

## European Automobiles

## Global LVP tracker: climbing the (Great) wall of worry

Industry Overview

## S&amp;P raises its outlook again but regional mix a dampener

S&P started 2024 on the same trend as 2023, raising forecasts. For 2023, global production was revised higher by c300k units and is now seen at 90.1m implying +9.4% for the year. The revision was mainly led by China (+250k units; +0.9ppts), which at 28.6m (+9.4%/y/y) accounted for 32% of global output. N. America was also up slightly by +60k units to c15.7m (to +9.5% y/y). The '24 forecast was also raised by c260k to 89.6m, but still implies a y/y decline of -0.5% (prior: -0.4%/y/y), albeit from a higher '23 base. At a regional level Europe (EU28) is expected to decline by 2.3% y/y, N. America to grow by 1.1% and China output to remain flat. Outlook for Japan is more negative at -5.4%/y/y on lost production at Daihatsu due to vehicle certification issues. S&P's underlying thesis is that inventory restocking is largely complete. Two key reads for European Auto suppliers are 1) First guidance: will be based on flat to declining LVP (0 to -1%) and thus organic growth will be entirely dependent on outperformance. Pass-through of lower raw materials will also be a top-line headwind to consider; 2) Regional mix implications are slightly negative, pointing towards a -0.4% headwind ('23: +1.2%).

## BofA more constructive on LVP in China &amp; N. America

We update our global LVP forecast to reflect the latest views of our regional Auto's teams and for '24 now stand 1.7% ahead of S&P (BofAe: 91.2m, +1.2% vs. S&P: 89.6m) with a more constructive view on China, N. America and Japan/Korea. For China, our forecast (29.3m, +2.2% vs. S&P 28.7m) reflects our China Auto teams 2024 outlook for wholesales growth of 3.7%/y/y. This is supported mainly by exports (+17.5%/y/y to 5.7m) which continue to encroach on international markets and is likely to be a key theme in 2024. In N. America, our [US Auto team](#) still sees pent-up demand from the past years production constraints and expects the next US market peak to occur only in 2028. Accordingly, their LVP outlook is for 16.6m units (+5.9%/y/y) vs. S&Ps 15.8m (+1.1%/y/y). We're also ahead on Japan (BofAe: 8.5m, -1.2%/y/y; S&P: 8.1m, -5.4%/y/y) more in-line with our Japan Auto team's view for +5%/y/y domestic sales growth.

## Q4 EV production rebounds slightly but China output leaps

The slowdown in BEV demand has been a key topic since Q4, and the sudden halt of subsidies by Germany in Dec'23 will not help (see [European Automobiles: Electric Vehicles: Sudden stop of German subsidies, significant price cuts ahead ... 18 December 2023](#)). Nevertheless, BEV production in Europe and N. America recovered in Q4 growing 8% and 3% q/q, respectively, but remains below the Q2'23 peak. However, the picture in China is vastly different. BEV production rose by 20% (c374k units) in Q4 hitting a new record of 2.3m units (Q3: 1.9m), +22% y/y. Among European OEMs, Stellantis ramped BEV production the most in Q4 (+20% q/q), likely in anticipation of the French leasing scheme which offers consumers access to entry-level EVs for €100/month or less. Renault also raised output by c12% q/q, driven in part by the launch of the Scenic in Q1'24. VW was the only EU OEM to further curtail BEV production in Q4 (-c3%q/q).

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**Refer to important disclosures on page 12 to 13.**

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Equity  
Europe  
Autos/Car Manufacturers

**Michael Jacks, CFA** >>  
Research Analyst  
MLI (UK)  
+44 20 7996 1085  
[michael.jacks@bofa.com](mailto:michael.jacks@bofa.com)

**Horst Schneider** >>  
Research Analyst  
BofA Europe (Frankfurt)  
+49 69 5899 5080  
[horst.schneider@bofa.com](mailto:horst.schneider@bofa.com)

**James De Chastelain** >>  
Research Analyst  
MLI (UK)  
[james.de\\_chastelain@bofa.com](mailto:james.de_chastelain@bofa.com)

**John Murphy, CFA**  
Research Analyst  
BofAS  
[johnj.murphy@bofa.com](mailto:johnj.murphy@bofa.com)

**Niccolo Serra** >>  
Research Analyst  
MLI (UK)  
[niccolo.serra@bofa.com](mailto:niccolo.serra@bofa.com)

**Ming Hsun Lee, CFA** >>  
Research Analyst  
Merrill Lynch (Hong Kong)  
[minghsun.lee@bofa.com](mailto:minghsun.lee@bofa.com)

**Kei Nihonyanagi** >>  
Research Analyst  
BofAS Japan  
[kei.nihonyanagi@bofa.com](mailto:kei.nihonyanagi@bofa.com)

## Jargon buster:

Refer to page 11

## BofA Global Research Reports

Title: Subtitle	Primary Author	Date Published
<a href="#">European Automobiles: Limited impact of Red Sea on EU Autos, positive impact on EU Tires</a>	Horst Schneider	17 January 2024
<a href="#">Global Automobiles: Valuation &amp; Consensus trends in EU &amp; rest of the world – January 2024</a>	Horst Schneider	15 January 2024
<a href="#">Global Automobiles: EV tracker Nov 23: New global sales record; Special: US elections = uncertainty</a>	Horst Schneider	10 January 2024

# Tracking BEV production against a softening demand backdrop

## EV production recovers in Europe in Q4 albeit 'slightly'

Back in Q3'23, EV production in Europe slowed sequentially for the first time, falling from 555k units to 482k units (Exhibit 2). While some of this was explained by seasonal effects of summer shutdowns, strong production in 1H'23 was not met with robust enough EV demand in Q3. In Q4'23, BEV production in Europe bounced back slightly in Q4 to 520k units (+6.2%y/y) but still remains below Q1 and Q2 levels. We expect that Q1'24 could be weighed down by the sudden discontinuation of subsidies in Germany in Dec'23 there may be some offset from the French leasing scheme which offers consumers access to entry-level EVs for €100/month or less. We think this could see French brands raise production more than their German peers. Indeed, we observed the first sign of this in 4Q'23 as Stellantis and Renault ramped production by 20% and 12%, respectively (Exhibit 1). Volkswagen however, was the only EU OEM that further curtailed BEV production in Q4 (-c3%q/q). S&P, however, still seems to expect a very strong rebound in Q1 24 for Europe and a decline for China which we think this is rather unlikely given the risks flagged above and momentum in China.

Accordingly, we think tracking monthly BEV sales trends by brand is critical to understand how the competitive landscape is developing. We include a link to our latest BEV sales tracker here - [EV tracker Nov 23: New global sales record; Special: US elections = uncertainty](#).

## N. America BEV LVP recovery tepid, China leaps up

Sequential production trends were similar in N. America with EV output rising to 276k units vs 270k in Q3 (Exhibit 4). Sentiment in the US towards EVs has soured of late and a number of US auto's companies have walked back targets, including GM and BorgWarner. However, in China the picture is very different. BEV production rose by c374k units sequentially and reached a new record of 2.3m units in Q4 (Q3: 1.9m), growing by +22% y/y (Exhibit 6). This appears to be led strongly by exports, which suggests to us that Chinese made BEVs will further encroach on international markets in 2024 and is likely to be an important theme for the year and beyond.

### Exhibit 1: BEV Quarterly production and sales of Light Vehicles (units)

OEM exposure; All the OEMs appear to have over-produced in Q4'23 vs. sales except for Renault and Volkswagen

BEV		Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	*Q4 2023
BMW	Production	40,282	58,292	62,699	90,430	83,993	96,569	106,792	115,079
	Sales	37,372	41,821	50,726	89,014	65,563	89,414	93,992	114,015
Mercedes-Benz	Production	40,881	36,620	51,354	77,847	98,811	98,703	80,585	95,641
	Sales	31,997	33,510	35,682	52,616	45,762	60,982	67,374	69,096
Renault	Production	27,081	44,004	53,150	57,093	44,326	47,298	33,023	37,124
	Sales	29,770	37,618	38,133	55,637	38,143	37,688	39,853	44,193
Stellantis	Production	61,225	73,460	68,620	84,120	87,136	91,412	82,718	103,047
	Sales	62,116	79,653	70,228	89,626	74,803	94,702	92,371	73,361
Volkswagen	Production	95,486	148,406	165,362	208,638	221,117	216,182	185,935	179,739
	Sales	99,470	119,182	151,283	208,462	137,104	179,849	203,333	223,121
Ford	Production	25,052	27,782	34,790	40,366	26,110	55,440	47,574	40,720
	Sales	17,462	24,477	29,376	34,274	18,501	24,659	33,823	34,727
General Motors	Production	6,038	18,675	34,216	44,427	34,115	50,558	67,169	71,067
	Sales	15,322	22,346	38,950	36,197	31,781	37,380	54,988	59,879
Toyota	Production	24,615	23,829	16,347	35,528	39,818	38,916	35,356	34,926
	Sales	4,461	5,013	4,013	11,817	19,674	29,295	28,956	27,677
Tesla	Production	305,407	258,580	365,923	439,701	440,808	479,700	430,488	461,735
	Sales	310,173	255,084	343,893	405,320	422,747	466,014	435,176	434,292

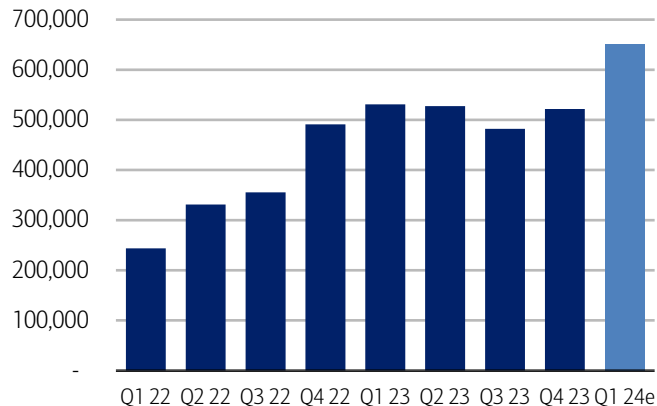
Source: S&P, EV Volumes, \*Q4 2023 – Sales data only available up to Nov 23 therefore Q4 23 sales weighted upwards (\*3/2) – assuming same run rate.

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## BEV quarterly production progression by region

### Exhibit 2: Europe BEV LV quarterly production progression

BEV unit production grew to 520k units in Q4 '23 from 482k in Q3 '23

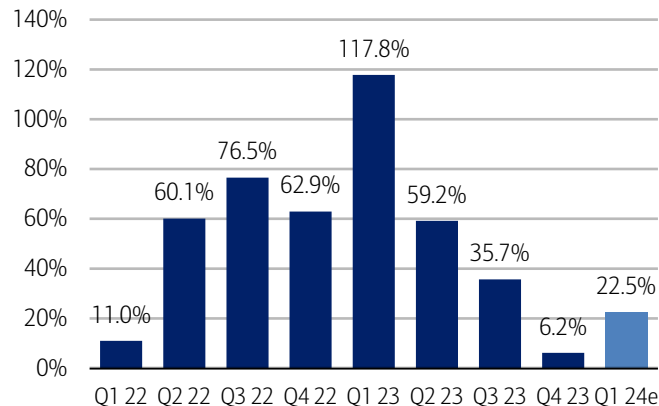


Source: S&P

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### Exhibit 3: Europe BEV LV quarterly growth rates (y/y %)

BEV unit production grew 36% y/y in Q3 '23 and 6% y/y in Q4 '23

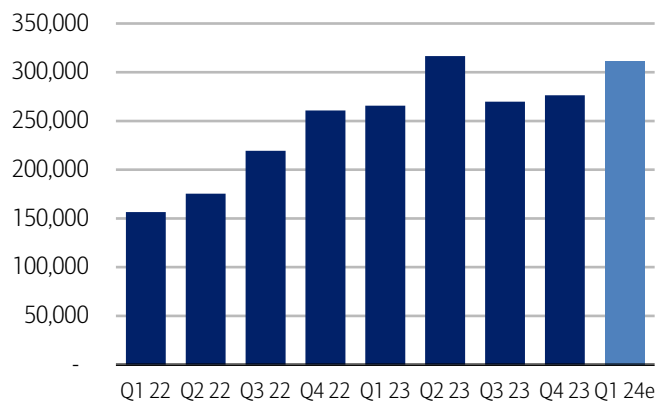


Source: S&P

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### Exhibit 4: N. America BEV LV quarterly production progression

BEV unit production grew slightly to 276k units in Q4 '23 from 270k in Q3

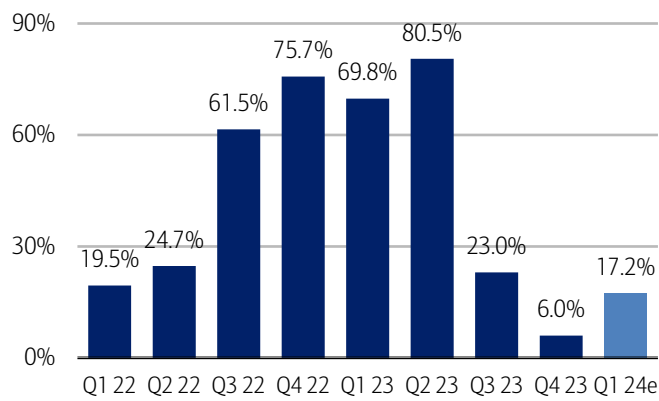


Source: S&P

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### Exhibit 5: N. America BEV LV quarterly growth rates (y/y)

BEV unit production grew 23% y/y in Q3 '23 and 6% y/y in Q4 '23

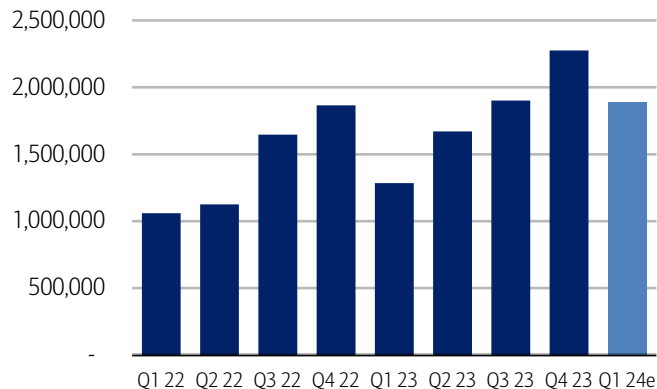


Source: S&P

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### Exhibit 6: China BEV LV quarterly production progression

BEV unit production to increase to 2.3m units in Q4 '23 from 1.9m in Q3 '23

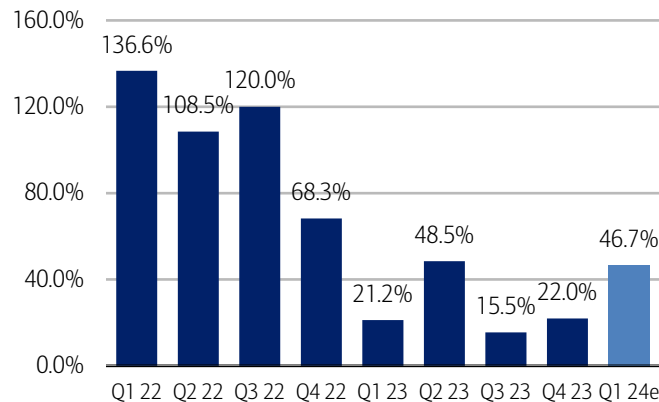


Source: S&P

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### Exhibit 7: China BEV LV quarterly growth rates (y/y %)

BEV unit production increased 16% y/y in Q3 '23 and +22% y/y in Q4 '23



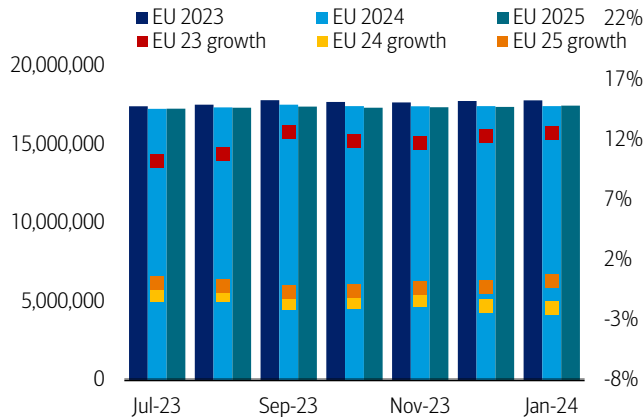
Source: S&P

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# Global LVP: 23E,24E and 25E revised up

## Exhibit 8: Latest Europe (S&P) annual LVP estimate for 2023-25

'23 estimate revised up by 0.2% vs. Dec'23 forecast to 17.8m. '24 flat

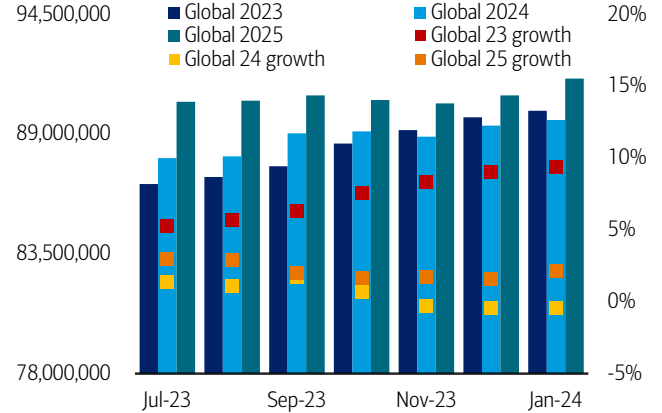


Source: BofA Global Research, S&P

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## Exhibit 9: Latest Global LVP (S&P) annual estimates for 2023-25

2023 LVP up at 90.1m (prev: 89.8m); 2024 up at 89.6m (prev: 89.4m)

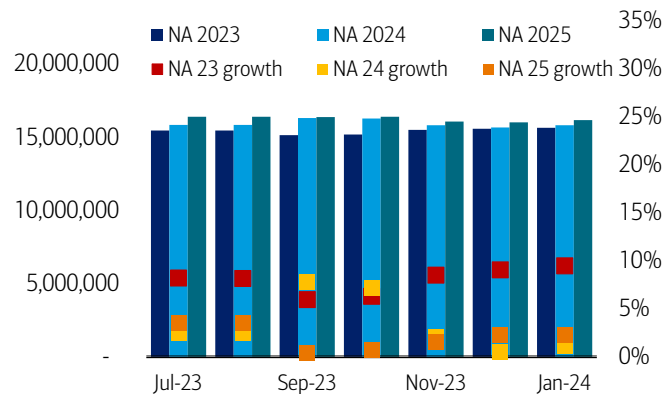


Source: BofA Global Research, S&P

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## Exhibit 10: Latest N. America (S&P) annual estimates for 2023-25

'23 up at 15.7m (prev: 15.6m) and '24 up (+1%) at 15.8m

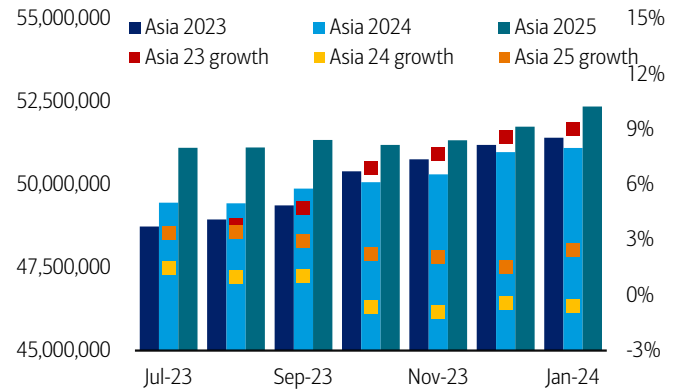


Source: BofA Global Research, S&P

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## Exhibit 11: Latest Asia (S&P) annual estimates for 2023-25

'23 up at 51.4m (prior: 51.2m), 2024 up to 51.1m (prior: 51m)

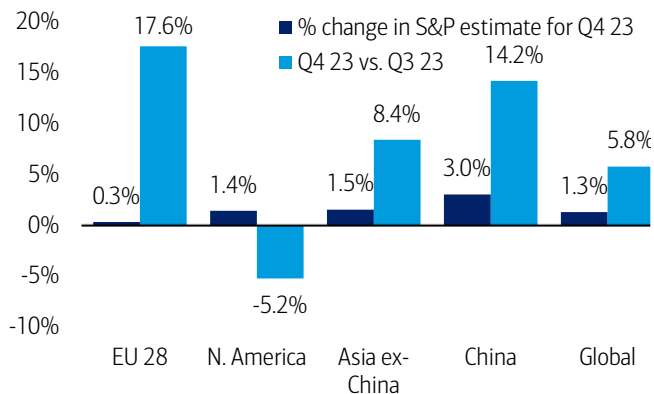


Source: BofA Global Research, S&P

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## Exhibit 12: Sequential change in LVP: 4Q'23 vs. 3Q'23

Global LVP run-rate expected to increase by 5.8%q/q in 4Q'23 vs. 3Q'23

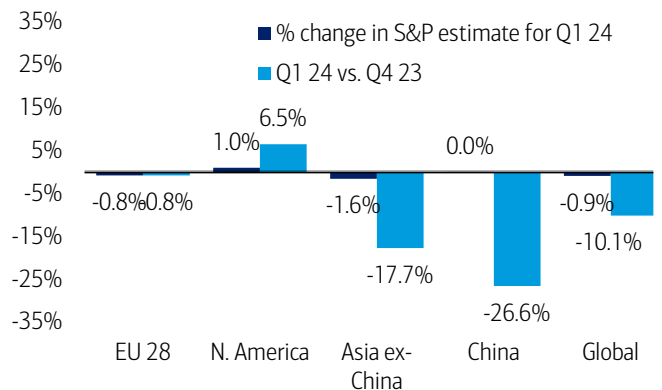


Source: BofA Global Research, S&P

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## Exhibit 13: Sequential change in LVP: Q1 24 vs. Q4 23

S&P forecast for 1Q'24 suggests a sequential -10%q/q, -27% in China

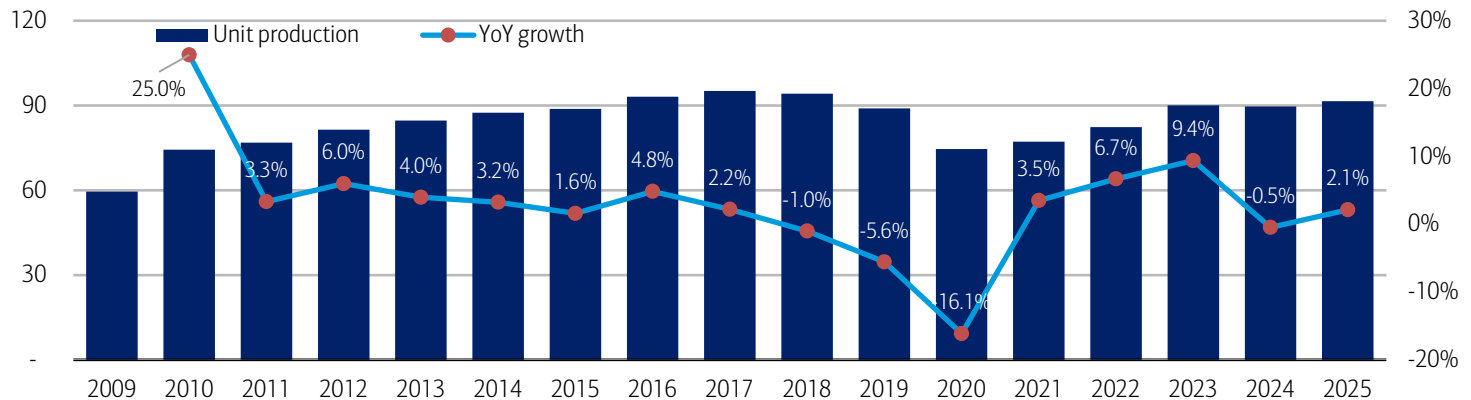


Source: BofA Global Research, S&P

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**Exhibit 14: Global annual light vehicle production (m units) and % annual growth (rhs)**

S&amp;P forecasts 90.1m units for 2023, +9.4% vs. 2022, and 2024 is forecast to reach 89.6m units (-0.5%/y)

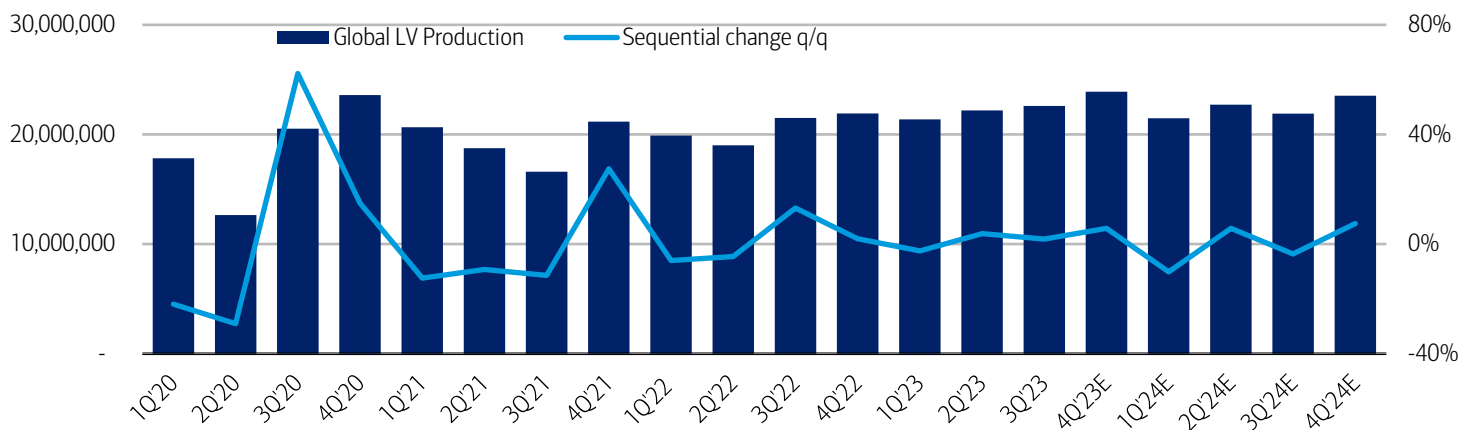


Source: BofA Global Research, S&amp;P

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**Exhibit 15: Global quarterly light vehicle production (units) and % sequential change (rhs)**

S&amp;P forecasts a sequential incline of +5.8% in LVP in Q4 '23 whilst it sees -10.1% q/q deceleration in Q1'24. This equates to +9%/+0.5%/y

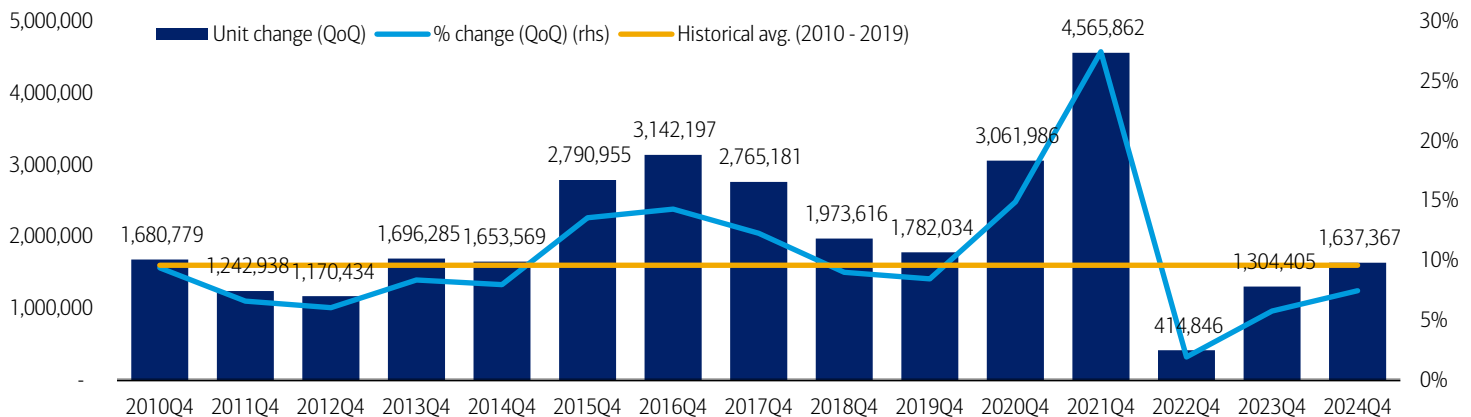


Source: BofA Global Research, S&amp;P

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**Exhibit 16: Global sequential light vehicle production on a Q4 basis vs. Q3 (m units) and % chng q/q (rhs)**

For 4Q'23 S&amp;P expects a +5.8% volume incline vs. 3Q'23, below the historical pattern of +9.6%

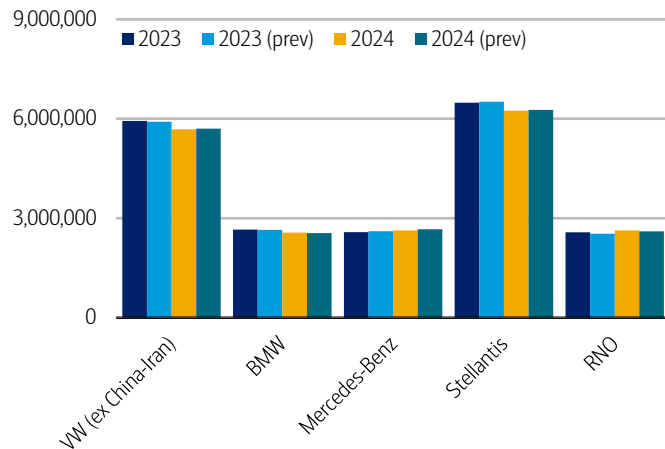


Source: BofA Global Research, S&amp;P

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**Exhibit 17: S&P global LVP by OEM for 2023 & 2024**

RNO is raised most for '23 (by +1.7%), MBC revised down (-1.2%)

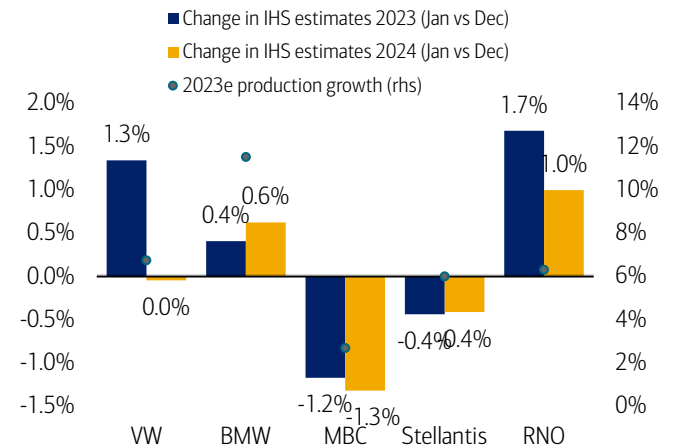


Source: BofA Global Research, S&amp;P

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**Exhibit 18: S&P global LVP estimates by EU OEM for CY23 & 24**

Upgrade for RNO in '23 &amp; '24 (+1.7% &amp; +1%), -c1.2% downgrade for MBC

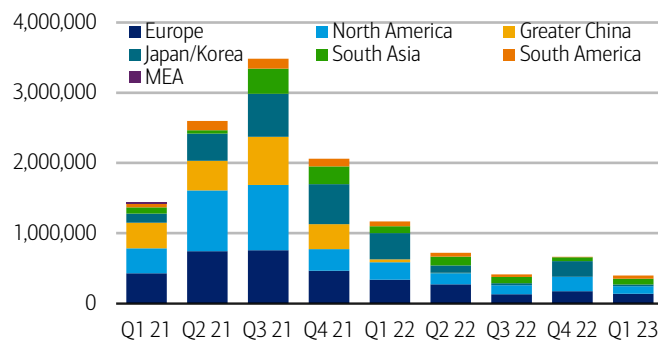


Source: BofA Global Research, S&amp;P, \*MBC = Mercedes-Benz

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**Exhibit 19: LVP losses caused by the Semi's shortage by region (units)**

According to S&amp;P, lost production in Q1 '23 is now near Q3 '22 levels

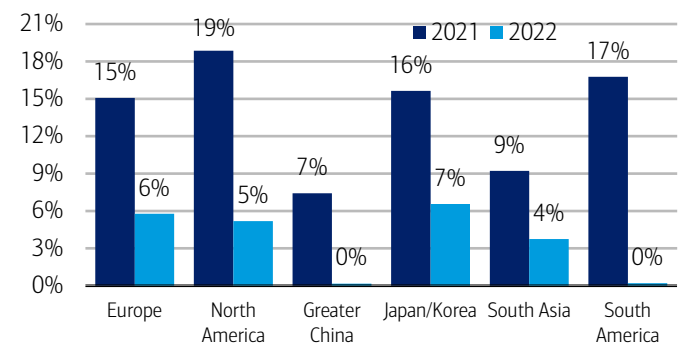


Source: BofA Global Research, S&amp;P

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**Exhibit 20: LVP losses by region for 2021 & 2022**

Most regions still suffered LVP losses in 2022, except for China

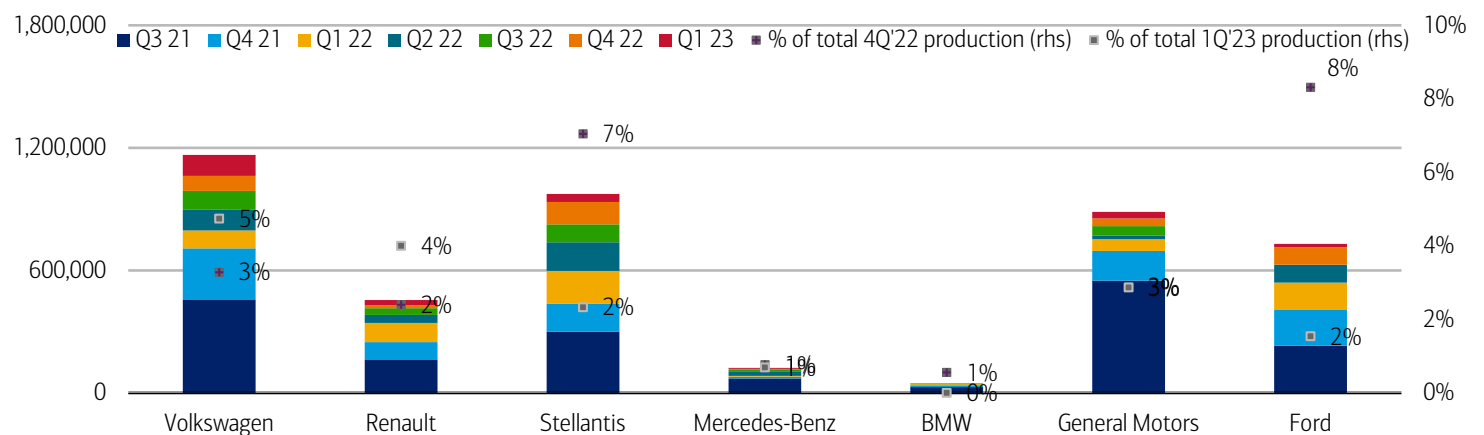


Source: BofA Global Research, S&amp;P

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**Exhibit 21: Semiconductor shortage impact by OEM: number of light vehicles not produced from Q3 '21 – Q1 '23**

Volkswagen and Renault were hit the hardest in Q1 '23 according to S&amp;P, losing 5/4% of production, respectively

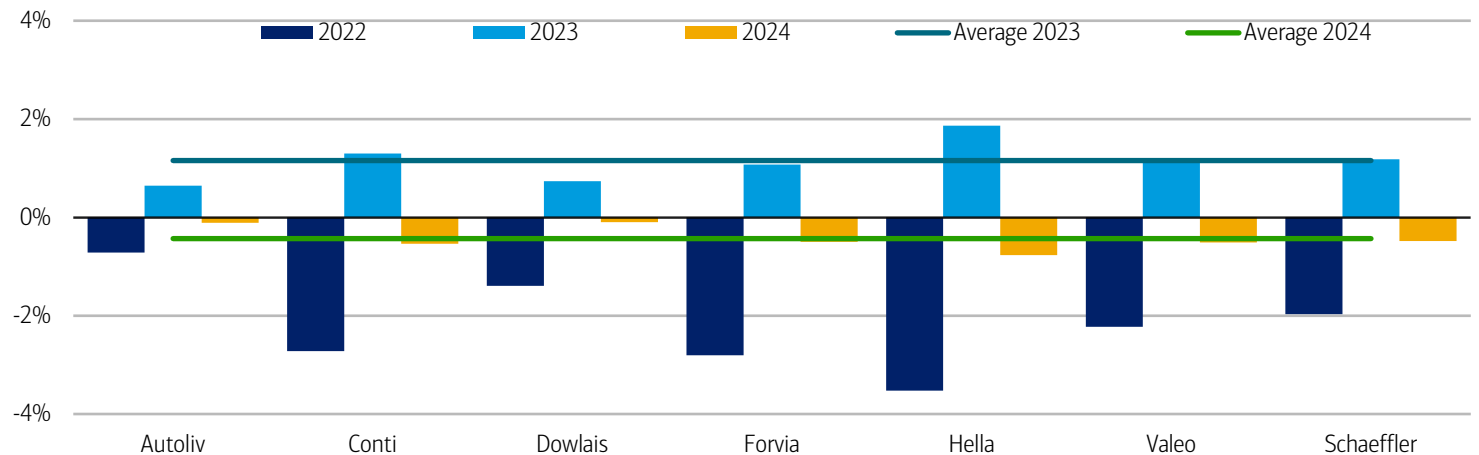


Source: BofA Global Research, S&amp;P

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**Exhibit 22: Regional mix impact for European parts suppliers vs. S&P global LV production (Jan'24)**

Regional mix impact remains positive at 1.2% on avg for 2023 and negative at -0.4% for 2024



Source: BofA Global Research estimates, S&amp;P

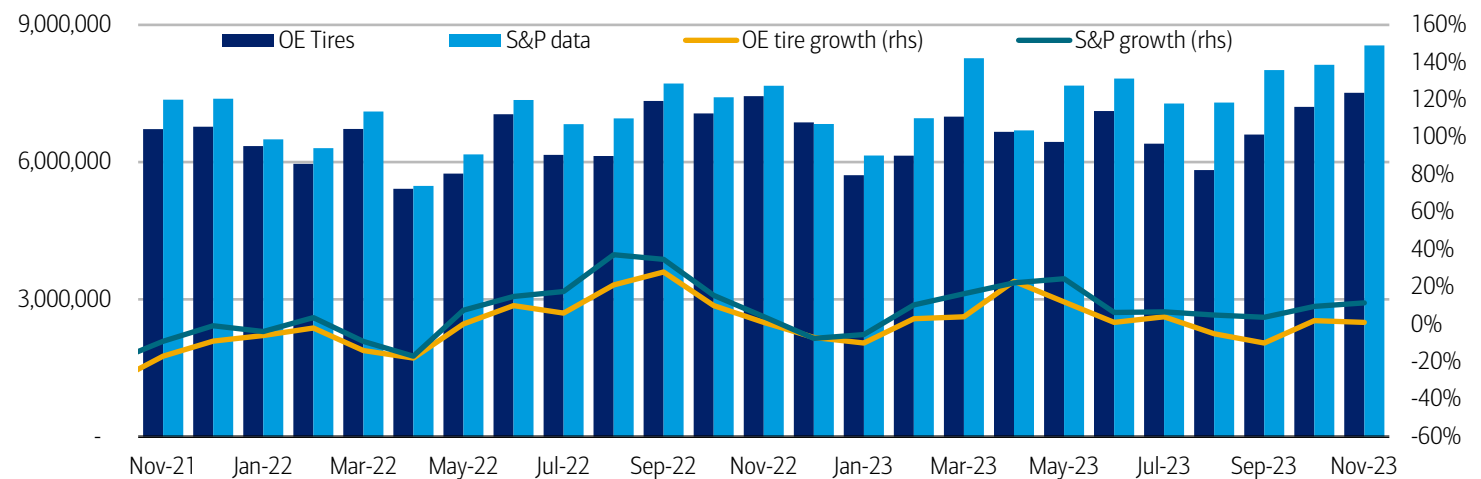
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**LVP rates as implied by OE tire sales**

As an independent data check, we calculate monthly global LVP using Michelin tire market sales into OEM channels. Since tires are supplied before cars roll off the production floor, we believe this data could provide some insight into the following month's production. Nov 2023 global OE tire sales run-rated slightly behind production (Exhibit 23).

**Exhibit 23: Global monthly Light Vehicle Production (Nov-23) implied by OE tire market growth rates**

Tire sales into OE channels are run rating behind S&amp;P production forecasts in Nov-23

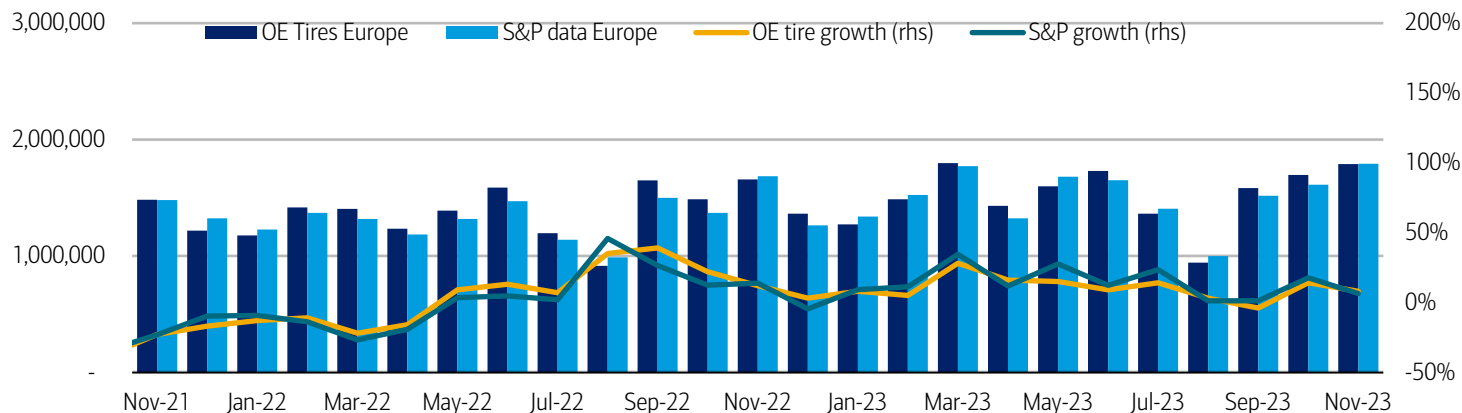


Source: BofA Global Research, Michelin Tire data

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**Exhibit 24: Europe monthly Light Vehicle Production (Nov-23) implied by tire market growth**

Tire sales into OE channels in Europe are run rating broadly in line with S&amp;P production forecasts in Nov-23

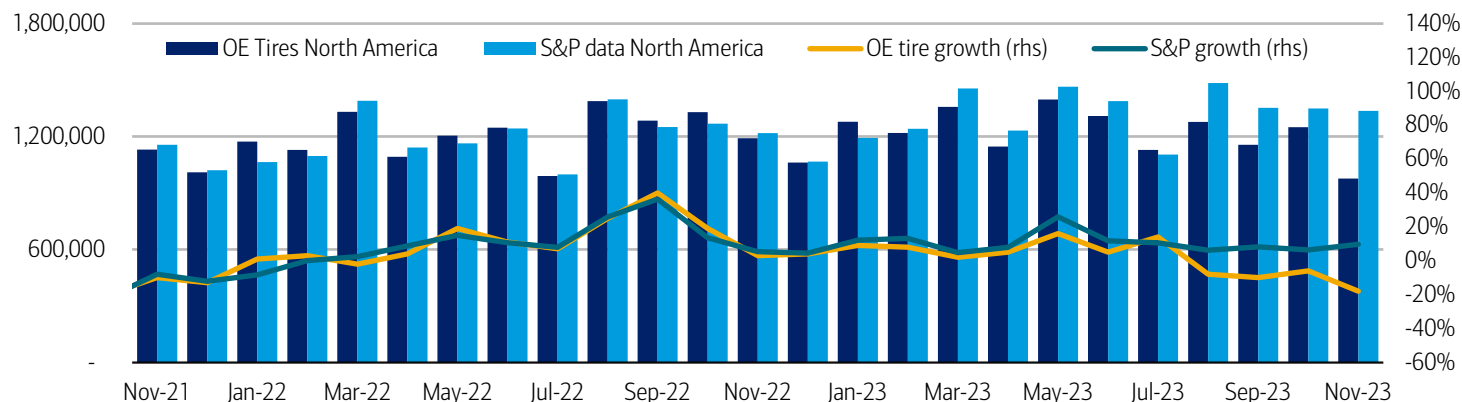


Source: BofA Global Research, Michelin Tire data

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**Exhibit 25: North America monthly Light Vehicle Production (Nov-23) implied by tire market growth**

Tire sales into OE channels in North America are run rating behind S&amp;P production forecasts in Nov-23

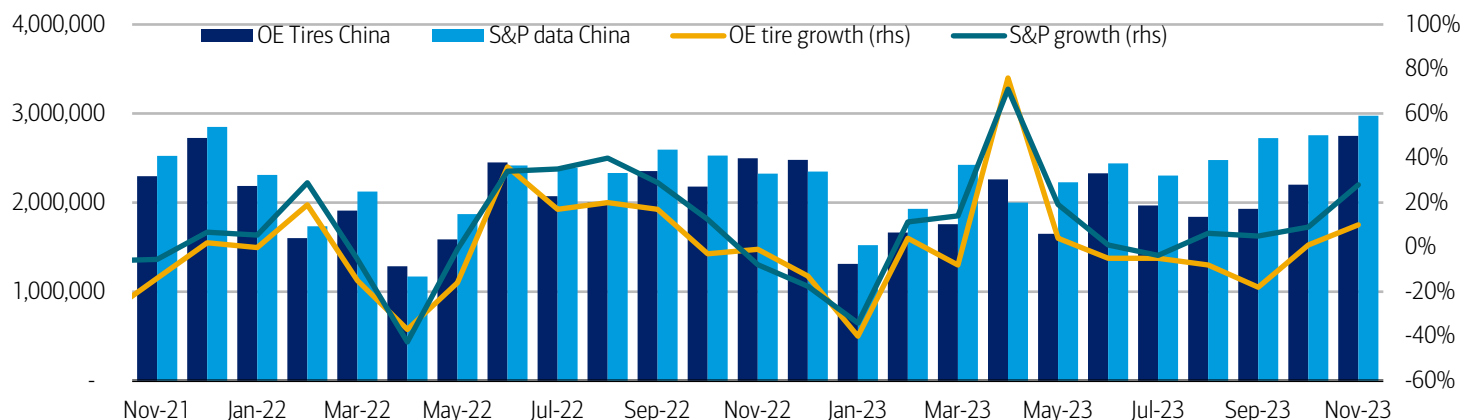


Source: BofA Global Research, Michelin Tire data

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**Exhibit 26: China monthly Light Vehicle Production (Nov-23) implied by tire market growth**

Tire sales into OE channels in China are now run rating well below S&amp;P production forecasts in Nov-23



Source: BofA Global Research, Michelin Tire data

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# S&P LV production estimates

## Exhibit 27: Changes in S&P LV production forecasts in Jan 2024 vs. Dec 2023

S&P global production forecasts revised upwards for 2023e by +0.3% and up 0.3% for 2024e and up 0.9% for 2025e

Changes in S&P Forecasts	2023			2024			2025		
	New	Old	% Change	New	Old	% Change	New	Old	% Change
<b>Western Europe</b>	<b>11,162,444</b>	<b>11,159,477</b>	<b>0.0%</b>	<b>10,884,014</b>	<b>10,898,529</b>	<b>-0.1%</b>	<b>10,910,483</b>	<b>10,809,433</b>	<b>0.9%</b>
Growth	12.9%	12.9%		-2.5%	-2.3%		0.2%	-0.8%	
<b>Central &amp; Eastern Europe</b>	<b>6,643,400</b>	<b>6,607,434</b>	<b>0.5%</b>	<b>6,558,939</b>	<b>6,541,342</b>	<b>0.3%</b>	<b>6,563,647</b>	<b>6,583,995</b>	<b>-0.3%</b>
Growth	11.8%	11.2%		-1.3%	-1.0%		0.1%	0.7%	
<b>Total Europe</b>	<b>17,805,844</b>	<b>17,766,911</b>	<b>0.2%</b>	<b>17,442,953</b>	<b>17,439,871</b>	<b>0.0%</b>	<b>17,474,130</b>	<b>17,393,428</b>	<b>0.5%</b>
Growth	12.5%	12.3%		-2.0%	-1.8%		0.2%	-0.3%	
<b>North America</b>	<b>15,647,830</b>	<b>15,587,794</b>	<b>0.4%</b>	<b>15,822,871</b>	<b>15,669,779</b>	<b>1.0%</b>	<b>16,181,231</b>	<b>16,026,502</b>	<b>1.0%</b>
Growth	9.5%	9.0%		1.1%	0.5%		2.3%	2.3%	
<b>China</b>	<b>28,621,233</b>	<b>28,371,482</b>	<b>0.9%</b>	<b>28,656,899</b>	<b>28,345,871</b>	<b>1.1%</b>	<b>29,867,491</b>	<b>29,365,502</b>	<b>1.7%</b>
Growth	9.4%	8.5%		0.1%	-0.1%		4.2%	3.6%	
<b>Asia ex-China</b>	<b>22,790,340</b>	<b>22,825,007</b>	<b>-0.2%</b>	<b>22,446,541</b>	<b>22,629,535</b>	<b>-0.8%</b>	<b>22,487,590</b>	<b>22,380,178</b>	<b>0.5%</b>
Growth	8.5%	8.7%		-1.5%	-0.9%		0.2%	-1.1%	
<b>South America</b>	<b>2,912,479</b>	<b>2,914,251</b>	<b>-0.1%</b>	<b>2,999,823</b>	<b>3,025,925</b>	<b>-0.9%</b>	<b>3,172,330</b>	<b>3,248,502</b>	<b>-2.3%</b>
Growth	3.1%	3.2%		3.0%	3.8%		5.8%	7.4%	
<b>Middle East</b>	<b>1,097,036</b>	<b>1,114,777</b>	<b>-1.6%</b>	<b>1,135,020</b>	<b>1,152,557</b>	<b>-1.5%</b>	<b>1,187,932</b>	<b>1,192,643</b>	<b>-0.4%</b>
Growth	-6.6%	-5.1%		3.5%	3.4%		4.7%	3.5%	
<b>Africa</b>	<b>1,190,868</b>	<b>1,178,156</b>	<b>1.1%</b>	<b>1,133,065</b>	<b>1,111,761</b>	<b>1.9%</b>	<b>1,170,742</b>	<b>1,161,434</b>	<b>0.8%</b>
Growth	11.6%	10.4%		-4.9%	-5.6%		3.3%	4.5%	
<b>World</b>	<b>90,065,630</b>	<b>89,758,378</b>	<b>0.3%</b>	<b>89,637,172</b>	<b>89,375,299</b>	<b>0.3%</b>	<b>91,541,446</b>	<b>90,768,189</b>	<b>0.9%</b>
Growth	9.4%	9.0%		-0.5%	-0.4%		2.1%	1.6%	

Source: BofA Global Research estimates, S&P

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## Exhibit 28: Global LV production by quarter and by region and percentage sequential change (q/q)

S&P revision shows global growth of 9% in Q4 23 y/y and 5.8% q/q and +0.5% and -10.1% respectively for Q1 24

	2022Q4	QoQ	2023Q1	QoQ	2023Q2	QoQ	2023Q3	QoQ	2023Q4	QoQ	2024Q1	QoQ
Western Europe	2,729,159	21.2%	3,026,940	10.9%	2,959,223	-2.2%	2,375,585	-19.7%	2,800,696	17.9%	2,805,962	0.2%
Growth	16.7%		25.8%		18.4%		5.5%		2.6%		-7.3%	
Central Europe	942,586	7.0%	1,060,950	12.6%	1,078,364	1.6%	896,907	-16.8%	1,047,638	16.8%	1,012,166	-3.4%
Growth	10.4%		24.4%		12.1%		1.8%		11.1%		-4.6%	
<b>EU 28</b>	<b>3,671,745</b>	<b>17.2%</b>	<b>4,087,890</b>	<b>11.3%</b>	<b>4,037,587</b>	<b>-1.2%</b>	<b>3,272,492</b>	<b>-18.9%</b>	<b>3,848,334</b>	<b>17.6%</b>	<b>3,818,128</b>	<b>-0.8%</b>
Growth	15.0%		25.4%		16.6%		4.5%		4.8%		-6.6%	
Eastern Europe	644,447	30.8%	545,347	-15.4%	616,256	13.0%	646,898	5.0%	751,040	16.1%	628,855	-16.3%
Growth	-22.3%		-16.7%		21.0%		31.3%		16.5%		15.3%	
<b>Total Europe</b>	<b>4,316,192</b>	<b>19.1%</b>	<b>4,633,237</b>	<b>7.3%</b>	<b>4,653,843</b>	<b>0.4%</b>	<b>3,919,390</b>	<b>-15.8%</b>	<b>4,599,374</b>	<b>17.3%</b>	<b>4,446,983</b>	<b>-3.3%</b>
Growth	7.3%		18.4%		17.2%		8.1%		6.6%		-4.0%	
<b>North America</b>	<b>3,552,293</b>	<b>-2.6%</b>	<b>3,888,961</b>	<b>9.5%</b>	<b>4,084,418</b>	<b>5.0%</b>	<b>3,940,396</b>	<b>-3.5%</b>	<b>3,734,055</b>	<b>-5.2%</b>	<b>3,976,057</b>	<b>6.5%</b>
Growth	7.9%		9.5%		15.1%		8.1%		5.1%		2.2%	
China	7,202,394	-1.6%	5,876,100	-18.4%	6,668,378	13.5%	7,505,740	12.6%	8,571,015	14.2%	6,293,134	-26.6%
Growth	-5.5%		-4.8%		22.2%		2.5%		19.0%		7.1%	
<b>Asia</b>	<b>12,857,370</b>	<b>0.7%</b>	<b>11,657,832</b>	<b>-9.3%</b>	<b>12,128,913</b>	<b>4.0%</b>	<b>13,255,459</b>	<b>9.3%</b>	<b>14,369,369</b>	<b>8.4%</b>	<b>11,824,710</b>	<b>-17.7%</b>
Growth	1.8%		3.3%		18.4%		3.8%		11.8%		1.4%	
South America	732,848	-7.5%	666,937	-9.0%	757,960	13.6%	783,918	3.4%	703,664	-10.2%	643,260	-8.6%
Growth	4.0%		14.1%		6.1%		-1.1%		-4.0%		-3.6%	
Middle East	186,010	-52.8%	240,940	29.5%	286,616	19.0%	392,043	36.8%	177,437	-54.7%	277,321	56.3%
Growth	-33.3%		-24.9%		4.7%		-0.5%		-4.6%		15.1%	
Africa	276,089	-0.2%	284,375	3.0%	281,127	-1.1%	306,827	9.1%	318,539	3.8%	310,403	-2.6%
Growth	9.3%		11.5%		8.3%		10.9%		15.4%		9.2%	
World - Passenger	18,404,916	2.4%	17,788,637	-3.3%	18,514,541	4.1%	19,087,799	3.1%	20,224,473	6.0%	17,972,909	-11.1%
World - LCV	3,515,886	-0.7%	3,583,645	1.9%	3,678,336	2.6%	3,510,234	-4.6%	3,677,965	4.8%	3,505,825	-4.7%
<b>World</b>	<b>21,920,802</b>	<b>1.9%</b>	<b>21,372,282</b>	<b>-2.5%</b>	<b>22,192,877</b>	<b>3.8%</b>	<b>22,598,033</b>	<b>1.8%</b>	<b>23,902,438</b>	<b>5.8%</b>	<b>21,478,734</b>	<b>-10.1%</b>
Growth	3.5%		7.4%		16.8%		5.1%		9.0%		0.5%	

Source: BofA Global Research estimates, S&P

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# Our (BofA) Global LV production forecasts

## Exhibit 29: Summary of BofA LV production forecasts (units)

We have updated our LVP forecast at a growth rate of +9.4%/y for 2023e in-line with S&P; for 2024e we forecast +1.2% growth (S&P: -0.5%)

Region	2020	2021	2022	2023E	S&P 2023E	2024E	S&P 2024E	2025E	2026E
<b>Western Europe</b>	<b>10,050,263</b>	<b>9,420,503</b>	<b>9,886,735</b>	<b>11,173,606</b>	<b>11,162,444</b>	<b>10,829,594</b>	<b>10,884,014</b>	<b>10,583,169</b>	<b>10,407,820</b>
Growth	-25.2%	-6.3%	4.9%	13.0%	12.9%	-3.1%	-2.5%	-2.3%	-1.7%
<b>Central Europe</b>	<b>3,533,335</b>	<b>3,407,964</b>	<b>3,638,830</b>	<b>4,083,859</b>	<b>4,083,859</b>	<b>3,986,412</b>	<b>4,006,444</b>	<b>3,811,295</b>	<b>3,749,625</b>
Growth	-18.7%	-3.5%	6.8%	12.2%	12.2%	-2.4%	-1.9%	-4.4%	-1.6%
<b>EU 28</b>	<b>13,583,598</b>	<b>12,828,467</b>	<b>13,525,565</b>	<b>15,257,465</b>	<b>15,246,303</b>	<b>14,816,006</b>	<b>14,890,458</b>	<b>14,394,463</b>	<b>14,157,444</b>
Growth	-23.6%	-5.6%	5.4%	12.8%	12.7%	-2.9%	-2.3%	-2.8%	-1.6%
<b>Eastern Europe</b>	<b>2,987,443</b>	<b>3,062,886</b>	<b>2,301,114</b>	<b>2,559,541</b>	<b>2,559,541</b>	<b>2,493,736</b>	<b>2,552,495</b>	<b>2,634,477</b>	<b>2,696,851</b>
Growth	-11.6%	2.5%	-24.9%	11.2%	11.2%	-2.6%	-0.3%	5.6%	2.4%
<b>Total Europe</b>	<b>16,571,041</b>	<b>15,891,353</b>	<b>15,826,679</b>	<b>17,817,006</b>	<b>17,805,844</b>	<b>17,309,742</b>	<b>17,442,953</b>	<b>17,028,940</b>	<b>16,854,295</b>
Growth	-21.7%	-4.1%	-0.4%	12.6%	12.5%	-2.8%	-2.0%	-1.6%	-1.0%
<b>North America</b>	<b>13,024,058</b>	<b>13,047,059</b>	<b>14,296,207</b>	<b>15,650,000</b>	<b>15,647,830</b>	<b>16,569,340</b>	<b>15,822,871</b>	<b>17,228,897</b>	<b>18,001,663</b>
Growth	-20.2%	0.2%	9.6%	9.5%	9.5%	5.9%	1.1%	4.0%	4.5%
<b>China</b>	<b>23,349,584</b>	<b>24,585,919</b>	<b>26,150,230</b>	<b>28,621,233</b>	<b>28,621,233</b>	<b>29,287,351</b>	<b>28,656,899</b>	<b>28,239,713</b>	<b>28,751,521</b>
Growth	-4.4%	5.3%	6.4%	9.4%	9.4%	2.3%	0.1%	-3.6%	1.8%
<b>Asia ex-China</b>	<b>17,625,994</b>	<b>19,011,783</b>	<b>21,005,000</b>	<b>22,790,340</b>	<b>22,790,340</b>	<b>22,863,710</b>	<b>22,446,541</b>	<b>22,021,165</b>	<b>22,066,724</b>
Growth	-19.1%	7.9%	10.5%	8.5%	8.5%	0.3%	-1.5%	-3.7%	0.2%
<b>South America</b>	<b>2,245,570</b>	<b>2,606,481</b>	<b>2,824,287</b>	<b>2,912,479</b>	<b>2,912,479</b>	<b>2,954,826</b>	<b>2,999,823</b>	<b>3,140,607</b>	<b>3,263,676</b>
Growth	-31.4%	16.1%	8.4%	3.1%	3.1%	1.5%	3.0%	6.3%	3.9%
<b>Middle East</b>	<b>938,512</b>	<b>1,064,127</b>	<b>1,174,304</b>	<b>1,097,036</b>	<b>1,097,036</b>	<b>1,100,969</b>	<b>1,135,020</b>	<b>1,176,053</b>	<b>1,246,140</b>
Growth	24.8%	13.4%	10.4%	-6.6%	-6.6%	0.4%	3.5%	6.8%	6.0%
<b>Africa</b>	<b>841,021</b>	<b>988,536</b>	<b>1,067,465</b>	<b>1,190,868</b>	<b>1,190,868</b>	<b>1,110,404</b>	<b>1,133,065</b>	<b>1,159,035</b>	<b>1,295,787</b>
Growth	-33.1%	17.5%	8.0%	11.6%	11.6%	-6.8%	-4.9%	4.4%	11.8%
<b>World</b>	<b>74,595,780</b>	<b>77,195,258</b>	<b>82,344,172</b>	<b>90,078,962</b>	<b>90,065,630</b>	<b>91,196,342</b>	<b>89,637,172</b>	<b>89,994,409</b>	<b>91,479,808</b>
Growth	-16.1%	3.5%	6.7%	9.4%	9.4%	1.2%	-0.5%	-1.3%	1.7%

Source: BofA Global Research estimates, S&P

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## BofA Global Auto teams views for 2024

### Table 1: List of our global autos teams year ahead reports

List of our autos teams year ahead report from Europe, US and APAC

#### BofA Global Research Reports

Title: Subtitle	Primary Author	Date Published
European Automobiles: Year ahead: 5 themes & 5 conviction stocks... "go for the gap that exists"	Horst Schneider	13 December 2023
<a href="#">Automotive Industry: Year Ahead 2024: Five Auto themes &amp; top stock picks as volatility remains</a>	John Murphy, CFA	09 January 2024
Greater China Auto, EV and EV battery: Year Ahead 2024 – look for bottom-up investment opportunity in a gloomy market	Ming Hsun Lee, CFA	10 January 2024
Japan Automobiles/Auto Parts: Year Ahead 2024: "Normalization" with blurred visibility. 4 themes and stock picks	Kei Nihonyanagi	15 January 2024
APAC Automobile: Year Ahead 2024: Two offshoots from BEV slowdown - HEV sales growth, BEV export	Kei Nihonyanagi	10 January 2024

Source: BofA Global Research

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**Key abbreviations used in this report:**

aka: also known as  
BYD: Build Your Dreams  
GM: General Motors  
EM: Emerging market  
EU: Europe  
IRA: Inflation Reduction Act  
LV: Light vehicles  
LVP: LV production  
LVS: LV sales  
MG: Morris Garages  
NEV: New Energy Vehicle  
OEM: Original equipment manufacturer  
p.a: Per annum  
SAAR = seasonally adjusted annualised rate  
STLA: Stellantis  
UAW: United Auto Workers  
PC: Passenger Car

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