

Automotive Industry

Weekly automotive pit stop

Industry Overview

Recent US industry reports and data points – Pages 2-8

- [Year Ahead 2024: Five Auto themes & top stock picks as volatility remains](#)
- [4Q23 late game update: mixed year-end opens road for another fast lap](#)

Core Autos primers (see links):

- [Car Wars 2024-2027: Rise of powertrain conundrum & return of market share shifts](#)
- [Who Makes the Car of the Future – 2023](#)
- [The Auto Dealer Dilemma – will the good times keep rolling?](#)

Valuation update – Pages 9-13

We believe that the accompanying valuation framework is one of the most important fundamental factors that should be considered when making investment decisions on the stocks in our coverage universe. However, given the extreme volatility in certain links of the automotive value chain, investors should be cognizant that the stocks are sensitive to headlines and swings in expectations, especially in the short term.

Buy: ABG, ADNT, AN, APTV, BWA, F, GM, GPI, LAD, LEA, MGA, PAG, RACE, RIVN, VC

Neutral: LAZR, LCID, TSLA

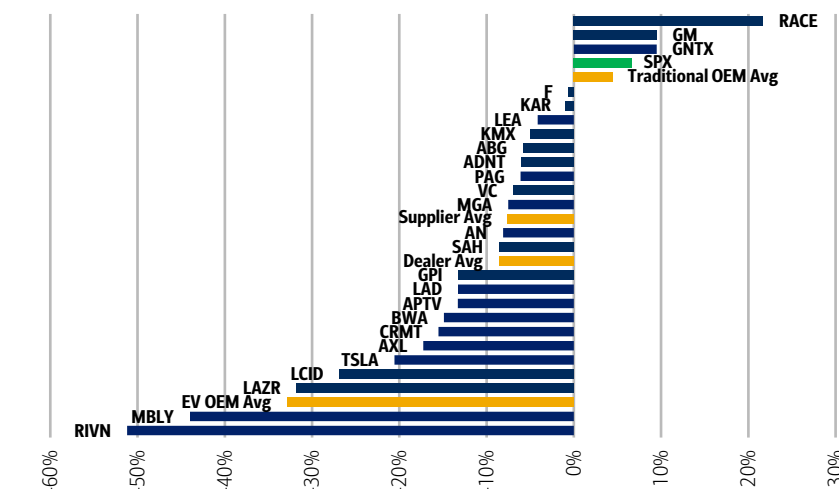
Underperform: AXL, CRMT, KAR, KMX, MBL, SAH

BofA Global Auto Summit coming up March 26-27

Our annual BofA Global Auto Summit will take place on March 26-27. As a reminder, we will host numerous OEMs, suppliers, and dealers for fireside chat discussions as well as investor meetings (1x1 and group sessions) and will have expert panels on various industry topics. Please call your BofA representative for more information.

Exhibit 1: 2024 YTD stock performance

YTD stock performance of automotive coverage vs. supplier, dealer & OEM averages as well as S&P Index



Source: Bloomberg as of 2/22/24

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23 February 2024

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Stock symbol key:

Adient Plc	ADNT
American Axle	AXL
America's Car-Mart	CRMT
Aptiv PLC	APTV
Asbury Auto	ABG
AutoNation, Inc.	AN
BorgWarner	BWA
CarMax	KMX
Ferrari	RACE
Ford Motor	F
General Motors	GM
Group 1 Auto	GPI
OPENLANE	KAR
Luminar Technologies Inc	LAZR
Lucid Group	LCID
Lear Corp.	LEA
Lithia Motors A	LAD
Mobileye	MBLY
Magna Intl	MGA
Penske Auto Group	PAG
Rivian Automotive	RIVN
Sonic Automotive	SAH
Tesla	TSLA
Visteon Corp	VC

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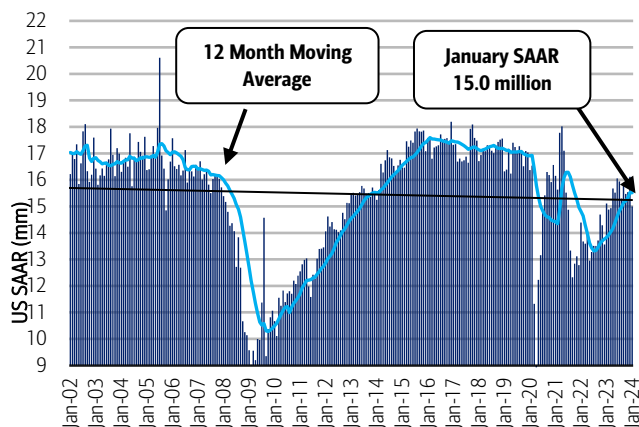
Timestamp: 23 February 2024 05:00AM EST

January SAAR of 15.0mm marks a cold start to 2024

January SAAR of 15.0mm down 1.3% YoY

Exhibit 2: U.S. seasonally adjusted annual rate (SAAR)

January SAAR of 15.0mm was below the 12-month moving average



Source: WardsAuto InfoBank

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January US light vehicle sales decreased 1.3% YoY for a seasonally adjusted annualized rate (SAAR) of 15.0mm, a notable decline from the 15.8mm SAAR in December. This was well below both our estimate of 15.7mm and consensus of 15.7mm. January's performance equates to an unadjusted volume increase of 2.8% YoY, but down -26% MoM from December 2023. We'd note that January is historically one of the smallest months of the year in terms of volume.

In 2023, US sales grew solidly to 15.5mm (+12.5% YoY). We expect a further uptick in 2024 to 16.1mm (+4% YoY) and project sales will continue to build towards the next peak in the US auto cycle in 2028 (17-18mm range). Sales growth should benefit from the release of pent-up demand following Covid-related production constraints. Additionally, fleet sales and a return in mass market sales are other incremental drivers.

Exhibit 3: US vehicle sales and market share – current month and 2024YTD

US January unit sales decreased 1.3% YoY on a SD-adjusted basis, with car sales down 2.7% YoY and light truck sales down 1.0% YoY

		Cars			Light Trucks			Total Vehicles		
		2024	2023	%Δ*	2024	2023	%Δ*	2024	2023	%Δ*
January	January UNITS:									
	Detroit Three	23,891	35,306	-35.0%	384,374	399,300	-7.6%	408,265	434,606	-9.8%
	Europeans	30,193	28,505	1.7%	69,624	66,093	1.1%	99,817	94,598	1.3%
	Japanese	113,629	95,105	14.7%	286,333	256,536	7.2%	399,962	351,641	9.2%
	Koreans	28,686	33,767	-18.4%	74,217	74,122	-3.9%	102,903	107,889	-8.4%
	Others	16,681	17,551	-8.8%	48,419	40,634	14.4%	65,100	58,185	7.4%
	Total	213,080	210,234	-2.7%	862,967	836,685	-1.0%	1,076,047	1,046,919	-1.3%
	ANNUAL RATE (Mils.)	3.0	3.1	-1.5%	12.0	12.1	-0.5%	15.0	15.1	-0.7%
	CAR/TRUCK MIX (%):	19.8%	20.1%	(0.3)	80.2%	79.9%	0.3	100.0%	100.0%	
	MARKET SHARE:									
YTD 2024	Detroit Three	11.2%	16.8%	(5.6)	44.5%	47.7%	(3.2)	37.9%	41.5%	(3.6)
	Europeans	14.2%	13.6%	0.6	8.1%	7.9%	0.2	9.3%	9.0%	0.2
	Japanese	53.3%	45.2%	8.1	33.2%	30.7%	2.5	37.2%	33.6%	3.6
	Koreans	13.5%	16.1%	(2.6)	8.6%	8.9%	(0.3)	9.6%	10.3%	(0.7)
	Others	7.8%	8.3%	(0.5)	5.6%	4.9%	0.8	6.0%	5.6%	0.5
	YTD 2024 UNITS:									
	Detroit Three	23,891	35,306	-35.0%	384,374	399,300	-7.6%	408,265	434,606	-9.8%
	Europeans	30,193	28,505	1.7%	69,624	66,093	1.1%	99,817	94,598	1.3%
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	Japanese	53.3%	45.2%	8.1	33.2%	30.7%	2.5	37.2%	33.6%	3.6
	Koreans	13.5%	16.1%	(2.6)	8.6%	8.9%	(0.3)	9.6%	10.3%	(0.7)
	Others	7.8%	8.3%	(0.5)	5.6%	4.9%	0.8	6.0%	5.6%	0.5

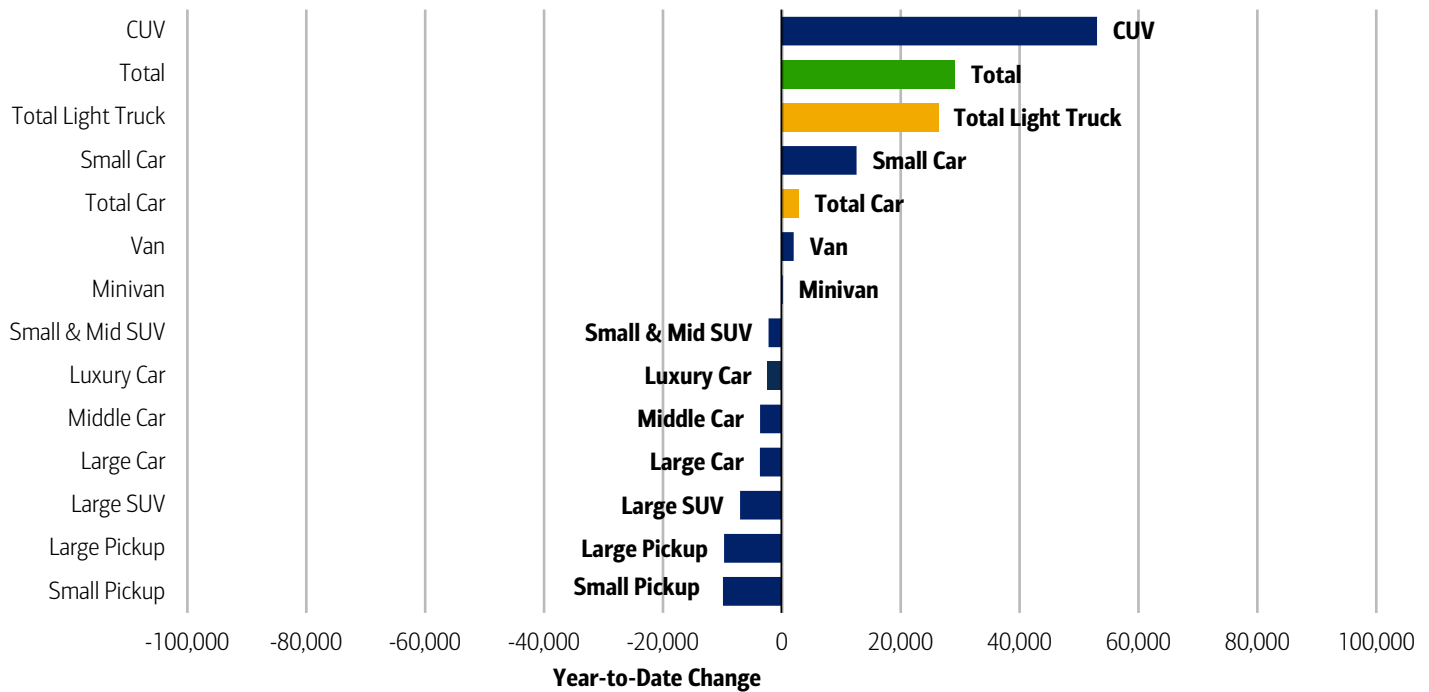
Source: WardsAuto InfoBank; * Note: Selling day adjusted

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US sales mix

Exhibit 4: US sales by segment – 2024 unit change

all light vehicle unit sales are up YTD driven mainly by CUVs and Small Cars, partially offset by declines in other segments

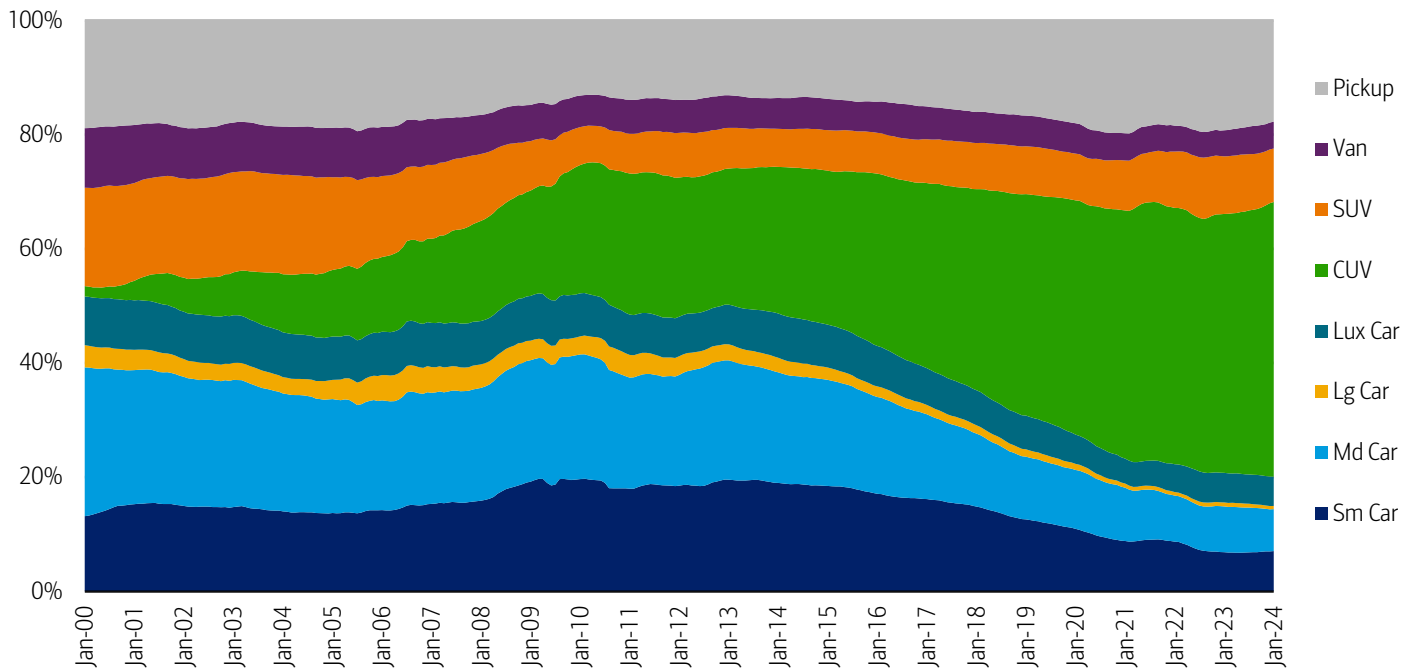


Source: WardsAuto InfoBank

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Exhibit 5: US sales by segment – Last Twelve Months (LTM) mix trend

Over the past decade, Crossover Utility Vehicles (CUVs) have increasingly gained market share from Small, Mid-sized and Large Cars



Source: WardsAuto InfoBank

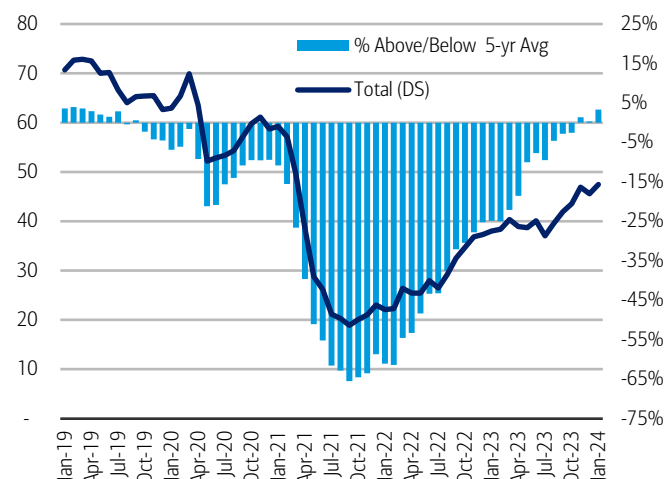
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Inventory grows following soft Jan sales

January inventory increases 93k units MoM

Exhibit 6: US inventory – total (DS)

January days' supply of 47DS came in above the 5-year average of 46DS



Source: WardsAuto InfoBank

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January 2024 auto inventory was up 93k units from December 2023 to ~2.4mm. Inventories have consistently marched higher over the last two years as production has recovered and are now up ~145% off the September 2021 trough. The MoM increase in absolute inventory was driven primarily by the Japanese (+58k) and Korean OEMs (+26k). The D3 posted higher inventory (+12k), driven by a +26k increase in GM Light truck inventory and partially offset by a -17k decline at Ford (Stellantis was up 2k MoM). European OEM inventory was -4k MoM. On a days' supply (DS) basis, inventory stood at 47DS, which is a bit above the five-year average of 46DS, and up one day MoM.

January inventory bump came in light of soft January sales, which were down MoM on a SAAR basis to 15.0mm.

Inventory remains lower than “normal” levels of 2.5mm-3.0mm+ units, but is approaching this range. In 2023, as production constraints faded, both sales and inventory started to recover after years in which low inventory impaired sales. Our latest forecast assumes inventories rise to 2.7-2.8mm units at the end of 2024. We believe there is still substantial unfulfilled demand following the last few years of shortages.

Exhibit 7: January 2024 inventory summary

January inventory was ~2.40mm units, with days' supply of 47 above the 5-year avg. of 46

	Inventory	Days	5-yr	% Above	
	Units	Supply	Avg DS	/Below	Note
Detroit 3 -- Cars	99,893	77	50	53%	Detroit 3 OEM's total inventory was up 12k MoM and increased 239k units YoY. Aggregate supply remains less constrained than the industry average, across both cars and light trucks.
Detroit 3 -- Lt Trucks	1,195,011	66	59	12%	
Detroit 3 -- Total	1,294,904	66	58	15%	
Japanese -- Cars	188,696	37	39	-4%	Supply at Japanese OEMs was up 58k MoM and increased 316k units YoY. Aggregate supply is more constrained than the industry average across both cars and light trucks.
Japanese -- Lt Trucks	493,957	38	38	-1%	
Japanese -- Total	682,653	38	38	-2%	
European -- Cars	56,148	43	46	-6%	European OEM's inventory was down 4k units MoM but increased 56k units YoY. Aggregate supply is less constrained than the industry average across both cars and light trucks.
European -- Lt Trucks	165,340	52	48	7%	
European -- Total	221,488	49	48	3%	
Korean -- Cars	43,431	27	35	-22%	Inventory at Korean OEMs was up 26k units MoM and increased 70k units YoY. Both car and truck inventories remain well below the industry average.
Korean -- Lt Trucks	113,365	30	36	-16%	
Korean -- Total	156,796	29	35	-17%	
Industry -- Cars	393,428	39	39	0%	Total inventory increased 93k units MoM, and was up 691k units YoY. Car supply tighter than light truck, as OEMs continue to prioritize production and inventory build of high ASP/margin vehicles.
Industry -- Lt Trucks	2,006,443	50	48	3%	
Industry -- Total	2,399,871	47	46	3%	

Source: WardsAuto InfoBank, BofA Global Research

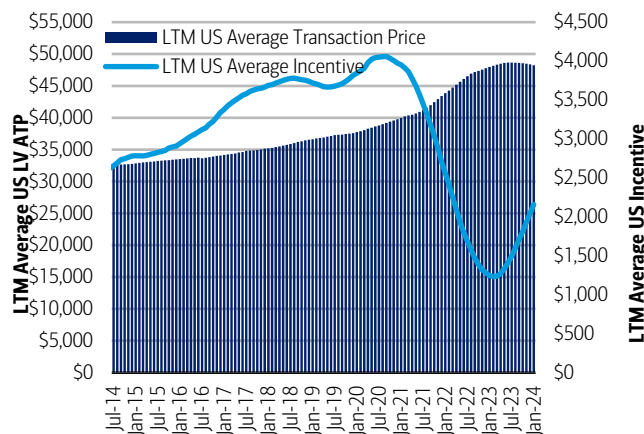
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Incentives & pricing

Mix holds near record levels, ATPs fall in January

Exhibit 8: Industry average transaction price & average incentive

US average ATPs fall from record highs in January, Incentives climb



Source: Kelley Blue Book (ATPs do not include applied incentives), AutoData

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Two data points that speak to the strength of underlying demand are mix and price, which remain near record levels. Light trucks (pickups, Sports Utility Vehicles (SUVs), Crossover Utility Vehicles (CUVs)) gained +30bps of market share relative to passenger cars in January on a YoY basis, while alternative powertrain vehicles gained +400bps from ICE vehicles YoY.

Average transaction prices (ATPs) fell in January, down 3.5% YoY to \$47,401 (-\$1,724/unit YoY) and were -2.6% MoM according to Kelley Blue Book. Incentives were up 95% YoY and +1% MoM in January but are still well below 2019 levels (5.7% of ATP vs. ~10% in 2019). We are closely monitoring the strength of demand in light of broader macro risks.

On that note, we expect the recently strong pricing trends (more transitory) and favorable mix shift that has occurred in the last 10 years (more structural) could begin to flatten out or fade as volumes begin to recover in the mid-2020s.

Exhibit 9: Most recent month US incentive and ATP trends – major automakers

Industry average incentive was up 94.6% YoY in January, while the average transaction price was down 3.5% YoY

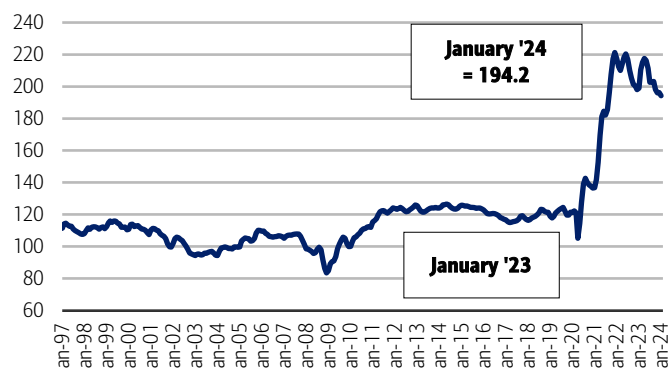
AutoData/KBB	Average Incentive					Average Transaction Price				
	Jan-24	Dec-23	MoM % Chg	Jan-23	YoY % Chg	Jan-24	Dec-23	MoM % Chg	Jan-23	YoY % Chg
GM	\$2,843	\$2,657	7.0%	\$1,964	44.8%	\$50,680	\$52,452	-3.4%	\$51,648	-1.9%
Ford	\$2,154	\$2,054	4.9%	\$2,083	3.4%	\$53,755	\$55,035	-2.3%	\$56,751	-5.3%
Stellantis	\$4,099	\$4,363	-6.1%	\$2,044	100.5%	\$58,531	\$58,678	-0.3%	\$56,680	3.3%
Toyota	\$1,154	\$1,051	9.8%	\$678	70.2%	\$42,686	\$43,084	-0.9%	\$41,474	2.9%
Honda	\$2,137	\$1,658	28.9%	\$1,335	60.1%	\$36,890	\$37,620	-1.9%	\$37,444	-1.5%
Nissan	\$3,062	\$2,992	2.3%	\$1,860	64.6%	\$34,927	\$35,932	-2.8%	\$37,377	-6.6%
Hyundai	\$2,439	\$2,563	-4.8%	\$856	184.9%	\$37,049	\$38,106	-2.8%	\$35,648	3.9%
BMW	\$3,445	\$4,442	-22.4%	\$2,552	35.0%	\$68,191	\$69,082	-1.3%	\$68,598	-0.6%
Volkswagen	\$3,738	\$3,875	-3.5%	\$1,916	95.1%	\$56,514	\$57,222	-1.2%	\$57,190	-1.2%
Tesla	\$4,666	\$5,032	-7.3%	\$1,036	350.4%	\$49,518	\$49,802	-0.6%	\$62,350	-20.6%
Industry	\$2,716	\$2,687	1.1%	\$1,396	94.6%	\$47,401	\$48,652	-2.6%	\$49,125	-3.5%

Source: Kelley Blue Book (ATPs do not include applied incentives), AutoData

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Exhibit 10: NADA Used Vehicle Price Index

NADA Used Vehicle Price Index was down 2.4% YoY in January 2023 and decreased 1.0% on a MoM basis

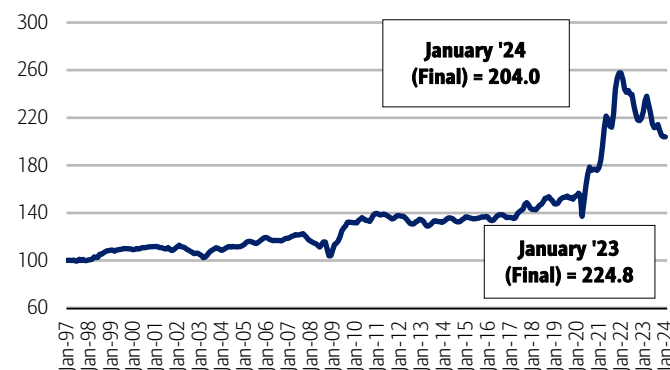


Source: NADA

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Exhibit 11: Manheim Used Vehicle Value Index

Manheim Used Vehicle Value Index was down 9.3% YoY in January 2024 (Final) and was flat on a MoM basis



Source: Manheim

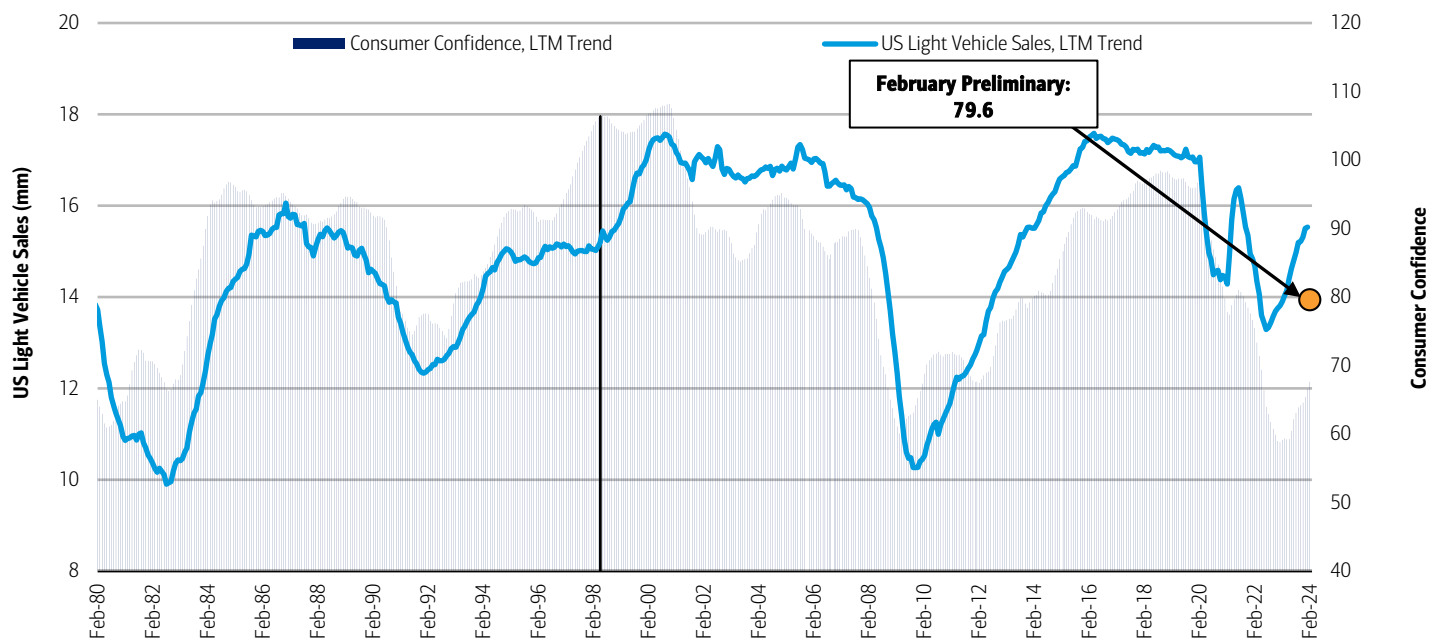
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Other monthly data

Exhibit 12: Consumer confidence versus US auto sales

LTM consumer confidence and US auto sales have improved over the last few months; February (Preliminary) consumer confidence was up 18.8% YoY

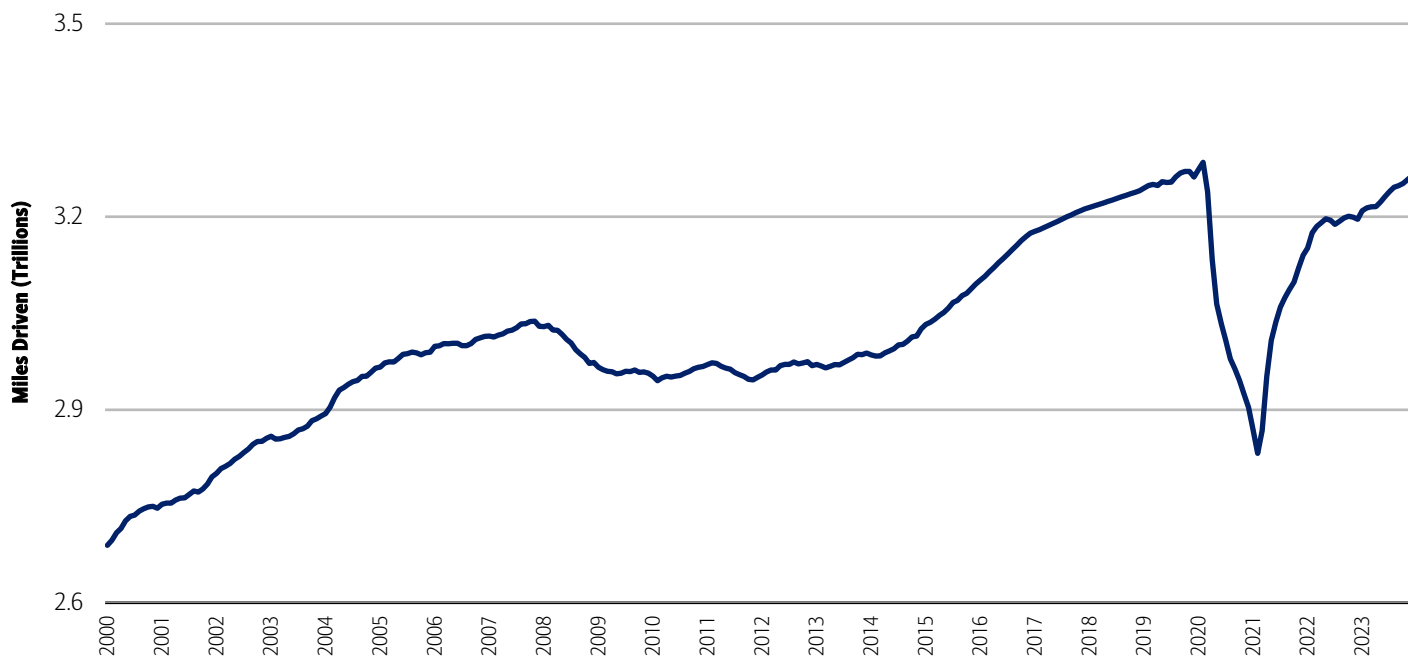


Source: University of Michigan, Wards AutoInfoBank

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Exhibit 13: LTM US miles driven

On a LTM basis, US miles driven fell significantly in 2020 due to COVID-19 but have largely recovered. After leveling out in 2H22, miles driven increased in 2023.



Source: Federal Highway Administration

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Exhibit 14: US average retail gasoline price

US average retail gasoline prices rose steadily from 2020-2022. Gas prices retreated throughout 2H22 and increased through 2023 but have declined since October.



Source: US Energy Information Administration

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Exhibit 15: BofA Global Research estimated total raw material \$ cost per average vehicle

We estimate that the total raw material \$ cost per average vehicle has decreased in recent months, although it has been volatile over time



Source: BofA Global Research estimates

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Upcoming event calendar

Exhibit 16: Calendar of upcoming automotive industry events

Below we outline the release dates for monthly industry and economic data used in our analyses

March	March 1, 2024	Industry Data Release	February 2024 US auto sales
	March 1, 2024	Economic Data Release	Final Consumer Confidence survey for month of February
	Week of March 4, 2024	Industry Data Release	February 2024 US auto inventories
	March 8, 2024	Economic Data Release	US unemployment rate / US employees change in nonfarm payrolls
	March 15, 2024	Economic Data Release	Preliminary Consumer Confidence survey for month of March
March 26-27, 2024		BofA Conference	Bank of America 2024 Global Automotive Summit (New York)
	March 28, 2024	Economic Data Release	Final Consumer Confidence survey for month of March
April	April 2, 2024	Industry Data Release	March 2024 US auto sales
	Week of April 1, 2024	Industry Data Release	March 2024 US auto inventories
	April 5, 2024	Economic Data Release	US unemployment rate / US employees change in nonfarm payrolls
	April 12, 2024	Economic Data Release	Preliminary Consumer Confidence survey for month of April
	April 26, 2024	Economic Data Release	Final Consumer Confidence survey for month of April
May	May 1, 2024	Industry Data Release	April 2024 US auto sales
	Week of May 1, 2024	Industry Data Release	April 2024 US auto inventories
	May 3, 2024	Economic Data Release	US unemployment rate / US employees change in nonfarm payrolls
	May 10, 2024	Economic Data Release	Preliminary Consumer Confidence survey for month of May
	May 24, 2024	Economic Data Release	Final Consumer Confidence survey for month of May
June	June 3, 2024	Industry Data Release	May 2024 US auto sales
	Week of June 3, 2024	Industry Data Release	May 2024 US auto inventories
	June 7, 2024	Economic Data Release	US unemployment rate / US employees change in nonfarm payrolls
	June 14, 2024	Economic Data Release	Preliminary Consumer Confidence survey for month of June
	June 28, 2024	Economic Data Release	Final Consumer Confidence survey for month of June

Source: AutoNews, Bloomberg, Company filings, BofA Global Research

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Valuation update

Exhibit 17: Automotive coverage universe valuation summary

Using valuation multiples based on 2024e (and sometimes 2025e), we have published ratings on a collection of OEM, supplier, and dealer company names

Ticker	Company Name	QRQ	Rating	Price Objective	Pot' Upside/Downside	Basis
F	Ford Motor Co	B-1-7	Buy	\$21.00	73.3%	~4x 2024e EV/EBITDAP, implying 11x P/E; within the historical trading range given increased credibility and improving execution
GM	General Motors	B-1-7	Buy	\$75.00	90.6%	~4x 2024e EV/EBITDAP, implying 9x P/E; within the historical trading range given ongoing execution and the Core to Future transition
RACE	Ferrari	B-1-7	Buy	\$458.00	11.2%	~31x 2024e EV/EBITDA, 12x EV/Sales; a slight premium to current trading level, reflecting ongoing volume, revenue, and earnings growth
LCID	Lucid Motors	C-2-9	Neutral	\$4.50	46.1%	~6x EV/Sales on 2025e, implies roughly 0.5x EV/Sales and 3x EV/EBITDA on pro-forma capital-induced 2030 estimates
RIVN	Rivian Automotive	C-1-9	Buy	\$25.00	118.3%	~3x EV/Sales on 2025e, implying 0.5x EV/Sales and 3x EV/EBITDA on pro-forma capital-induced 2030 estimates
TSLA	Tesla Motors	C-2-9	Neutral	\$280.00	41.8%	~8.5x EV/Sales and 50x EV/EBITDA on 2024e, implying 3.0x EV/Sales and 22x EV/EBITDA on pro-forma capital-induced 2025 estimates
ADNT	Adient PLC	C-1-9	Buy	\$50.00	46.3%	~6x FY2024e EV/EBITDA, above the historical average, reflecting forthcoming US/NA and Global production volume recovery and turnaround efforts
APTIV	Aptiv	C-1-9	Buy	\$115.00	47.8%	~11x 2024e EV/EBITDA; well above supplier average and above multi-industrial average given unique leverage to industry mega-trends
AXL	American Axle	C-3-9	Underperform	\$7.00	-4.0%	~4x 2024e EV/EBITDA; below historical average but in-line recent trading ranges, reflecting forthcoming US/NA and Global production recovery
BWA	BorgWarner	B-1-7	Buy	\$50.00	63.9%	~7x 2024e EV/EBITDA; reflecting BWA's positioning towards a higher growth trajectory after the spin-off of the Fuel Systems and Aftermarket segments
LAZR	Luminar Technologies	C-2-9	Neutral	\$4.00	73.9%	~5.5x EV/Sales on 2025e, a slight premium to avg EV/Sales multiples in Auto/Tech universe we include in LAZR's peer group
LEA	Lear Corp	B-1-7	Buy	\$210.00	55.1%	~7x 2024e EV/EBITDA; above the average, reflecting how vertical integration will bolster already strong cash flow and shareholder returns
MGA	Magna International	B-1-7	Buy	\$70.00	28.1%	~6x 2024e EV/EBITDA; above the historical average given solid long term positioning in industry evolution
MBLY	Mobileye	C-3-9	Underperform	\$22.00	-9.3%	~5.5x 2025e EV/Sales; below the average of its four closest peers reflecting our slower growth outlook following the company's initial guidance for 2024
VC	Visteon Corp	C-1-9	Buy	\$165.00	41.9%	~10x EV/EBITDA on 2024e, consistent with a P/E of ~20x. Slightly above mid-point of where the stock has traded since 2016 (6x-12x)
ABG	Asbury Automotive Group	B-1-9	Buy	\$340.00	60.4%	~11x 2024e P/E; roughly in line with average dealer through-cycle multiple, reflecting forthcoming US/NA cycle recovery through mid-2020s
AN	AutoNation	B-1-9	Buy	\$220.00	59.4%	~11x 2024e P/E; roughly in line with average dealer through-cycle multiple, reflecting forthcoming US/NA cycle recovery through mid-2020s
GPI	Group 1 Automotive	C-1-7	Buy	\$425.00	60.7%	~11x 2024e P/E; about in line with average dealer through-cycle multiple, reflecting forthcoming US/NA cycle recovery through mid-2020s
LAD	Lithia Motors	C-1-7	Buy	\$440.00	54.1%	~11x 2024e P/E; roughly in line with average dealer through-cycle multiple, reflecting forthcoming US/NA cycle recovery through mid-2020s
PAG	Penske Automotive Group	B-1-7	Buy	\$175.00	16.1%	~12x 2024e P/E; roughly in line with average dealer through-cycle multiple, reflecting forthcoming US/NA cycle recovery through mid-2020s
SAH	Sonic Automotive	C-3-7	Underperform	\$60.00	16.8%	~9x 2024e P/E; a bit below the average dealer through-cycle multiple, reflecting potential challenges given the supply of used vehicles
CRMT	America's Car-Mart	C-3-9	Underperform	\$55.00	-14.1%	~15x FY2025e (CY2024) P/E; line with an average through-cycle multiple, reflecting less favorable macro dynamics for low income consumer
KMX	CarMax	C-3-9	Underperform	\$44.00	-39.6%	~12x FY2025e (CY2024) P/E; below historical trading range reflecting potential challenges given the supply of used vehicles
KAR	KAR Auction Services	C-3-9	Underperform	\$16.00	9.1%	~8x 2024e EV/EBITDA; about in line with historical trading range, reflecting potential challenges given the supply of wholesale vehicles

Source: Company filings, Bloomberg, BofA Global Research estimates Up/Downside=potential

Notes: Upside/downside = potential from current stock prices, Adjusted EV/Sales and EV/EBITDA multiples are adjusted for pension & OPEB, 2023-2025e are based off of actual prices as of 2/22/2024, CRMT & KMX calendar years equate to 1-year forward fiscal years (CY2024 = FY2025)

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Exhibit 18: Automotive coverage universe P/E multiples

Below we compare P/E multiples for the companies in our coverage universe, as well as forecast P/E multiples out through 2025E

		P/E											
Ticker	Company Name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E
F	Ford Motor Co	11.6x	7.3x	6.9x	6.6x	5.9x	7.8x	24.4x	13.1x	6.2x	6.1x	5.9x	5.3x
GM	General Motors	11.5x	6.8x	5.7x	6.2x	5.1x	6.8x	8.5x	8.3x	4.4x	4.7x	4.2x	3.6x
RACE	Ferrari	nm	27.9x	24.6x	30.9x	25.8x	39.9x	57.5x	54.4x	39.5x	45.3x	50.1x	46.1x
	Traditional OEM Average ex. RACE	11.5x	7.0x	6.3x	6.4x	5.5x	7.3x	16.5x	10.7x	5.3x	5.4x	5.1x	4.4x
LCID	Lucid Motors	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm
RIVN	Rivian Automotive	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm
TSLA	Tesla Motors	nm	nm	nm	nm	nm	2,788.9x	309.5x	155.9x	30.3x	79.4x	59.8x	48.1x
	EV OEM Average	nm	nm	nm	nm	nm	2,788.9x	309.5x	155.9x	30.3x	79.4x	59.8x	48.1x
ADNT	Adient PLC	nm	nm	6.9x	8.4x	2.7x	11.8x	nm	23.0x	nm	16.9x	12.0x	6.7x
APTIV	Aptiv	nm	nm	nm	18.3x	11.7x	17.6x	67.2x	53.9x	27.3x	18.5x	13.4x	11.4x
AXL	American Axle	9.8x	6.6x	5.9x	4.5x	3.4x	6.0x	64.2x	10.0x	12.6x	nm	60.8x	9.1x
BWA	BorgWarner	16.9x	14.2x	12.1x	13.1x	7.8x	9.4x	14.0x	11.4x	8.8x	9.6x	7.4x	6.6x
LAZR	Luminar Technologies	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm
LEA	Lear Corp	12.0x	11.3x	9.4x	10.4x	6.7x	8.7x	29.8x	23.0x	14.2x	11.8x	8.7x	6.4x
MGA	Magna International	12.0x	9.0x	8.3x	9.6x	6.8x	8.1x	19.7x	15.8x	13.7x	10.9x	8.7x	6.7x
MBLY	Mobileye	nm	nm	nm	nm	nm	nm	nm	nm	43.8x	52.8x	60.7x	37.3x
VC	Visteon Corp	187.5x	40.7x	15.1x	20.3x	9.8x	31.3x	129.4x	52.7x	24.5x	19.2x	14.2x	11.2x
	Supplier Average	42.9x	16.1x	10.6x	12.6x	7.7x	13.5x	49.7x	26.7x	17.3x	14.9x	17.7x	9.0x
ABG	Asbury Automotive Group	17.4x	12.1x	10.1x	10.0x	7.9x	10.5x	11.3x	6.3x	4.8x	6.9x	6.9x	6.8x
AN	AutoNation	17.3x	15.0x	11.5x	12.8x	8.1x	9.1x	9.8x	6.4x	4.4x	6.5x	6.9x	6.5x
GPI	Group 1 Automotive	15.3x	11.0x	10.5x	9.2x	5.9x	8.1x	7.3x	5.7x	3.9x	6.9x	6.9x	7.1x
LAD	Lithia Motors	17.0x	15.2x	13.1x	13.5x	7.6x	11.1x	16.1x	7.4x	4.6x	8.9x	7.1x	6.5x
PAG	Penske Automotive Group	15.5x	11.5x	13.0x	11.1x	7.6x	8.5x	8.9x	7.0x	6.2x	10.0x	10.4x	9.9x
SAH	Sonic Automotive	14.2x	11.6x	11.4x	10.0x	7.7x	10.4x	10.0x	5.8x	5.1x	8.1x	7.7x	8.0x
CRMT	America's Car-Mart	19.3x	8.2x	32.9x	17.5x	20.1x	14.5x	14.9x	6.8x	5.2x	24.4x	19.9x	17.1x
KMX	CarMax	30.8x	20.3x	21.0x	19.7x	17.0x	16.3x	17.7x	28.8x	8.7x	25.3x	25.4x	19.7x
KAR	KAR Auction Services	nm	nm	nm	nm	nm	18.7x	36.5x	50.4x	30.3x	21.8x	18.3x	14.0x
	Dealer Average	16.1x	12.7x	11.6x	11.1x	7.5x	9.6x	10.6x	6.5x	4.8x	7.9x	7.6x	7.5x

Source: Company filings, Bloomberg, BofA Global Research estimates

Notes: Upside/downside = potential from current stock prices, 2023-2025e are based off of actual prices as of 2/22/2024, CRMT & KMX calendar years equate to 1-year forward fiscal years (CY2024 = FY2025)

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Exhibit 19: Automotive coverage universe adjusted EV/EBITDA estimates

Below we compare Adjusted EV/EBITDA multiples for the companies in our coverage universe, as well as forecast these multiples through 2025E

Ticker	Company Name	Adjusted EV / EBITDA											
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E
F	Ford Motor Co	4.8x	3.1x	5.0x	3.3x	1.9x	2.5x	3.9x	5.0x	2.0x	5.8x	4.4x	3.7x
GM	General Motors	3.8x	3.6x	3.1x	3.5x	2.8x	3.8x	4.2x	4.3x	2.1x	2.3x	4.0x	3.3x
RACE	Ferrari	nm	12.7x	12.6x	16.4x	15.0x	22.0x	31.0x	29.6x	20.9x	25.2x	28.4x	25.5x
	Traditional OEM Average ex. RACE	4.3x	3.4x	4.1x	3.4x	2.3x	3.1x	4.1x	4.6x	2.0x	4.1x	4.2x	3.5x
LCID	Lucid Motors	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm
RIVN	Rivian Automotive	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	8.8x
TSLA	Tesla Motors	nm	nm	53.7x	147.5x	29.3x	27.5x	125.6x	101.1x	21.9x	55.0x	35.8x	27.9x
	EV OEM Average	nm	nm	53.7x	147.5x	29.3x	27.5x	125.6x	101.1x	21.9x	55.0x	35.8x	18.3x
ADNT	Adient PLC	nm	nm	6.5x	6.9x	2.8x	4.1x	7.8x	10.8x	5.8x	7.8x	5.2x	4.3x
APTIV	Aptiv	nm	nm	nm	12.4x	8.5x	11.5x	22.8x	22.5x	14.5x	10.9x	8.1x	6.8x
AXL	American Axle	6.0x	5.0x	4.4x	5.2x	4.2x	4.6x	5.9x	4.4x	5.0x	5.4x	4.4x	3.5x
BWA	BorgWarner	9.2x	8.6x	6.7x	7.7x	5.0x	5.5x	12.4x	9.8x	14.0x	15.0x	8.1x	7.9x
LAZR	Luminar Technologies	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm
LEA	Lear Corp	6.7x	6.4x	5.3x	5.9x	4.0x	4.8x	9.6x	9.1x	6.5x	5.9x	4.8x	3.9x
MGA	Magna International	6.7x	5.0x	5.0x	5.7x	4.5x	4.5x	7.3x	7.2x	6.1x	5.7x	4.7x	3.9x
MBLY	Mobileye	nm	nm	nm	nm	nm	nm	nm	nm	36.2x	46.1x	42.7x	22.6x
VC	Visteon Corp	38.1x	9.8x	7.6x	10.9x	6.1x	11.5x	19.6x	15.2x	11.0x	8.5x	6.6x	5.3x
	Supplier Average	12.9x	7.2x	6.3x	7.9x	5.4x	7.1x	12.6x	11.9x	9.5x	9.0x	6.7x	5.6x
ABG	Asbury Automotive Group	10.7x	8.8x	7.7x	7.3x	7.1x	8.6x	9.4x	7.8x	5.3x	6.9x	6.5x	6.3x
AN	AutoNation	10.6x	9.5x	8.7x	9.3x	7.1x	6.8x	6.8x	5.6x	4.4x	5.8x	5.5x	5.4x
GPI	Group 1 Automotive	10.0x	8.3x	8.0x	7.5x	6.4x	7.6x	6.6x	5.9x	4.4x	6.1x	6.2x	6.4x
LAD	Lithia Motors	11.1x	9.3x	8.4x	8.7x	6.9x	8.3x	11.5x	6.4x	6.0x	9.8x	9.5x	9.5x
PAG	Penske Automotive Group	11.1x	8.4x	10.3x	9.7x	8.2x	8.9x	8.3x	6.8x	6.4x	8.9x	8.3x	8.1x
SAH	Sonic Automotive	8.0x	6.9x	6.9x	6.7x	6.0x	6.2x	6.3x	5.4x	4.8x	6.5x	6.3x	6.6x
CRMT	America's Car-Mart	20.1x	33.0x	17.5x	14.4x	14.9x	16.8x	16.0x	16.6x	18.5x	19.9x	36.1x	31.9x
KMX	CarMax	16.0x	11.4x	12.0x	11.1x	9.9x	11.2x	12.0x	17.6x	7.1x	13.7x	13.0x	11.3x
KAR	KAR Auction Services	nm	nm	nm	nm	nm	7.8x	10.3x	9.5x	9.7x	9.2x	7.6x	5.9x
	Dealer Average	10.3x	8.5x	8.3x	8.2x	7.0x	7.7x	8.1x	6.3x	5.2x	7.3x	7.1x	7.0x

Source: Company filings, Bloomberg, BofA Global Research estimates

Notes Adjusted EV/EBITDA multiples are adjusted for pension & OPEB; 2023-2025e are based off of actual prices as of 2/22/2024, CRMT & KMX calendar years equate to 1-year forward fiscal years (CY2024 = FY2025)

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Exhibit 20: Automotive coverage universe EPS

Below we compare EPS for the companies in our coverage universe, as well as forecasted EPS estimates out through 2025E

Ticker	Company Name	EPS											
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E
F	Ford Motor Co	\$1.34	\$1.93	\$1.76	\$1.88	\$1.30	\$1.19	\$0.36	\$1.59	\$1.88	\$2.01	\$2.05	\$2.30
GM	General Motors	\$3.03	\$5.02	\$6.12	\$6.62	\$6.54	\$4.82	\$4.90	\$7.07	\$7.59	\$7.68	\$9.35	\$10.85
RACE	Ferrari	€ 1.38	€ 1.63	€ 2.25	€ 2.83	€ 3.37	€ 3.71	€ 3.28	€ 4.50	€ 5.13	€ 6.90	€ 7.60	€ 8.25
LCID	Lucid Motors	nm	nm	nm	nm	nm	(\$35.61)	(\$28.42)	(\$2.00)	(\$0.77)	(\$1.36)	(\$1.30)	(\$1.00)
RIVN	Rivian Automotive	nm	nm	nm	nm	nm	nm	nm	(\$14.78)	(\$6.34)	(\$4.88)	(\$4.00)	(\$1.00)
TSLA	Tesla Motors	(\$0.07)	(\$0.36)	(\$0.19)	(\$0.58)	(\$0.09)	\$0.01	\$0.76	\$2.26	\$4.07	\$3.13	\$3.30	\$4.10
ADNT	Adient PLC	nm	\$5.33	\$8.52	\$9.35	\$5.65	\$1.61	(\$0.04)	\$2.08	\$0.11	\$2.15	\$2.85	\$5.10
APTV	Aptiv	\$3.77	\$3.51	\$4.47	\$4.64	\$5.26	\$4.80	\$1.94	\$3.06	\$3.41	\$4.86	\$5.80	\$6.85
AXL	American Axle	\$2.31	\$2.88	\$3.27	\$3.81	\$3.30	\$1.61	\$0.13	\$0.93	\$0.62	(\$0.16)	\$0.12	\$0.80
BWA	BorgWarner	\$3.25	\$3.04	\$3.26	\$3.89	\$4.48	\$4.13	\$2.76	\$3.96	\$4.60	\$3.75	\$4.10	\$4.60
LAZR	Luminar Technologies	nm	nm	nm	nm	(\$12.00)	(\$0.84)	(\$2.54)	(\$0.38)	(\$0.78)	(\$0.84)	(\$0.75)	(\$0.60)
LEA	Lear Corp	\$8.15	\$10.85	\$14.03	\$17.00	\$18.21	\$13.99	\$5.33	\$7.94	\$8.72	\$12.01	\$15.50	\$21.30
MGA	Magna International	\$4.54	\$4.49	\$5.23	\$5.93	\$6.70	\$6.05	\$3.60	\$5.13	\$4.10	\$5.41	\$6.30	\$8.10
MBLY	Mobileye	\$0.21	\$0.47	\$0.73	nm	nm	nm	nm	nm	\$0.80	\$0.82	\$0.40	\$0.65
VC	Visteon Corp	\$0.57	\$2.81	\$5.31	\$6.15	\$6.13	\$2.77	\$0.97	\$2.11	\$5.33	\$6.49	\$8.20	\$10.35
ABG	Asbury Automotive Group	\$4.37	\$5.57	\$6.08	\$6.43	\$8.41	\$9.46	\$12.90	\$27.29	\$37.66	\$32.60	\$30.75	\$31.30
AN	AutoNation	\$3.49	\$3.98	\$4.22	\$4.01	\$4.41	\$4.77	\$7.12	\$18.14	\$24.57	\$22.98	\$20.00	\$21.30
GPI	Group 1 Automotive	\$5.87	\$6.87	\$7.42	\$7.73	\$8.91	\$10.93	\$18.03	\$34.55	\$45.71	\$44.38	\$38.50	\$37.25
LAD	Lithia Motors	\$5.11	\$7.02	\$7.42	\$8.39	\$9.98	\$11.76	\$18.19	\$40.03	\$44.42	\$36.85	\$40.20	\$43.85
PAG	Penske Automotive Group	\$3.17	\$3.67	\$4.00	\$4.31	\$5.34	\$5.28	\$6.64	\$15.28	\$18.55	\$16.10	\$14.50	\$15.30
SAH	Sonic Automotive	\$1.90	\$1.97	\$2.01	\$1.85	\$1.79	\$2.65	\$3.85	\$8.46	\$9.61	\$6.95	\$6.65	\$6.40
CRMT	America's Car-Mart	\$2.77	\$3.25	\$1.33	\$2.55	\$3.60	\$6.73	\$7.39	\$14.95	\$13.92	\$3.11	\$3.22	\$3.75
KMX	CarMax	\$2.16	\$2.66	\$3.06	\$3.26	\$3.69	\$4.79	\$5.33	\$4.52	\$6.97	\$3.03	\$2.87	\$3.70
KAR	KAR Auction Services	nm	nm	nm	\$1.30	\$1.26	\$1.04	\$0.51	\$0.31	\$0.43	\$0.68	\$0.80	\$1.05

Source: Company filings, Bloomberg, BofA Global Research estimates

Notes: CRMT & KMX calendar years equate to 1-year forward fiscal years (CY2024 = FY2025)

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**Exhibit 21: Automotive coverage universe closing prices**

Below we compare annual closing prices for the companies in our coverage universe

Ticker	Company Name	Closing Price											
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024E	2025E
F	Ford Motor Co	\$15.50	\$14.09	\$12.13	\$12.49	\$7.65	\$9.30	\$8.79	\$20.77	\$11.63	\$12.19	\$12.12	\$12.12
GM	General Motors	\$34.91	\$34.01	\$34.84	\$40.99	\$33.45	\$32.59	\$41.64	\$58.63	\$33.64	\$35.92	\$39.34	\$39.34
RACE	Ferrari	nm	\$48.00	\$58.14	\$104.84	\$99.44	\$147.42	\$229.52	\$258.82	\$214.22	\$338.43	\$411.85	\$411.85
LCID	Lucid Motors	nm	nm	nm	nm	nm	nm	\$10.01	\$38.05	\$6.83	\$4.21	\$3.08	\$3.08
RIVN	Rivian Automotive	nm	nm	nm	nm	nm	nm	nm	\$103.69	\$18.43	\$23.46	\$11.45	\$11.45
TSLA	Tesla Motors	\$14.83	\$16.00	\$14.25	\$20.76	\$22.19	\$27.89	\$235.22	\$352.26	\$123.18	\$248.48	\$197.41	\$197.41
ADNT	Adient PLC	nm	nm	\$58.60	\$78.70	\$15.06	\$18.92	\$34.77	\$47.88	\$34.69	\$36.36	\$34.17	\$34.17
APTV	Aptiv	nm	nm	nm	\$84.83	\$61.57	\$84.58	\$130.29	\$164.95	\$93.13	\$89.72	\$77.80	\$77.80
AXL	American Axle	\$22.59	\$18.94	\$19.30	\$17.03	\$11.10	\$9.58	\$8.34	\$9.33	\$7.82	\$8.81	\$7.29	\$7.29
BWA	BorgWarner	\$54.95	\$43.23	\$39.44	\$51.09	\$34.74	\$38.63	\$38.64	\$45.07	\$40.25	\$35.85	\$30.51	\$30.51
LAZR	Luminar Technologies	nm	nm	nm	nm	nm	\$10.20	\$34.00	\$16.91	\$4.95	\$3.37	\$2.30	\$2.30
LEA	Lear Corp	\$98.08	\$122.83	\$132.37	\$176.66	\$122.86	\$122.18	\$159.03	\$182.95	\$124.02	\$141.21	\$135.37	\$135.37
MGA	Magna International	\$54.35	\$40.56	\$43.40	\$56.67	\$45.45	\$48.84	\$70.80	\$80.94	\$56.18	\$59.08	\$54.64	\$54.64
MBLY	Mobileye	nm	nm	nm	nm	nm	nm	nm	nm	\$35.06	\$43.32	\$24.26	\$24.26
VC	Visteon Corp	\$106.86	\$114.50	\$80.34	\$125.14	\$60.28	\$86.59	\$125.52	\$111.14	\$130.83	\$124.90	\$116.24	\$116.24
ABG	Asbury Automotive Group	\$75.92	\$67.44	\$61.70	\$64.00	\$66.66	\$99.55	\$145.74	\$172.73	\$179.25	\$224.97	\$211.91	\$211.91
AN	AutoNation	\$60.41	\$59.66	\$48.65	\$51.33	\$35.70	\$43.31	\$69.79	\$116.85	\$107.30	\$150.18	\$138.00	\$138.00
GPI	Group 1 Automotive	\$89.62	\$75.70	\$77.94	\$70.97	\$52.72	\$89.06	\$131.14	\$195.22	\$180.37	\$304.74	\$264.52	\$264.52
LAD	Lithia Motors	\$86.69	\$106.67	\$96.86	\$113.59	\$76.33	\$130.91	\$292.67	\$296.95	\$204.74	\$329.28	\$285.59	\$285.59
PAG	Penske Automotive Group	\$49.07	\$42.34	\$51.84	\$47.85	\$40.32	\$44.72	\$59.39	\$107.22	\$114.93	\$160.51	\$150.72	\$150.72
SAH	Sonic Automotive	\$27.04	\$22.76	\$22.90	\$18.45	\$13.76	\$27.61	\$38.57	\$49.45	\$49.27	\$56.21	\$51.39	\$51.39
CRMT	America's Car-Mart	\$53.38	\$26.69	\$43.75	\$44.65	\$72.45	\$97.66	\$109.84	\$102.40	\$72.26	\$75.77	\$64.01	\$64.01
KMX	CarMax	\$66.58	\$53.97	\$64.39	\$64.13	\$62.73	\$78.07	\$94.46	\$130.23	\$60.89	\$76.74	\$72.89	\$72.89
KAR	KAR Auction Services	nm	nm	nm	nm	nm	\$19.41	\$18.61	\$15.62	\$13.05	\$14.81	\$14.66	\$14.66

Source: Company filings, Bloomberg, BofA Global Research estimates

Notes: 2023-2025e are based off of actual prices as of 2/22/2024, CRMT & KMX calendar years equated to 1-forecast fiscal years (CY2024 = FY2025)

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Stock performance

Exhibit 22: Stock performance

On average within our stock coverage, traditional original equipment manufacturers (OEMs) are up 5%, electric vehicle (EV) OEMs are down 33%, suppliers are down 8%, and dealers are down 9% YTD

2/22/2024	Price	Absolute Perf.			Relative to Sector			Relative to Market			52 Week		% Down vs. High	% Up vs. Low	Year-to-Date		
		-1M	-3M	-12M	-1M	-3M	-12M	-1M	-3M	-12M	High	Low			Absolute	Rel./Sec.	Rel./Mkt.
Suppliers																	
Adient	\$34.17	-0.4%	6.4%	-22.0%	3.9%	13.8%	14.0%	-5.0%	-4.7%	-38.8%	\$46.51	\$30.11	-26.5%	13.5%	-6.0%	8.9%	-11.9%
American Axle	\$7.29	-4.8%	1.3%	-17.3%	-0.7%	8.4%	20.8%	-9.3%	-9.3%	-35.2%	\$9.68	\$6.29	-24.7%	15.9%	-17.3%	-4.1%	-22.4%
Aptiv	\$77.80	-2.8%	-4.7%	-33.0%	1.4%	2.0%	-2.1%	-7.3%	-14.6%	-47.4%	\$120.65	\$71.01	-35.5%	9.6%	-13.3%	0.5%	-18.7%
BorgWarner	\$30.51	-8.2%	-11.8%	-30.3%	-4.2%	-5.7%	1.9%	-12.4%	-21.0%	-45.3%	\$47.05	\$29.51	-35.2%	3.4%	-14.9%	-1.4%	-20.2%
Luminar	\$2.30	-2.1%	-15.4%	-68.9%	2.1%	-9.5%	-54.6%	-6.7%	-24.3%	-75.6%	\$10.55	\$2.09	-78.2%	10.0%	-31.8%	-20.9%	-36.0%
Lear	\$135.37	3.5%	1.5%	-5.6%	8.0%	8.6%	37.9%	-1.3%	-9.1%	-26.0%	\$157.91	\$117.79	-14.3%	14.9%	-4.1%	11.1%	-10.1%
Magna	\$54.64	-1.9%	0.5%	-2.1%	2.3%	7.6%	43.0%	-6.5%	-9.9%	-23.2%	\$65.27	\$46.71	-16.3%	17.0%	-7.5%	7.2%	-13.3%
Mobileye	\$24.26	-16.0%	-44.1%	-40.8%	-12.4%	-40.2%	-13.4%	-19.9%	-49.9%	-53.5%	\$47.41	\$24.17	-48.8%	0.4%	-44.0%	-35.1%	-47.5%
Visteon Corp	\$116.24	-1.1%	-1.5%	-29.4%	3.2%	5.4%	3.2%	-5.7%	-11.7%	-44.6%	\$171.66	\$108.66	-32.3%	7.0%	-6.9%	7.8%	-12.7%
BofA Supplier Universe Average	nm	-0.7%	0.9%	-14.2%	3.6%	7.9%	25.4%	-5.3%	-9.7%	-32.7%	nm	nm	-23.1%	15.0%	-7.6%	7.1%	-13.3%
Traditional OEMs																	
Ford	\$12.12	8.2%	18.1%	-0.7%	12.0%	32.5%	1.3%	3.2%	5.8%	-22.1%	\$15.42	\$9.63	-21.4%	25.9%	-0.6%	20.4%	-6.8%
GM	\$39.34	11.4%	40.0%	-3.8%	15.2%	57.1%	-1.8%	6.2%	25.4%	-24.5%	\$41.47	\$26.30	-5.1%	49.6%	9.5%	32.7%	2.7%
Ferrari	\$411.85	22.2%	13.1%	58.0%	26.4%	26.9%	61.3%	16.5%	1.3%	24.0%	\$412.99	\$252.17	-0.3%	63.3%	21.7%	47.4%	14.1%
BofA Traditional OEM Universe Average	nm	9.8%	29.1%	-2.3%	13.6%	44.8%	-0.3%	4.7%	15.6%	-23.3%	nm	nm	-13.3%	37.7%	4.5%	26.6%	-2.0%
EV OEMs																	
Lucid Motor	\$3.08	8.8%	-26.7%	-69.1%	12.6%	-17.7%	-68.5%	3.8%	-34.3%	-75.8%	\$10.22	\$2.54	-69.9%	21.3%	-26.8%	-11.4%	-31.4%
Rivian Automotive	\$11.45	-28.6%	-28.3%	-39.8%	-26.1%	-19.6%	-38.6%	-31.9%	-35.8%	-52.8%	\$28.06	\$11.06	-59.2%	3.5%	-51.2%	-40.9%	-54.2%
Tesla	\$197.41	-5.5%	-15.7%	-1.7%	-2.2%	-5.4%	0.3%	-9.9%	-24.5%	-22.9%	\$299.29	\$152.37	-34.0%	29.6%	-20.6%	-3.8%	-25.5%
BofA EV OEM Universe Average	nm	-8.4%	-23.6%	-36.9%	-5.2%	-14.3%	-35.6%	-12.7%	-31.5%	-50.5%	nm	nm	-54.4%	18.1%	-32.9%	-18.7%	-37.0%
Auto Dealers																	
Asbury Automotive	\$211.91	2.1%	2.3%	-7.5%	5.6%	14.8%	-5.6%	-2.7%	-8.3%	-27.4%	\$256.39	\$178.40	-17.3%	18.8%	-5.8%	14.1%	-11.7%
AutoNation	\$138.00	-3.3%	3.4%	-4.1%	0.1%	16.1%	-2.1%	-7.8%	-7.3%	-24.7%	\$182.08	\$120.26	-24.2%	14.8%	-8.1%	11.3%	-13.8%
Group 1	\$264.52	-5.0%	-5.5%	17.6%	-1.7%	6.0%	20.0%	-9.4%	-15.4%	-7.8%	\$310.08	\$194.33	-14.7%	36.1%	-13.2%	5.2%	-18.6%
Lithia Motors	\$285.59	-5.9%	6.5%	10.9%	-2.7%	19.5%	13.2%	-10.3%	-4.6%	-13.0%	\$331.96	\$203.65	-14.0%	40.2%	-13.3%	5.1%	-18.7%
Sonic Automotive	\$51.39	-2.4%	-1.6%	-11.1%	1.0%	10.4%	-9.3%	-6.9%	-11.9%	-30.3%	\$60.24	\$39.02	-14.7%	31.7%	-8.6%	10.8%	-14.3%
Penske Auto Group	\$150.72	-2.1%	-1.0%	2.1%	1.2%	11.1%	4.2%	-6.7%	-11.3%	-19.9%	\$180.84	\$128.37	-16.7%	17.4%	-6.1%	13.7%	-12.0%
America's Car-Mart	\$64.01	-1.3%	-18.0%	-17.9%	2.1%	-8.0%	-16.3%	-5.9%	-26.6%	-35.6%	\$127.96	\$57.61	-50.0%	11.1%	-15.5%	2.3%	-20.8%
CarMax	\$72.89	3.9%	14.1%	4.9%	7.5%	28.1%	7.0%	-0.9%	2.2%	-17.7%	\$87.50	\$55.77	-16.7%	30.7%	-5.0%	15.1%	-10.9%
KAR Auction Services	\$14.66	1.1%	-0.5%	-4.6%	4.6%	11.7%	-2.7%	-3.6%	-10.9%	-25.2%	\$16.49	\$12.19	-11.1%	20.3%	-1.0%	19.9%	-7.2%
BofA Dealer Universe Average	nm	-1.8%	2.6%	1.8%	1.6%	15.1%	3.9%	-6.4%	-8.1%	-20.1%	nm	nm	-16.9%	27.1%	-8.6%	10.7%	-14.3%
BofA Auto Universe Average	nm	-2.4%	-4.9%	-14.7%	1.3%	4.8%	0.2%	-6.9%	-14.8%	-33.1%	\$118.51	\$73.32	-29.8%	21.0%	-13.5%	3.1%	-18.9%
S&P 500 Auto Components Index	\$167.06	-4.1%	-6.6%	-31.6%	nm	nm	nm	-8.6%	-16.3%	-46.3%	\$252.47	\$158.95	-33.8%	5.1%	-13.7%	nm	-19.1%
S&P 500 Automobiles Index	\$83.70	-3.3%	-10.9%	-2.0%	nm	nm	nm	-7.8%	-20.2%	-23.1%	\$121.08	\$66.31	-30.9%	26.2%	-17.4%	nm	-22.6%
S&P 500	\$5,087.03	4.9%	11.6%	27.5%	nm	nm	nm	nm	nm	nm	\$5,094.39	\$3,808.86	-0.1%	33.6%	6.7%	nm	nm

Source: Bloomberg as of 2/22/2024

Notes: Supplier sector relatives are calculated using the S&P 500 Auto Components Index, OEM sector relatives and auto renters are calculated using the S&P 500 Automobiles Index, Market relatives are calculated using the S&P 500 Index.

Past performance should not and cannot be viewed as an indicator of future performance. The BofA performance data in this exhibit relates to BofA covered companies that have been aggregated into a BofA sector by us for purposes of this report. This performance data is not intended to be representative of the larger market sectors or sub-sectors, which may include the companies not covered by BofA Global Research. The performance data for sector presented does not represent and is not intended to represent the performance of any BofA analyst's ratings over the relevant periods

BofA GLOBAL RESEARCH



Stocks mentioned

Prices and ratings for stocks mentioned in this report

BofA Ticker	Bloomberg ticker	Company name	Price	Rating
ADNT	ADNT US	Adient Plc	US\$ 34.17	C-1-9
AXL	AXL US	American Axle	US\$ 7.29	C-3-9
CRMT	CRMT US	America's Car-Mart	US\$ 64.01	C-3-9
APTV	APTV US	Aptiv PLC	US\$ 77.8	C-1-9
ABG	ABG US	Asbury Auto	US\$ 211.91	B-1-9
AN	AN US	AutoNation, Inc.	US\$ 138	B-1-9
BWA	BWA US	BorgWarner	US\$ 30.51	B-1-7
KMX	KMX US	CarMax	US\$ 72.89	C-3-9
RACE	RACE US	Ferrari	US\$ 411.85	B-1-7
XJHKF	RACE IM	Ferrari	EUR 380.2	B-1-7
F	F US	Ford Motor	US\$ 12.12	B-1-7
GM	GM US	General Motors	US\$ 39.34	B-1-7
GPI	GPI US	Group 1 Auto	US\$ 264.52	C-1-7
LEA	LEA US	Lear Corp.	US\$ 135.37	B-1-7
LAD	LAD US	Lithia Motors A	US\$ 285.59	C-1-7
LCID	LCID US	Lucid Group	US\$ 3.08	C-2-9
LAZR	LAZR US	Luminar	US\$ 2.3	C-2-9
MGA	MGA US	Magna Intl	US\$ 54.64	B-1-7
YMG	MG CN	Magna Intl	C\$ 73.63	B-1-7
MBLY	MBLY US	Mobileye	US\$ 24.26	C-3-9
KAR	KAR US	OPENLANE	US\$ 14.66	C-3-9
PAG	PAG US	Penske Auto Group	US\$ 150.72	B-1-7
RIVN	RIVN US	Rivian Automotive	US\$ 11.45	C-1-9
SAH	SAH US	Sonic Automotive	US\$ 51.39	C-3-7
TSLA	TSLA US	Tesla	US\$ 197.41	C-2-9
VC	VC US	Visteon Corp	US\$ 116.24	C-1-9

Source: BofA Global Research

Price objective basis & risk**Adient Plc (ADNT)**

Our price objective of \$50 for ADNT is based on an EV/EBITDA multiple of roughly 6.0x on our FY2024 estimates, slightly above the historical average of roughly 5.5x as the company successfully completed debt refinancing and secured its capital structure, and continues to improve in performance with its turnaround efforts.

Downside risks: 1) inability to win sufficient and profitable new business, expand the backlog, and reaccelerate top line growth, 2) inability to complete restructuring programs or cost rationalization initiatives, 3) decline in new vehicle production, 4) inability to consistently execute financially, 5) raw material cost inflation, 6) inability to handle OEM price downs, 7) failure to maintain a lean cost structure, 8) new program/platform launch risk.

Upside risks: 1) ADNT successfully wins back business, expands its backlog and reaccelerates its top line growth, 2) better than expected operating leverage from continued growth in global auto production, 3) significant progress made on



restructuring programs and cost rationalization actions, 4) material market share gains in China market, 5) wind-down of non-recurring items boosts ongoing cash flow power.

American Axle (AXL)

Our price objective of \$7 is based on an EV/EBITDA multiple of roughly 4x on our 2024 estimates, which is somewhat lower than the historical average of roughly 4.5x, but in range of recent trading ranges and reflective of the forthcoming US/NA and Global production volume recovery.

Upside risks: 1) Continued strength in large truck volume growth, 2) resolution of plant issues, 3) labor cost inflation doesn't materialize

Downside risks: 1) a slowdown in large truck volume growth, particularly at key customers, 2) failure to diversify its customer base, geographic, and product exposure, 3) expansion into new segments could significantly reduce operating margins, 4) continued sharp rise in raw material and labor costs, 5) loss of business at key customers, and 6) disruption at AXL's suppliers.

America's Car-Mart, Inc. (CRMT)

Our price objective of \$55 is based on a P/E multiple of approximately 15x on our FY2025 (CY2024) EPS estimates, which is about in line with an average through-cycle multiple. We believe this is appropriate given emerging macroeconomic headwinds to CRMT's business including tight inventory in the used vehicle market and weakening of lower-income consumers.

Upside risks: 1) economic conditions improve and income disparity narrows, providing an outsized benefit to CRMT's lower-income bracket consumers, 2) interest rates remain high, used vehicle prices decline and CRMT resumes its role as a lender of last resort as competitive pressures abate, 3) used vehicle supply improves, 4) greater cost containment and operating leverage than forecast, 5) credit metrics improve (collections, defaults, loss rate, etc.)

Downside risks: 1) stalled economic improvement, particularly in rural markets where CRMT is overexposed, 2) interest rates decline quickly and used vehicle values rise, keeping competitive pressure from dealers and lenders high, 3) Inflation remains elevated, 4) used vehicle supply remains restricted, 5) inability to cover fixed costs and achieve operating leverage, 6) deterioration of credit metrics (collections, defaults, loss rate, etc.) and 7) increasing scrutiny by state legislators and/or the CFPB.

Aptiv PLC (APTV)

Our PO of \$115 for APTV is based on an EV/EBITDA multiple of roughly 11x on our 2024 estimates. Our assumed valuation metrics are in line with the average historical trading multiple, but well above the traditional automotive suppliers, which trade in ranges of 3x to 6x. We believe a valuation premium to the group is warranted, as APTV is more of a pure-play electrification / autonomy / connectivity / mobility-centric company, unencumbered by factor risks from other non-future tech businesses/products. However, we see the stock trading in line with its historical average given the hurdles on the semiconductor supply front, which are not completely resolved yet.

Downside risks: 1) sustained volatility in international markets, 2) a longer than expected decline or flatline in US/global automotive volumes, 3) a continued rise in raw material costs and semiconductors disruptions, 4) loss of key customers or suppliers, 5) inability to win new business, 6) competitive pricing pressure.

Upside risks: 1) strength in global auto production volumes, particularly in North America, 2) increased business wins as a result of Safe, Green, Connected portfolio that

continue to support growth above market, 3) shareholder-friendly actions, including accretive M&A and share repurchases, support earnings and the stock.

Asbury Auto (ABG)

Our price objective of \$340 is based on a P/E multiple of roughly 11x on our 2024 estimates, which is about in line with an average dealer through-cycle multiple. We believe this is appropriate in light of the ongoing recovery in the US/NA automotive cycle following the COVID-induced trough in 2020, which should translate into revenue and earnings growth across the dealer vertical over our forecast period.

Downside risks: 1) a swift and/or material downturn in US sales, 2) market share losses by the brands to which ABG is overexposed, 3) higher interest rate environment causes material demand deterioration and/or repossessions, 4) consumer dissatisfaction with auto retailing, and 5) the potential for franchise law and/or consumer finance law changes.

Upside risks: 1) US/North America cycle recovers and plateaus at a high level of sales, continues growing, or even declines less than expected, 2) ABG is able to gain back and/or maintain some gross profit per unit in its new and used vehicles businesses, 3) used vehicle focus drives demand, top line and earnings growth beyond the peak in new vehicle sales, and 4) interest rates decline quicker than expected, stimulating demand in 2H23.

AutoNation, Inc. (AN)

Our price objective of \$220 is based on a P/E multiple of roughly 11x on our 2024 estimates, which is about in-line with an average dealer through-cycle multiple. We believe this is appropriate in light of the ongoing recovery in the US/NA automotive cycle following the COVID-induced trough in 2020, which should translate into revenue and earnings growth across the dealer vertical over our forecast period.

Downside risks: 1) a swift and/or material downturn in US sales, 2) poorer-than-expected cost performance and margin compression, 3) a stoppage in share repurchase activity or material sell-off by key shareholders, 4) higher interest rate environment causes material demand deterioration and/or repossessions 5) consumer dissatisfaction with auto retailing, and 6) the potential for franchise law and/or consumer finance law changes.

Upside risks: 1) US/NA cycle recovers and plateaus at a high level of sales, continues growing, or even declines less than expected, 2) AN is able to gain or even just maintain gross profit per unit in its new and used vehicles businesses, 3) standalone used vehicle stores capture some demand and drives top line and earnings growth beyond the peak in new vehicle sales, and 4) interest rates decline quicker than expected, stimulating demand in 2H23.

BorgWarner (BWA)

Our price objective of \$50 is based on an EV/EBITDA multiple of roughly 7.0x on our 2024 estimates, which we believe reflects the higher growth trajectory on which the company positioned itself after the spin-off of the Fuel Systems and Aftermarket segments in July 2023.

Downside risks: 1) relaxed fuel-efficiency regulations, 2) increased competition in the turbocharger industry, 3) a longer than expected decline or flatline in US/global automotive volumes, 4) a continued rise in raw material costs, 5) slower electric vehicle adoption.

Upside risks: 1) strength in global auto production volumes, particularly in North America, 2) faster adoption of electric and hybrid vehicles, 3) BWA regains lost investor confidence through continued execution and performance.



CarMax, Inc. (KMX)

Our price objective of \$44 is based on a P/E multiple of roughly 12x on our FY2025 (CY2024) estimates, which is the lower end of the average P/E multiple historical range, which we view as appropriate as it reflects challenges presented by the short supply of used vehicles.

Upside risks: 1) used vehicle pricing remains range bound as supply increases and KMX effectively manages its inventory to drive total profits, 2) reversal in the trend of consumers opting for new vehicles rather than late-model used, 3) greater than anticipated store growth, 4) increase in customer interaction/footprint through online presence.

Downside risks: 1) extreme fluctuations in used vehicle pricing, which would have a big impact on sentiment towards the stock, 2) an extensive trend of customers opting for new vehicles rather than late-model used, 3) deterioration in credit availability and decline in the ABS market, 4) disruption from newer tech-oriented entrants, 5) potential demand destruction stemming from macro pressures.

Ferrari (RACE / XJHKF)

Our \$458 PO for RACE US (EUR426 for RACE IM) is based on an adj. EV/EBITDA multiple of roughly 31x on our 2024 estimates, which is a slight premium to RACE's current trading level due to ongoing volume, sales, and earnings growth. This valuation is also supported by a DCF analysis. The multiples used for our valuation framework are a premium to the current trading range of a number of luxury companies we classify as RACE's peer group, but warranted, in our view, given RACE's outsized growth opportunity and stability.

Downside risks: 1) devaluation of the brand due to overproduction or licensing expansion, 2) a decline in the wealth/size of the HNWI community, 3) degradation in perceived vehicle quality or performance, 4) impairment of its Formula 1 reputation or perceived racing pedigree, 5) F-1 losses persist or accelerate, 6) deterioration in adjacent businesses, 7) intensifying competition in the luxury vehicle market, 8) dependence on certain large volume suppliers, 9) significant rise in raw material costs, 10) significant voting power and control attributable to Piero Ferrari & Exor S.p.A.

Upside risks: 1) modest volume expansion, 2) an upward bias on pricing, 3) growth in adjacent businesses, 4) gradual brand and licensing extension, 5) moderation or rationalization of F-1 losses, 6) execution & cost efficiency realization, and 7) management commitment to preserving the exclusive luxury culture.

Ford Motor (F)

Our price objective of \$21 is based on an EV/EBITDAP multiple (EV/EBITDA adjusted for pension) of roughly 4x on our 2024 estimates. This valuation methodology reflects a multiple within Ford's historical range (3-6x). We believe a multiple at this level is warranted considering the timing of the cycle and as the company is on the verge of executing something analogous to our Core to Future transition framework, by which it will strengthen its core business pillars to fund its future business.

Downside risks: 1) a more swift and/or material downturn in US auto sales, 2) a sharp and sustained rise in input costs, 3) disruption in the supply base, 4) significant increase in gas prices, 5) new vehicle pricing deteriorates, 6) market share losses pressure results, 7) unwillingness of dealers to shoulder inventory risk, 8) suppliers gain significant pricing power, 9) stress in capital markets makes borrowing more expensive, 10) Incremental execution risk as management ramps up.

Upside risks: 1) continued strength in US auto cycle, 2) growth in China remains robust, which Ford is able to leverage with product launches, 3) mix and pricing remain

favorable, 4) capital allocation is directed towards shareholder returns (special dividend, etc.).

General Motors Company (GM)

Our price objective of \$75 is based on an EV/EBITDAP multiple (EV/EBITDA adjusted for pension) of roughly 4x on our 2024 estimates. This valuation methodology reflects a multiple within GM's historical range (3-6x). We believe a multiple at this level is warranted considering the timing of the cycle and as GM's Core business is being well managed even amidst a choppy macro, while the accelerating focus on Future-proofing the business with the development of the necessary components of the future of mobility services, including an autonomous electric vehicle fleet (Cruise Anywhere) and connectivity (OnStar), may provide upside.

Downside risks: 1) a more swift and/or material downturn in US auto sales, 2) a sharp and sustained rise in input costs, 3) disruption in the supply base, 4) significant increase in gas prices, 5) new vehicle pricing deteriorates, 6) market share losses pressure results, 7) unwillingness of dealers to shoulder inventory risk, 8) suppliers gain significant pricing power, 9) stress in capital markets makes borrowing more expensive, 10) key members of management leave.

Upside risks: 1) continued strength in US auto cycle, 2) growth in China remains robust, which benefits GM through its established market position, 3) mix and pricing remain favorable, 4) capital allocation is directed towards shareholder returns (share repurchases, etc.).

Group 1 Auto (GPI)

Our price objective of \$425 is based on a P/E multiple of roughly 11x on our 2024 estimates, which is about in-line with an average dealer through-cycle multiple. We believe this is appropriate in light of the ongoing recovery in the US/NA automotive cycle following the COVID-induced trough in 2020, which should translate into revenue and earnings growth across the dealer vertical over our forecast period.

Downside risks: 1) weaker demand than expected in the US, and/or UK, 2) the loss of key management, 3) the possibility that GPI is unable to achieve the operating leverage we forecast, 4) higher interest rate environment causes material demand deterioration and/or repossessions, 5) consumer dissatisfaction with auto retailing, and 6) the potential for franchise law and/or consumer finance law changes.

Upside risks: 1) US/NA cycle recovers and plateaus at a high level of sales, continues growing, or even declines less than expected, 2) GPI is able to gain back some gross profit per unit in its new and used vehicles businesses, 3) growth in international markets helps to offset weakness in the US market, and 4) interest rates decline quicker than expected, stimulating demand in 2H23.

Lear Corp. (LEA)

Our \$210 price objective on LEA shares is based on an EV/EBITDA multiple of roughly 7.0x on our 2024 estimates. This multiple is a slight premium to the company's historical average since we believe adjustment to a lower volume environment and the company's vertical integration will bolster already strong cash flow that is being returned to shareholders through dividends and growing share buybacks.

Downside risks: 1) a slower or further decline in US/global automotive volume growth, 2) disruption from the re-emergence in the Seating market of LEA's largest competitor (ADNT), 3) increased pricing pressure from OEM customers, 4) loss of business at key customers, 5) fierce competition in the automotive supply base, 6) a new rise in raw material costs, 7) execution risk of restructuring, operations, and acquisitions.



Upside risks: 1) faster recovery than expected in global auto production volumes, 2) continued execution and progress on margin expansion, 3) shareholder-friendly actions including accretive M&A and share repurchases support earnings and the stock.

Lithia Motors A (LAD)

Our price objective of \$440 is based on a P/E multiple of roughly 11x on our 2024 estimates, which is a slight premium to an average dealer through-cycle multiple. We believe this is appropriate in light of the company's track record of strong earnings and recent strong execution of M&A growth actions.

Downside risks: 1) a swift and/or material downturn in US sales, 2) slower improvement in operating leverage than forecast, 3) substantial market share loss by domestic brands, to which LAD is exposed, 4) higher interest rate environment causes material demand deterioration and/or repossessions, 5) consumer dissatisfaction with auto retailing, and 6) the potential for franchise law and/or consumer finance law changes.

Upside risks: 1) acquisition activity above current forecasts, 2) continued recovery in US auto sales beyond current estimates, 2) LAD is able to gain back/maintain some gross profit per unit in its new and used vehicles businesses, and 3) interest rates decline quicker than expected, stimulating demand in 2H23.

Lucid Group (LCID)

Our price objective of \$4.50 is based on 6x EV/Sales on our 2025 estimates, which implies roughly 0.5x EV/Sales and 3x EV/EBITDA on pro-forma capital-induced 2030 estimates. Our valuation framework for LCID is relatively consistent with TSLA and includes the following steps: 1) What the current stock price affords to LCID in incremental plants/units. 2) What the incremental units translates into in incremental revenue/profits. 3) What the incremental revenue/profits translates into in terms of multiples on theoretical pro-forma 2030 metrics.

Downside risks: 1) inability to continue to raise low cost capital to fund business ventures, 2) inability to convert refundable reservations into contracted orders, unit sales, and revenue, 3) greenfield/clean-sheet approach to EV manufacturing introduces risk of successful execution, 4) direct-to-consumer sales and service model may create challenges for business to scale, 5) inability to reach sustainable positive EBITDA/FCF.

Upside risks: 1) significant and better than expected customer traction for introduced/unveiled products, 2) successful execution of go-to-market strategy via direct-to-consumer sales and service model, 3) better than expected progress on start and ramp of production with clean-sheet manufacturing approach, 4) breakthrough in advanced battery technology to drive ICE/EV parity, 5) incremental government/regulatory support/stimulus for EV market.

Luminar Technologies (LAZR)

Our PO of \$4 is based on an EV/Sales multiple of 4.0x on our 2025 estimates. This is somewhat lower than the average EV/Sales multiple of 4.5-5x for the Auto/Tech companies we include in LAZR's peer group, reflecting concerns about growth for ADAS and autonomous vehicle technology.

Upside risks: 1) Continued strong execution on securing series production contracts, 2) Progress on Level 2+ autonomous driving and market penetration may be faster than projected, 3) Technological breakthrough on Level 4+ autonomous capabilities and systems, 4) Market consolidation eases competitive pressures and leaves more room expansion, 5) Better than expected cost reduction and quicker scaling of operation, 5) Prices hold up better-than expected.

Downside risks: 1) Slower pace of securing series production contracts, 2) Progress on

Level 2+ autonomous driving and market penetration may be slower than projected, 3) Pushout of Level 4+ autonomous capabilities and systems, 4) Necessity for LIDAR at varying levels of autonomy could change as new technology is developed, and preferences may shift to alternative sensors, 5) Inability to establish or maintain technological leadership over competition, 6) Inability to drive down cost effectively to preserve margins as ASPs decline with volume, 7) Macro/market volatility could impact customer demand and launch schedules, 8) LAZR may need to raise additional capital.

Magna Intl (MGA / YMG)

Our \$70 price objective on MGA US (CAD95 for MG CN) is based on an EV/EBITDA multiple of roughly 6x on our 2024 estimates, above the historical average of roughly 5.0x, which we believe reflects MGA's superior long-term positioning, and expertise of the complete vehicle/components that provides the company with a competitive advantage amid the ongoing industry evolution and technological advancement (Big Bang).

Downside risks: 1) a flatline or decline in the US SAAR and NA production volumes for longer than expected, 2) inability to deliver on projected growth targets in emerging markets, 3) stress at key customers, most notably the Detroit Three.

Upside risks: 1) strength in global auto production volumes, particularly in North America, 2) expansion into China market, 3) continued execution and progress on restructuring programs and margin expansion, 4) shareholder-friendly actions including accretive M&A and share repurchases support earnings and the stock.

Mobileye (MBLY)

Our PO of \$22 is based on 5.5x EV/Sales on 2025E, which is below the average of its four closest peers (NVDA, QCOM, LAZR, AMBA) and lower than the range of the two Tier 2+ ADAS/AV hardware companies in the comp set. This reflects our slower growth outlook, specifically following the company's initial guidance for 2024.

Downside risks: 1) Market penetration of Level 2+ ADAS may take longer than expected and pathway/timing of Level 4+ autonomous vehicle (AV) capabilities is unclear, 2) inability to maintain technological leadership over competition, 3) standardization of ADAS/AV technology could make it challenging to maintain gross and operating margins, 4) macro/market volatility could impact demand and product launches, 5) export control limitations of key semiconductor technology and restriction of US citizens/greencard holders from working in certain Chinese entities, 6) lack of liquidity in the stock and/or future stock sales.

Upside risks: 1) Mega-trend towards ADAS & autonomy, 2) timing and go-to-market strategy of MBLY's Level 4+ offerings could exceed expectations, 3) MBLY may be more successful in winning new customers/contracts, 4) barriers to entry could prove more formidable, 5) industry consolidation in ADAS/AV, 6) better operating performance and/or changes to strategy.

OPENLANE (KAR)

Our price objective of \$16 is based on an adjusted EV/EBITDA multiple of roughly 8x on our 2024 estimates. Although KAR's longer-term historical average EV/EBITDA multiple range is somewhat illustrative, it is not directly applicable because of significant changes in the company since it was last public. We believe recent management changeover will catalyze a broader turnaround effort and result in more sustainable improved operating performance. However, the lack of wholesale vehicle supply in the short term may usurp management's best efforts.

Upside risks: 1) supply of wholesale vehicles bounces back faster than currently expected, 2) execution of a large, transformational acquisition, 3) development of



relationships with new suppliers and customers.

Downside risks: 1) supply of new vehicles does not recover or further declines 2) failure to maintain relationships with key customers, 3) failure to maintain key managers.

Penske Auto Group (PAG)

Our price objective of \$175 is based on a P/E multiple of roughly 12x on our 2024 estimates, which is about in line with an average dealer through-cycle multiple. We believe this is appropriate in light of the ongoing recovery in the US/NA automotive cycle following the COVID-induced trough in 2020, which should translate into revenue and earnings growth across the dealer vertical over our forecast period.

Downside risks: 1) the loss of Roger Penske's leadership, 2) a swift and/or material downturn in US sales, 3) slower recovery in Europe sales, 4) higher interest rate environment causes material demand deterioration and/or repossessions 5) unfavorable foreign exchange rates, 6) consumer dissatisfaction with auto retailing, and 7) the potential for franchise law and/or consumer finance law changes.

Upside risks: 1) acquisition activity above current forecasts, 2) continued recovery in US auto sales beyond current estimates, 3) significant improvement in cost leverage beyond our estimates. 4) interest rates decline quicker than expected, stimulating demand in 2H23.

Rivian Automotive (RIVN)

Our price objective of \$25, based on 3x EV/Sales on our 2025 estimates, implying 0.5x EV/Sales and 3x EV/EBITDA on pro-forma capital-induced 2030 estimates. Our valuation framework for RIVN is relatively consistent with its peer and includes the following steps: 1) What the current stock price affords to RIVN in incremental plants/units. 2) What the incremental units translates into in incremental revenue/profits. 3) What the incremental revenue/profits translates into in terms of multiples on theoretical pro-forma 2030 metrics.

Downside risks: 1) inability to continue to raise low cost capital to fund business ventures, 2) inability to convert pre-orders and orders into unit sales, revenue, and eventually earnings, 3) termination of or amendment to sales and service agreement with anchor customer, 4) direct-to-consumer sales and service model may create challenges for business to scale, 5) inability to reach sustainable positive EBITDA/FCF with investment across numerous business areas.

Upside risks: 1) significant and better than expected customer traction for introduced/unveiled products, 2) successful execution of go-to-market strategy via direct-to-consumer sales and service model, 3) better than expected progress ramp of production and successful build-out of incremental capacity, 4) breakthrough in advanced battery technology to drive ICE/EV parity, 5) incremental government/regulatory support/stimulus for EV market.

Sonic Automotive (SAH)

Our price objective of \$60 is based on a P/E multiple of roughly 9x on our 2024 estimates, which is just below an average dealer through-cycle multiple. We believe this is appropriate in light of the somewhat stalled recovery in the US/NA automotive cycle following the COVID-induced trough in 2020, as well as SAH's over exposure to the Used market via its standalone EchoPark stores.

Upside risks are 1) prolonged upside in the US cycle beyond our forecasts, 2) material accretive M&A activity, 3) market share gains as a result of successful initiatives. 4) interest rates decline quicker than expected, stimulating demand in 2H23.

Downside risks are 1) a swift and/or material downturn in US sales, 2) higher interest rate environment causes material demand deterioration and/or repossessions, 3) consumer dissatisfaction with auto retailing, and 4) the potential for franchise law and/or consumer finance law changes.

Tesla Motors (TSLA)

Our price objective of \$280 is based on 8.5x EV/Sales and 50x EV/EBITDA on our 2024 estimates, which implies roughly 3x EV/Sales and 22x EV/EBITDA on pro-forma capital-induced 2025 estimates. Our valuation framework for TSLA includes the following steps: 1) What the current stock price affords to TSLA in incremental plants/units. 2) What the incremental units translates into in incremental revenue/profits. 3) What the incremental revenue/profits translates into in terms of multiples on theoretical pro-forma 2025 metrics.

Downside risks: 1) inability to continue raising low-cost capital to fund business ventures, 2) inability to generate positive earnings/FCF, 3) slower ramp in electric vehicle demand, 4) setbacks or lack of advancements in battery technology, 5) fierce competition from incumbent OEMs, 6) inability to execute efficiently with higher volume, 7) low gasoline prices, and 8) loss of management.

Upside risks: 1) better execution and cost containment, 2) a sharp/sustained rise in gasoline prices, 3) a breakthrough in advanced battery technology, 4) increase in federal or state incentives, 5) short covering.

Visteon (VC)

Our PO of \$165 is based on an EV/EBITDA multiple of 10x on our 2024 estimates, which is consistent with a P/E multiple of roughly 20x. This is slightly above the mid-point of where the stock has traded (6-12x) since 2016, excluding the Covid-19 period. Our assumed multiple is a premium to the current trading multiple of 7x for the suppliers in our coverage and our average assumed multiple of 8x underlying our POs, given VC's growth-over-market is above most suppliers and in consideration of its exposure to key mega-trends.

Downside risks: 1) intense competition that is likely to heat up further as suppliers aggressively position their product portfolio to benefit from high growth markets, 2) inability to maintain a technological edge amidst the rapidly evolving auto sector, 3) inability to win new business across its product lines, or gain higher content per vehicle on new business wins, 4) Inability to drive growth-over-market and margin expansion as expected, 5) UAW strike a near-term risk to volumes and earnings.

Upside risks: 1) Stronger-than-expected recovery in automotive sales/production, 2) higher-than-expected content per vehicle across newer product areas, 3) market share gains with new product launches, 4) successfully achieve 2026 growth and margin targets, 5) shareholder-friendly actions, such as M&A and share repurchases.

Analyst Certification

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Semiconductor Manufacturing Co Ltd, which was announced on September 12, 2023.

US - Automotives Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Adient Plc	ADNT	ADNT US	John Murphy, CFA
	Aptiv PLC	APTV	APTV US	John Murphy, CFA
	Asbury Auto	ABG	ABG US	John Murphy, CFA
	AutoNation, Inc.	AN	AN US	John Murphy, CFA
	BorgWarner	BWA	BWA US	John Murphy, CFA
	Ferrari	RACE	RACE US	John Murphy, CFA
	Ferrari NV	XJHKF	RACE IM	John Murphy, CFA
	Ford Motor	F	F US	John Murphy, CFA
	General Motors Company	GM	GM US	John Murphy, CFA
	Group 1 Auto	GPI	GPI US	John Murphy, CFA
	Lear Corp.	LEA	LEA US	John Murphy, CFA
	Lithia Motors A	LAD	LAD US	John Murphy, CFA
	Magna Intl	MGA	MGA US	John Murphy, CFA
	Magna Intl	YMG	MG CN	John Murphy, CFA
	Penske Auto Group	PAG	PAG US	John Murphy, CFA
	Rivian Automotive	RIVN	RIVN US	John Murphy, CFA
	Visteon	VC	VC US	John P. Babcock
NEUTRAL				
	Gentex	GNTX	GNTX US	John Murphy, CFA
	Lucid Group	LCID	LCID US	John Murphy, CFA
	Luminar Technologies	LAZR	LAZR US	John P. Babcock
	Tesla Motors	TSLA	TSLA US	John Murphy, CFA
UNDERPERFORM				
	American Axle	AXL	AXL US	John Murphy, CFA
	America's Car-Mart, Inc.	CRMT	CRMT US	John Murphy, CFA
	CarMax, Inc.	KMX	KMX US	John Murphy, CFA
	Mobileye	MBLY	MBLY US	John Murphy, CFA
	OPENLANE	KAR	KAR US	John Murphy, CFA
	Sonic Automotive	SAH	SAH US	John Murphy, CFA
RVW				
	Fisker	FSR	FSR US	John P. Babcock

Disclosures

Important Disclosures

Equity Investment Rating Distribution: Autos Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	67	55.83%	Buy	39	58.21%
Hold	30	25.00%	Hold	15	50.00%
Sell	23	19.17%	Sell	12	52.17%

Equity Investment Rating Distribution: Distributors Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	5	71.43%	Buy	2	40.00%
Hold	0	0.00%	Hold	0	0.00%
Sell	2	28.57%	Sell	1	50.00%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

^{R1} Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R2}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

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