsite

OnSite/Physical Offsite Digital



REPOS DIP IN 2020-2021 FOLLOWED BY SLOW RECOVERY

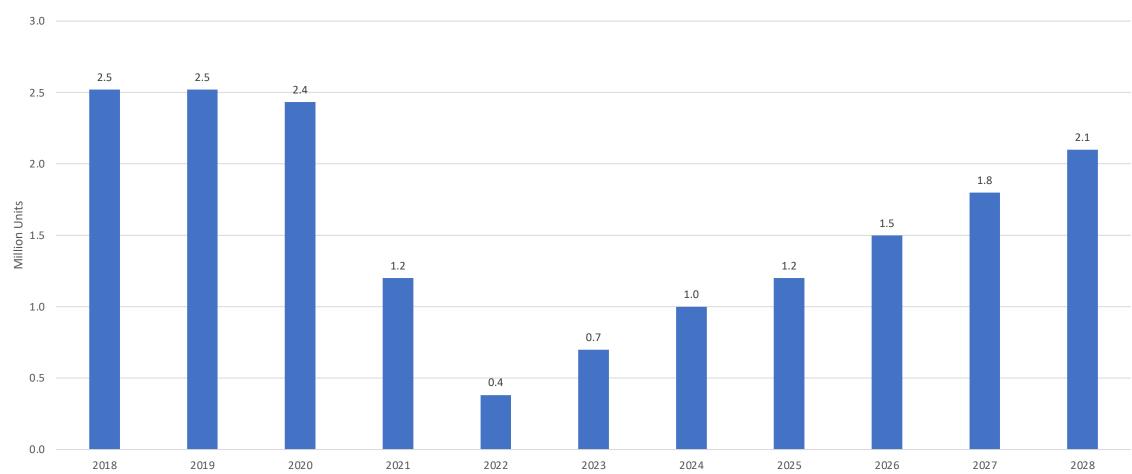
Near term limited by smaller subprime loan base; longer term expects normal default rates by credit tier



Estimated Repossession Volumes

OFF-LEASE RETURNS COLLAPSED WITH RECORD VALUES

Return rate hit historical low of 11% in 2022 vs. 62% in 2019; now lease maturities are falling

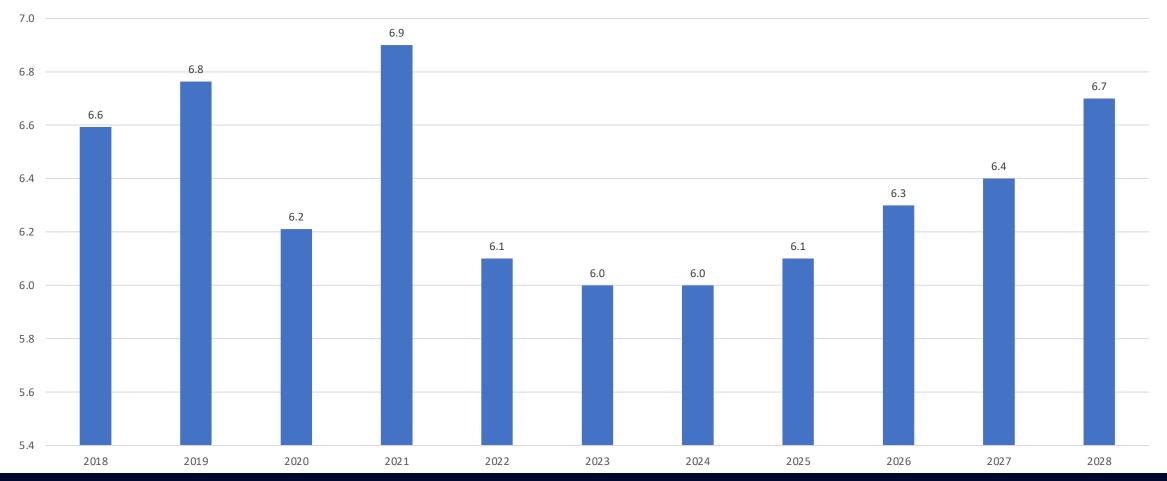


Off Lease Returns

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DEALER VOLUMES PEAKED IN 2021; NOW CHALLENGED BY DECLINE IN OFF-LEASE

Off-lease arbitrage and record retail sales powered 11% jump in dealer consignments in 2021

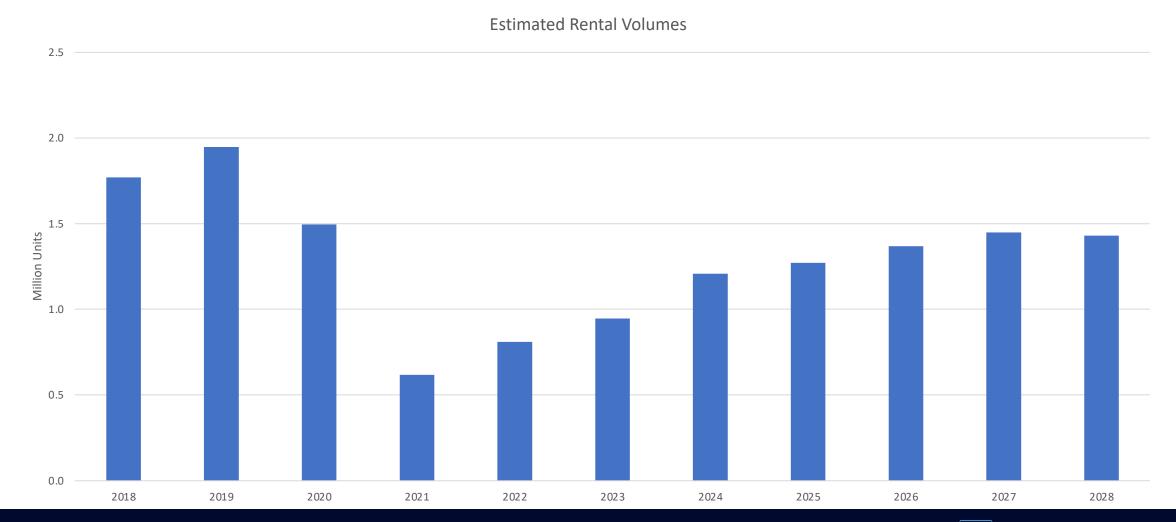


Estimated Dealer Volumes

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RENTAL VOLUMES RECOVERING WITH IMPROVING SALES INTO FLEET

Total fleet size expected to return to pre-pandemic levels by 2027 as share of new market recovers

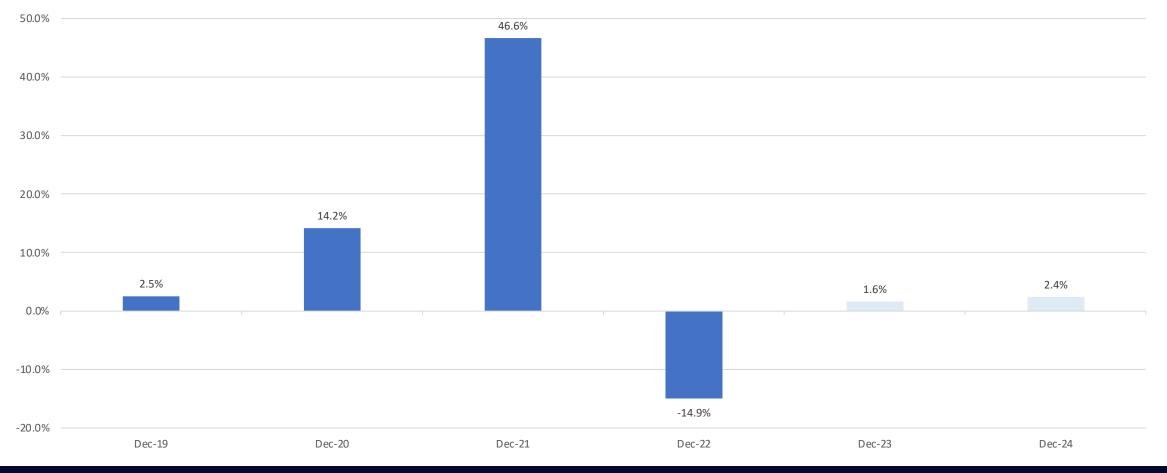


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USED VEHICLE VALUE OUTLOOK NOW STRONGER FOR 2023

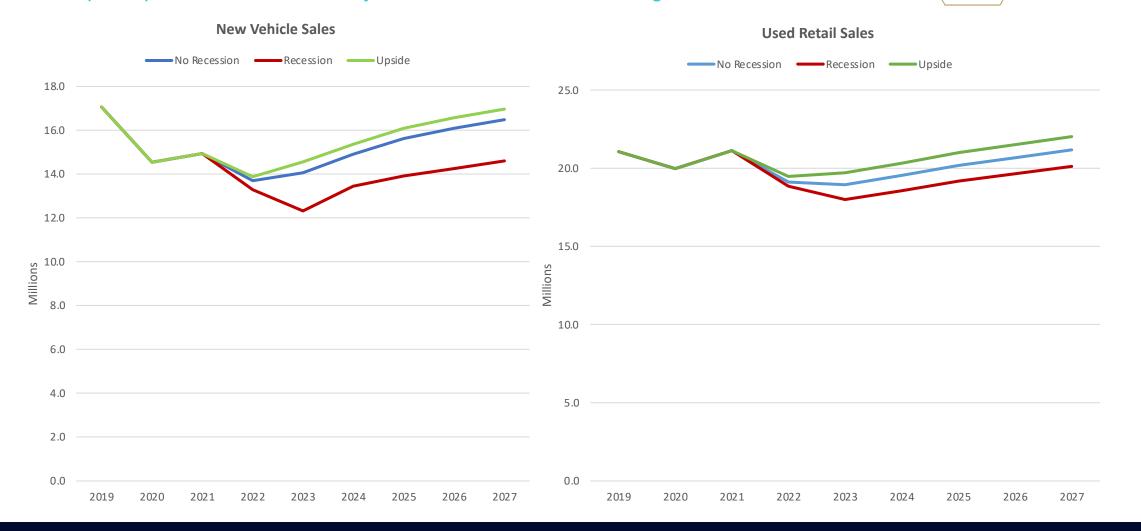
Strong start followed by weaker spring and summer leads to a close to average year on Manheim Index

Y/Y % Change Manheim Index, As Of December



FORECAST RANGE NEEDED WITH RECESSION 50/50

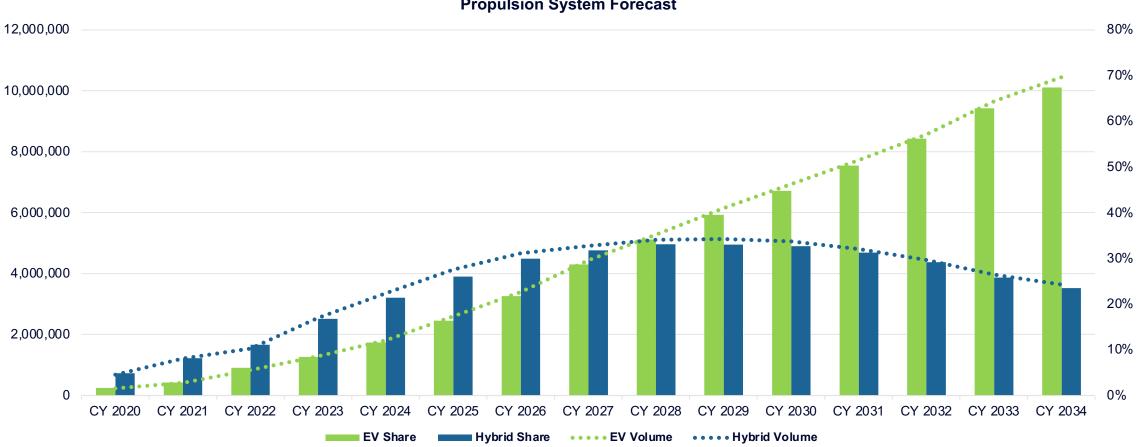
Minimal upside potential with most likely outcome between soft landing and recession



COX AUTOMOTIVE

EV & HYBRID VOLUME FORECAST | 4.4 MILLION BEVS BY 2027

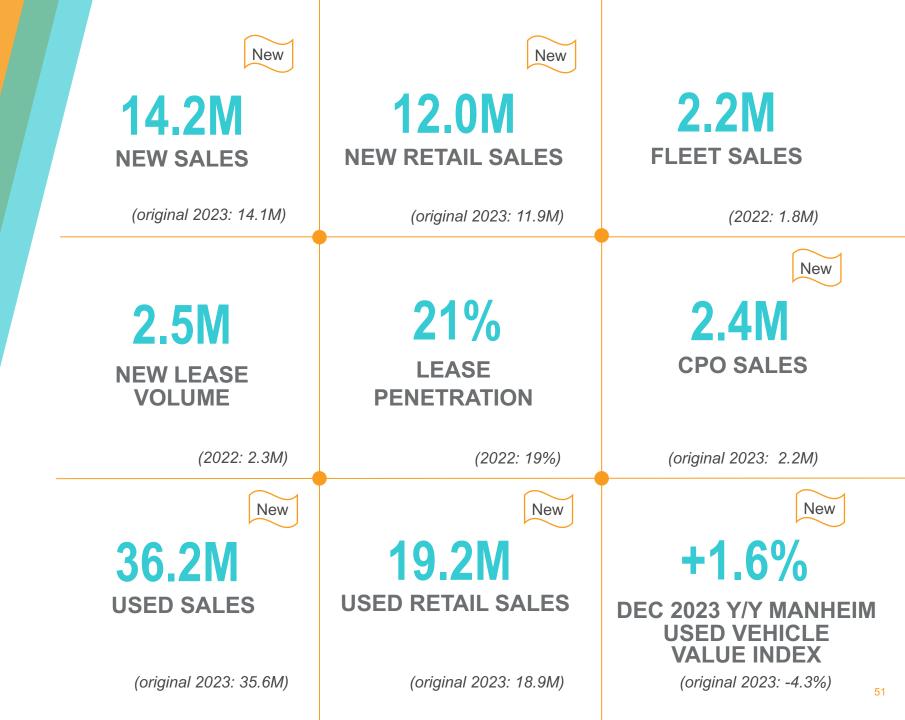
Gains in hybrids only temporary as only pure EV growth expected to continue



Propulsion System Forecast



2023 FORECASTS Q2 Update





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.



THANK YOU FOR ATTENDING!

Contact us with questions or to speak with an expert:

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Mark Schirmer Director Cox Automotive Corporate Communications mark.schirmer@coxautoinc.com