

Informa Tech Automotive Group



# Wards Intelligence North America Barometer

Current Trends and 5-Year Outlook  
May 18, 2023

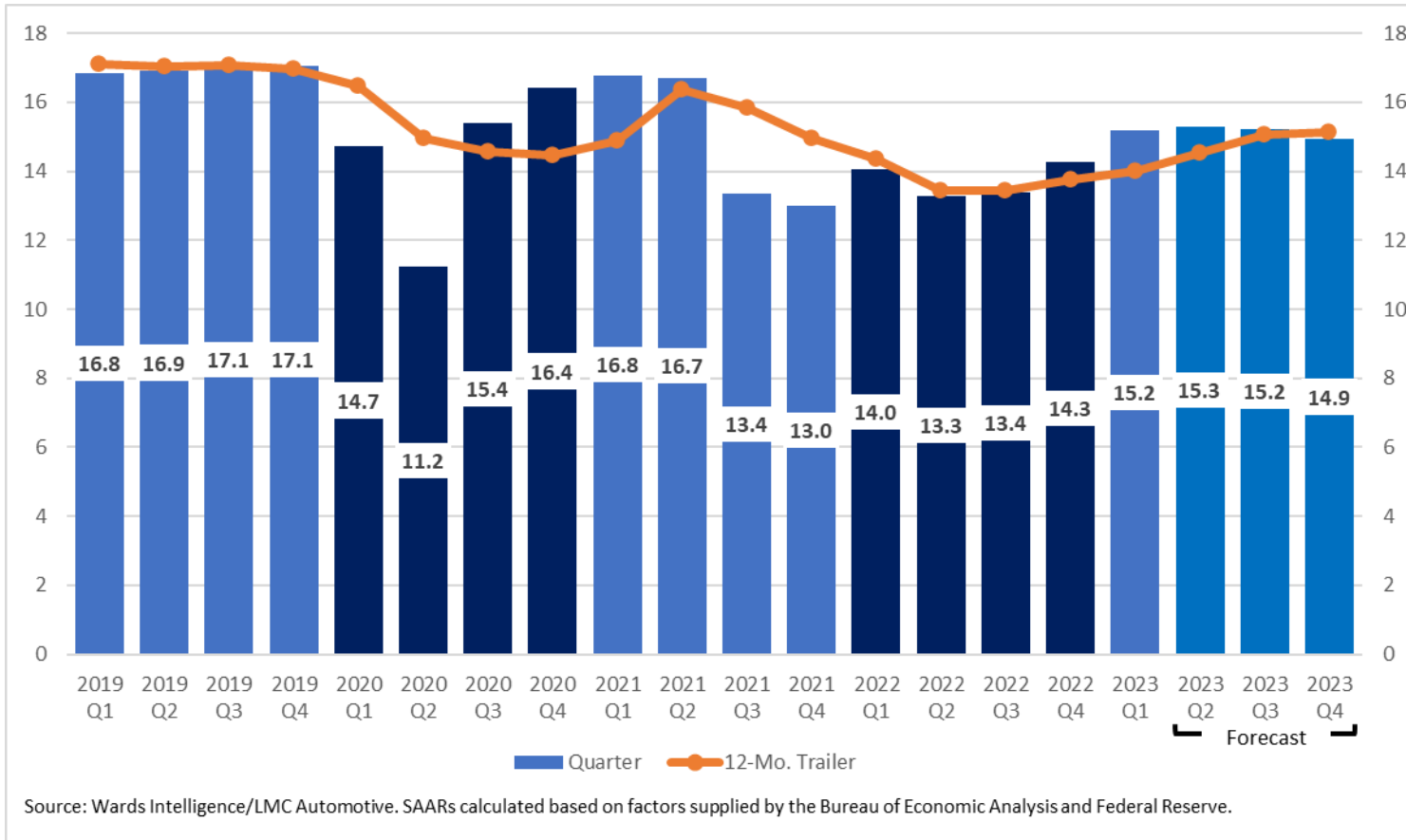
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Wards Intelligence



# U.S. Market Outlook

# Short-Term U.S. Sales Outlook Thru 2023

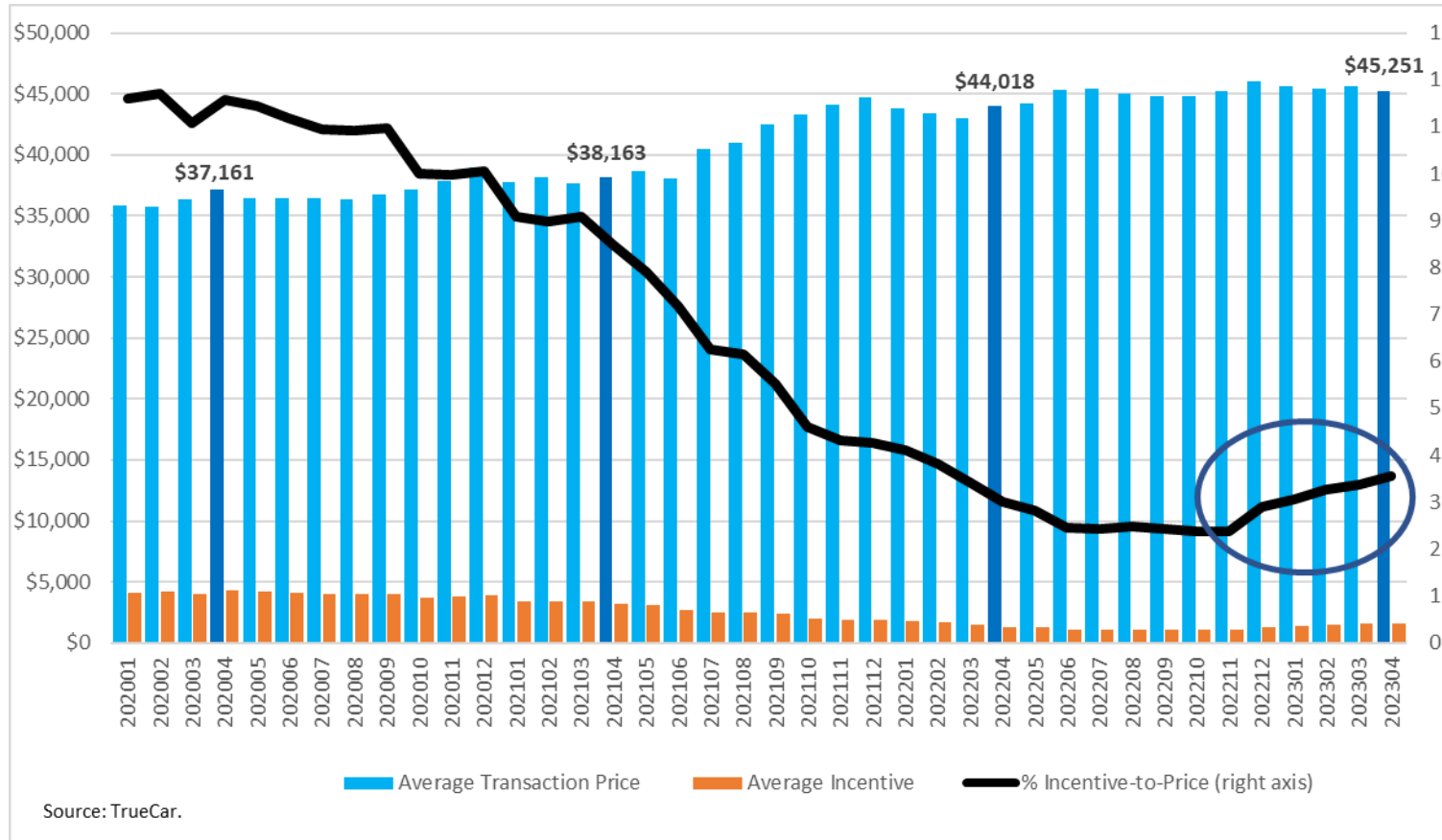
## (Seasonally Adjusted Annual Rates – in millions)



2023 Sales by Quarter				
	Q1	Q2	Q3	Q4
Volume (millions)	3.6	4.0	3.9	3.7
Yr./Yr. Change	7.8%	15.1%	15.2%	2.4%

- Growth expected to weaken sometime in the second half under the assumption of a mild recession
- Pent-up demand, combined with rising product availability, so far offsetting most of the pushback from economic and political headwinds, and puts upside to the second-half outlook
- However, still a lot of potential for a weaker second half

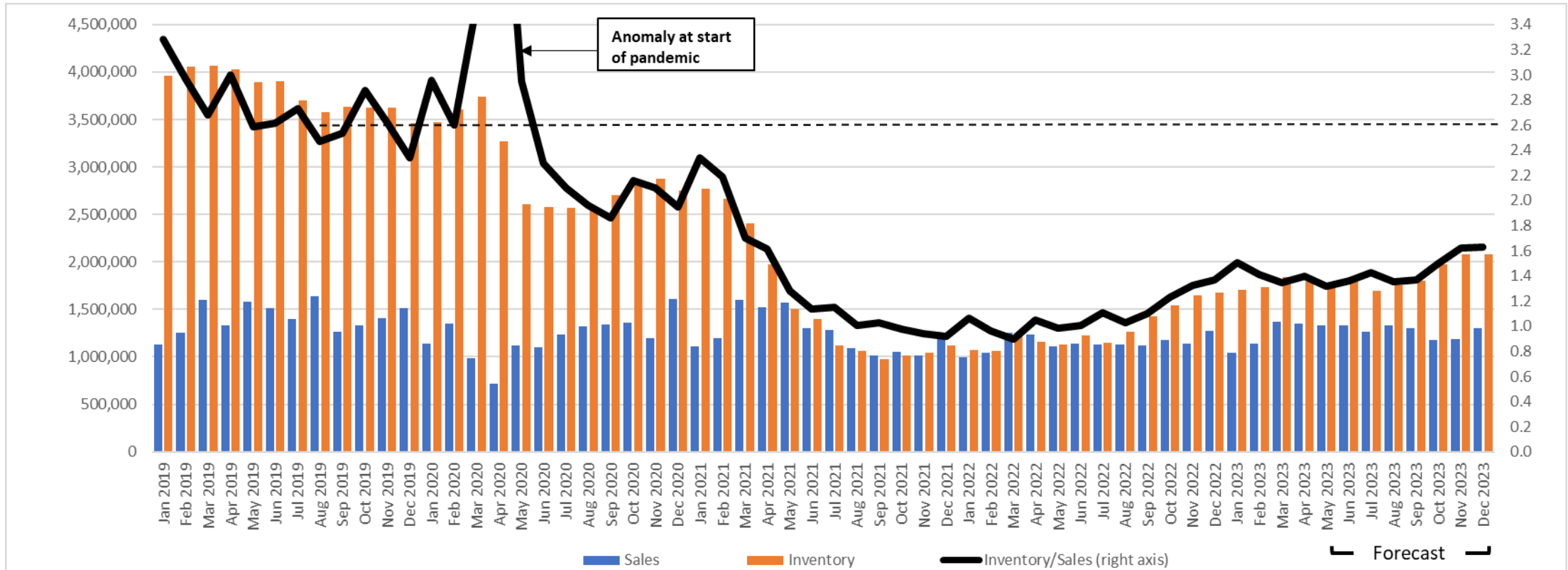
# Average Retail Transaction Prices and Incentives



- Average prices still rising but increases have slowed
- Incentive activity month-to-month has been rising faster than prices since November
- Incentive activity likely continues rising as inventory increases – how much depends on the level of inventory automakers ultimately choose to carry in current market conditions

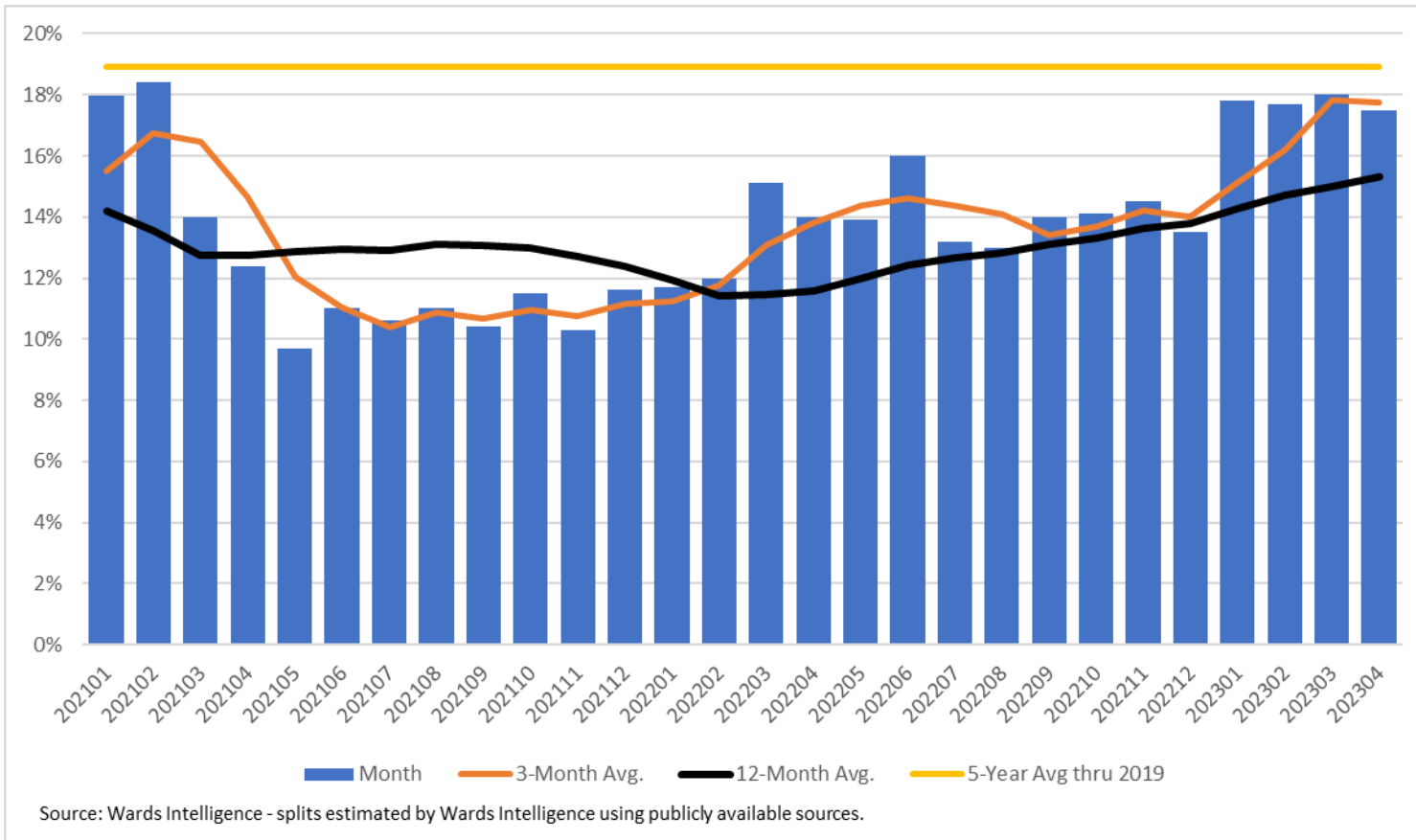
# U.S. Light-Vehicle Sales vs. Inventory

- Historically, monthly inventory as a ratio to sales averaged 2.6. Ratio still well below that level, even at the end of the year when raw inventory tops 2 million units for first time since Q1-2021



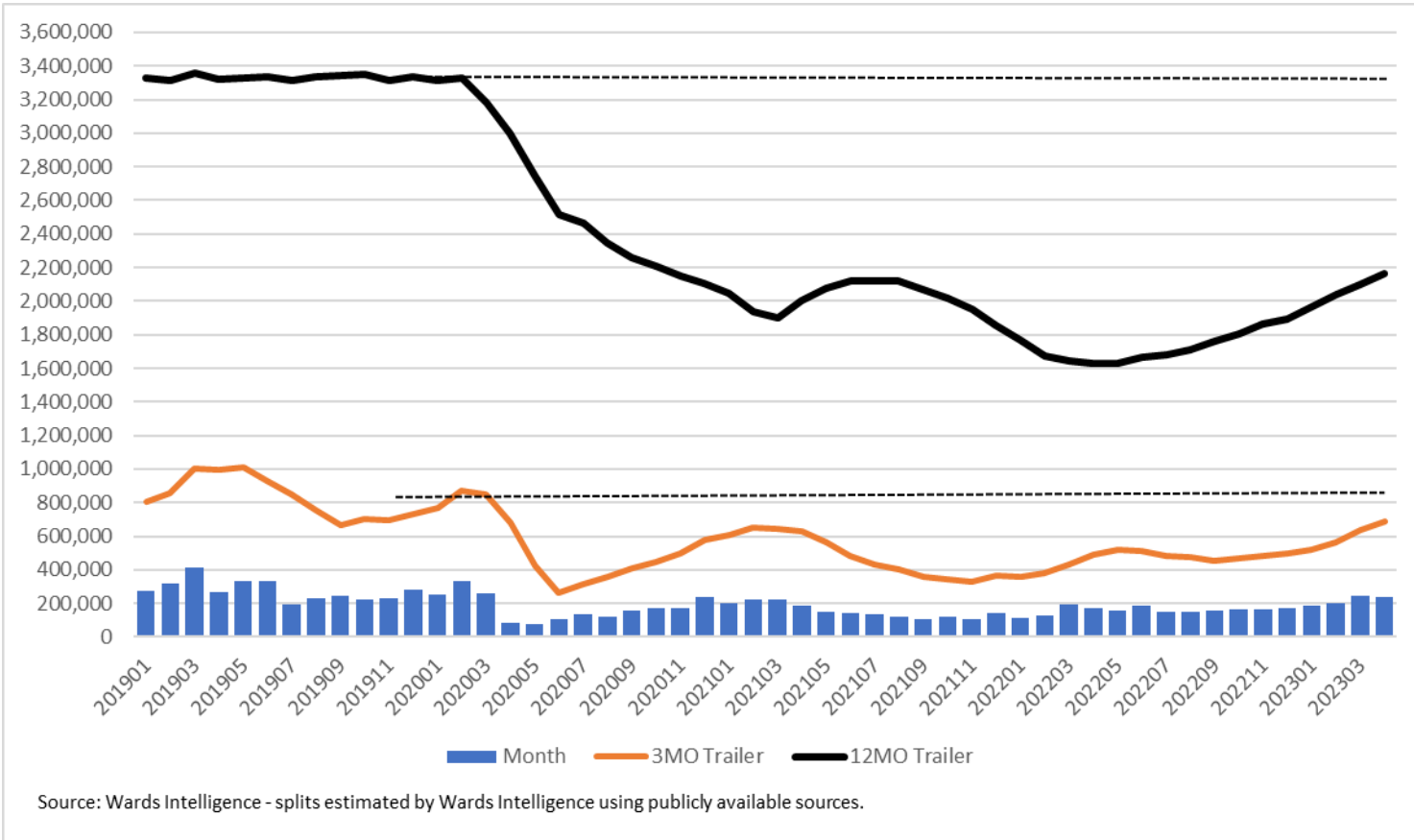
Note: Inventory/Sales is beginning-month inventory as a ratio to sales in that month - includes a minor adjustment for each month's number of official selling days.  
 Source: Wards Intelligence/LMC Automotive.

# Fleet Share of Light Vehicle Sales



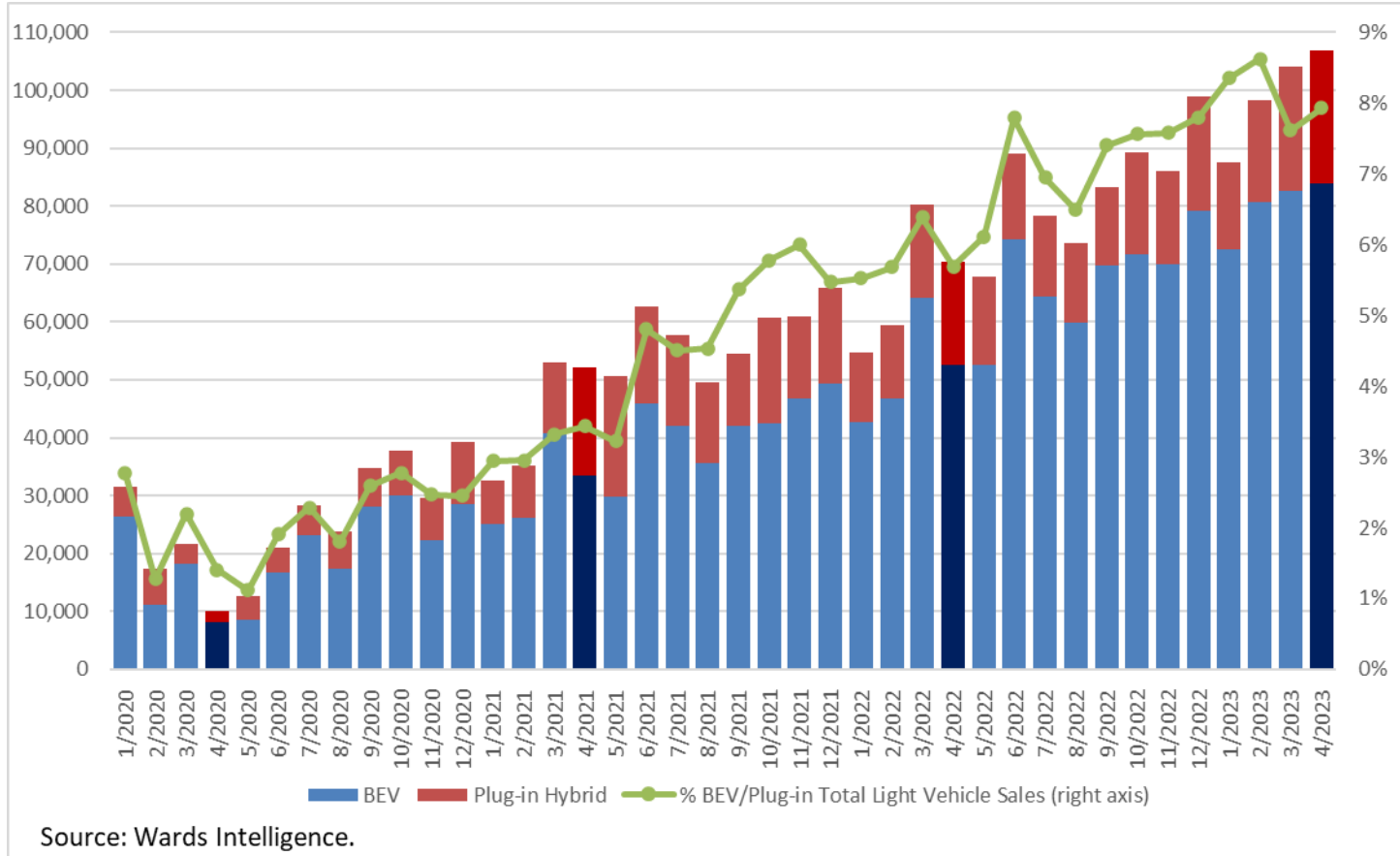
- Fleet penetration is getting back to historical norms of 19% - averaged close to 18% past four months

# Fleet Volume - Light Vehicle



- Fleet volume still well below typical annual totals of 3-million-plus typical in the pre-pandemic era
- A lot of pent-up demand
- Fleet deliveries in 2023 projected to total 2.7 million

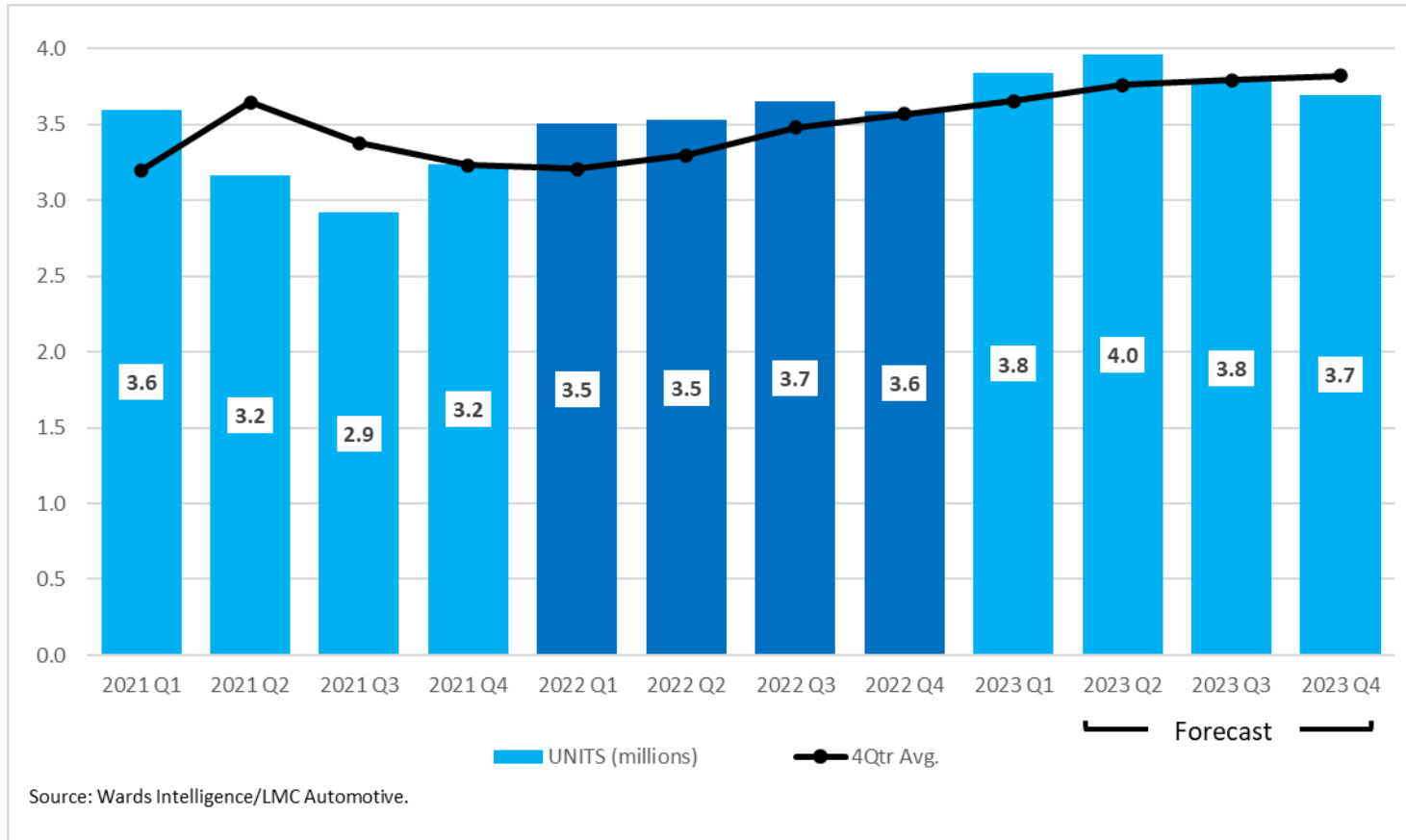
# U.S. Battery-Electric and Plug-in Hybrid Light-Vehicle Sales



- Final IRA rules for earning buyer credits, as well as a lease end-run, kicked-in mid-April
- Both BEV and PHEV volumes in April were records, and continued the 3-year upward trend



# North America Light-Vehicle Production Outlook by Quarter

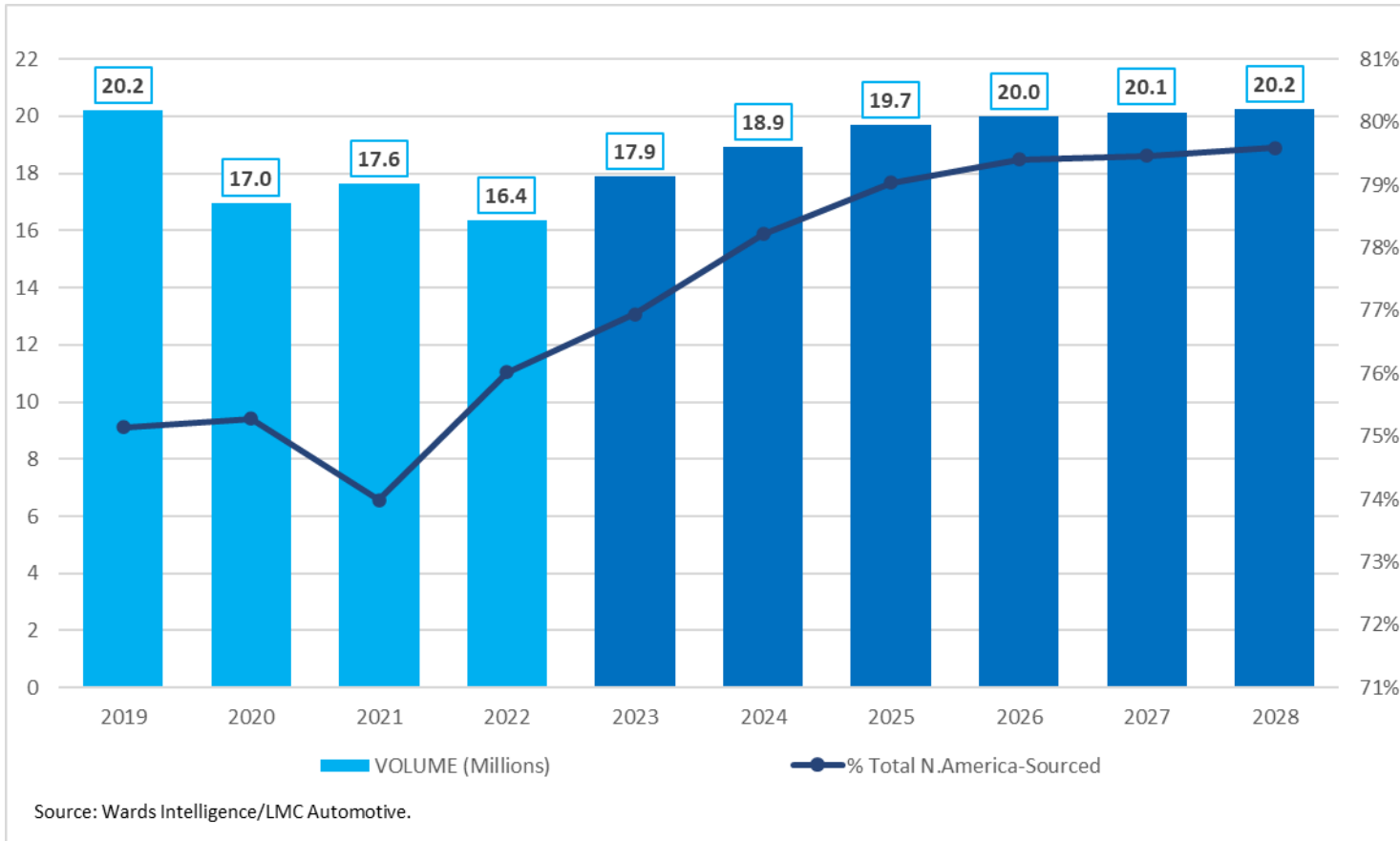


Year/Year % Change			
2023 Q1	2023 Q2	2023 Q3	2023 Q4
9.6	12.2	3.7	2.9

- Although production still constrained, much of the volatility is gone
- However, one million units are forecast to be unavailable in 2023 due to ongoing supply-chain problems
- Also possible in a mild recession production not significantly reduced due to the unusual situation of huge pent-up demand

# North America Long-Term Overview

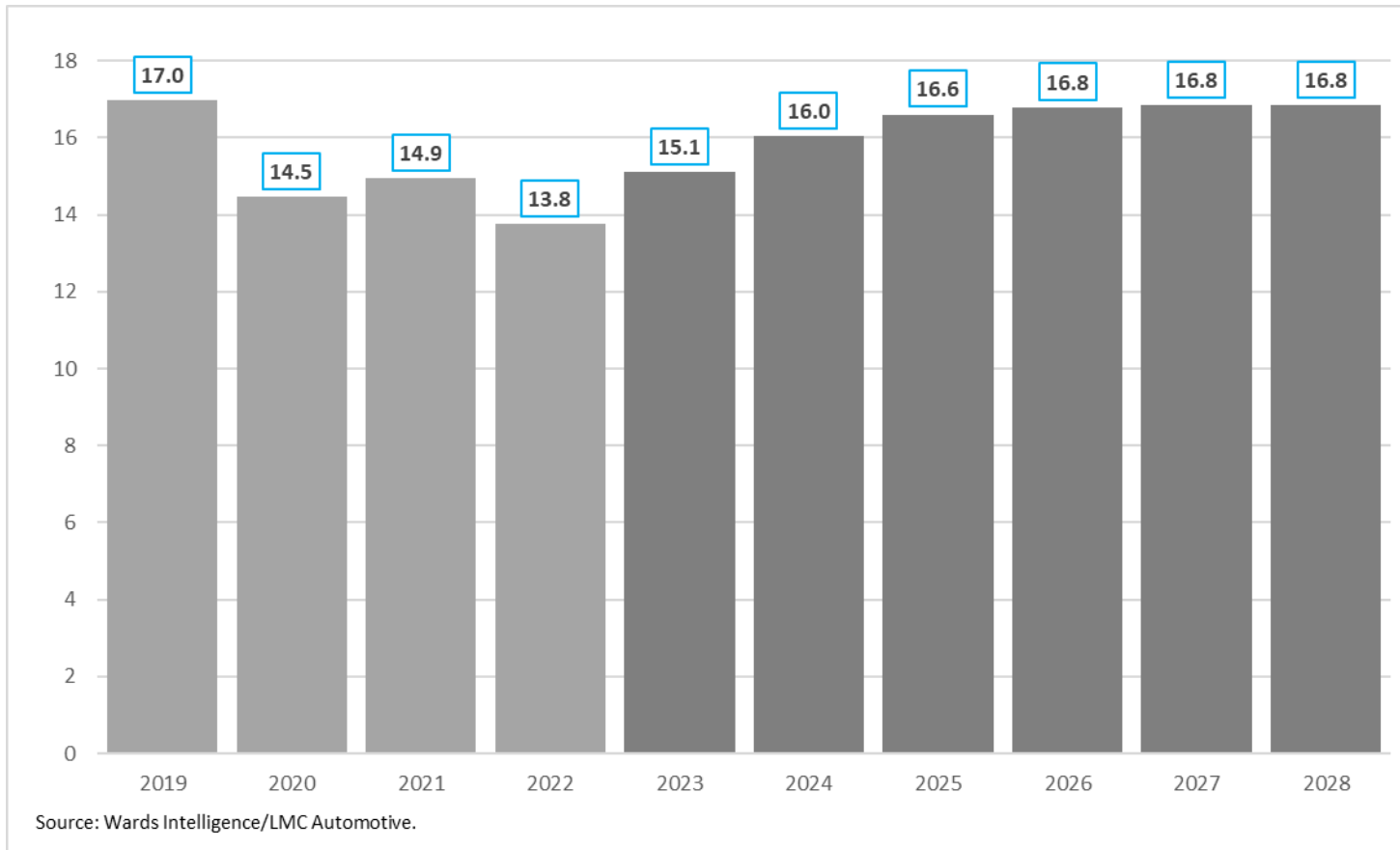
# North America Light-Vehicle Sales - Forecast



Year/Year % Change						
2022	2023	2024	2025	2026	2027	2028
-7.2	9.4	5.8	4.1	1.5	0.8	0.5

- Strong growth in 2023-25 leveling off quickly
- Outlook assumes sluggish economic growth over next five years (Oxford Economics)
- Also limiting top-level volume will be lower inventory and continued weighting of the product mix to pricier vehicles (including focus on transitioning to electrified vehicles)

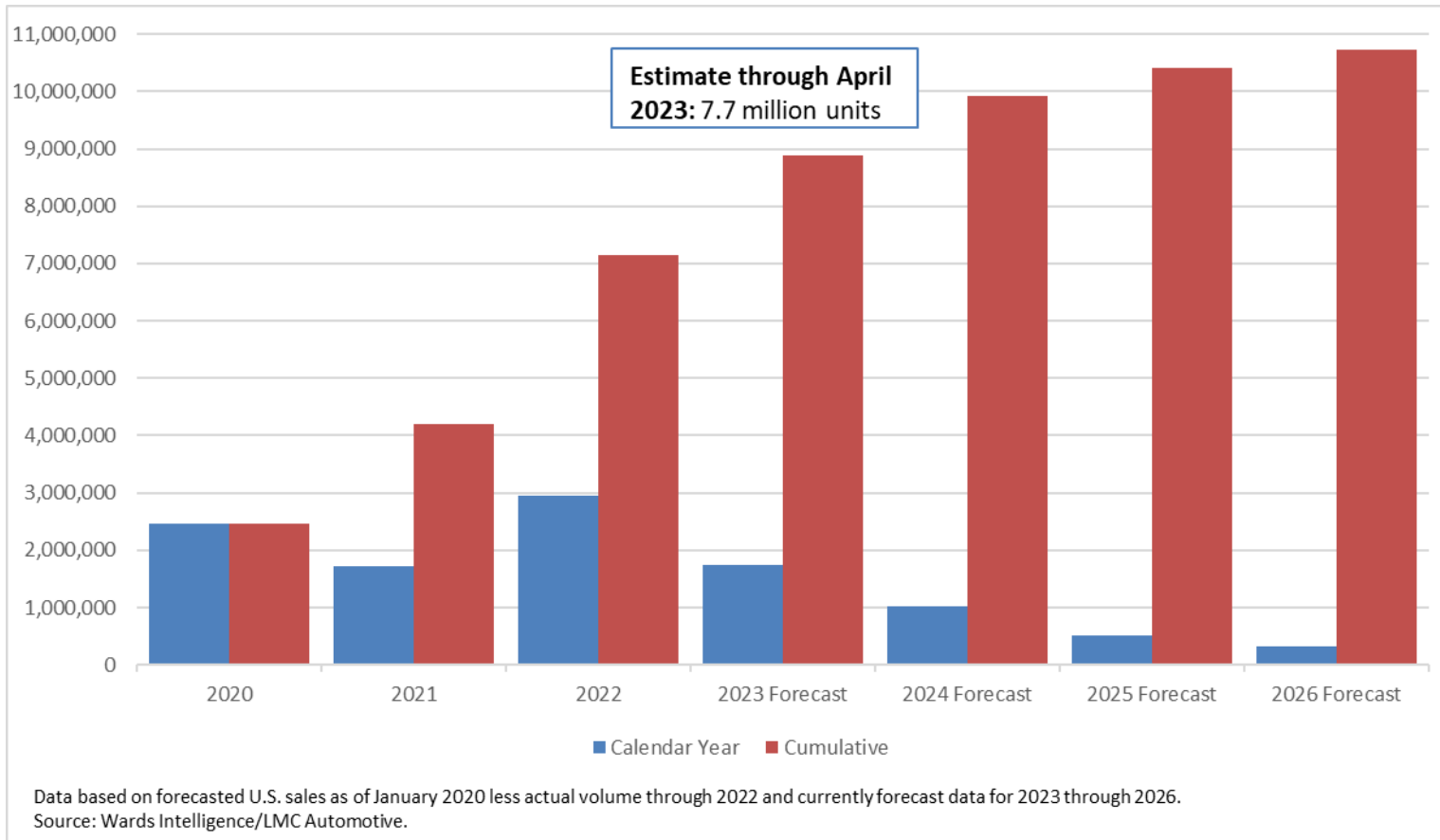
# U.S. Light-Vehicle Sales Forecast (millions)



Year/Year % Change						
2022	2023	2024	2025	2026	2027	2028
-8.0	9.8	6.2	3.6	1.1	0.3	0.0

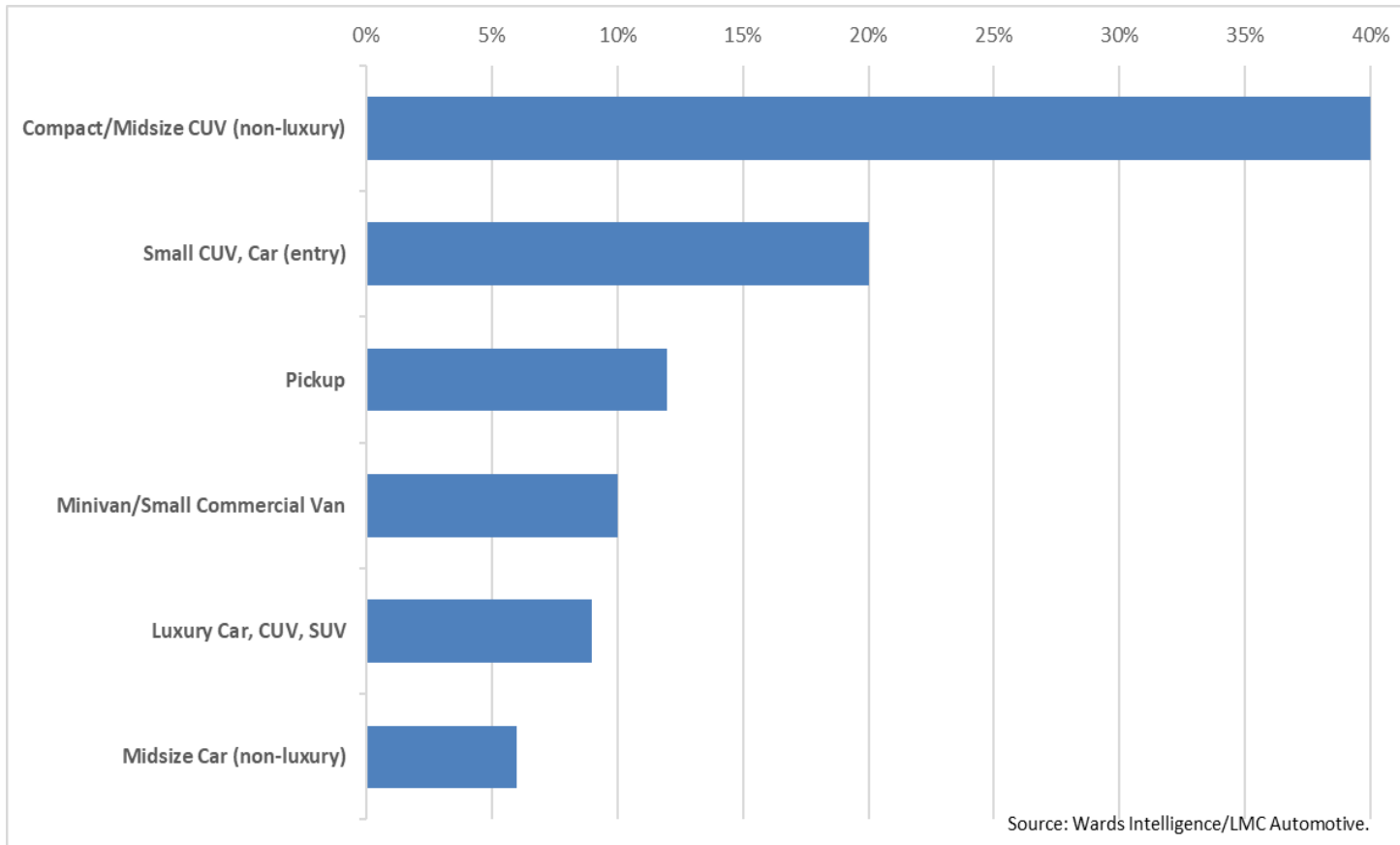
- There is more upside than downside to the 5-year outlook
- Pent-up demand built up over past three years could continue to have more impact than economic and price headwinds
- Also, automakers could increase the inventory mix for lower-cost vehicles or raise incentives higher than expected
- Major disruptor is the depth of a recession

# Nominal Pent-up Demand in U.S. Light-Vehicle Market



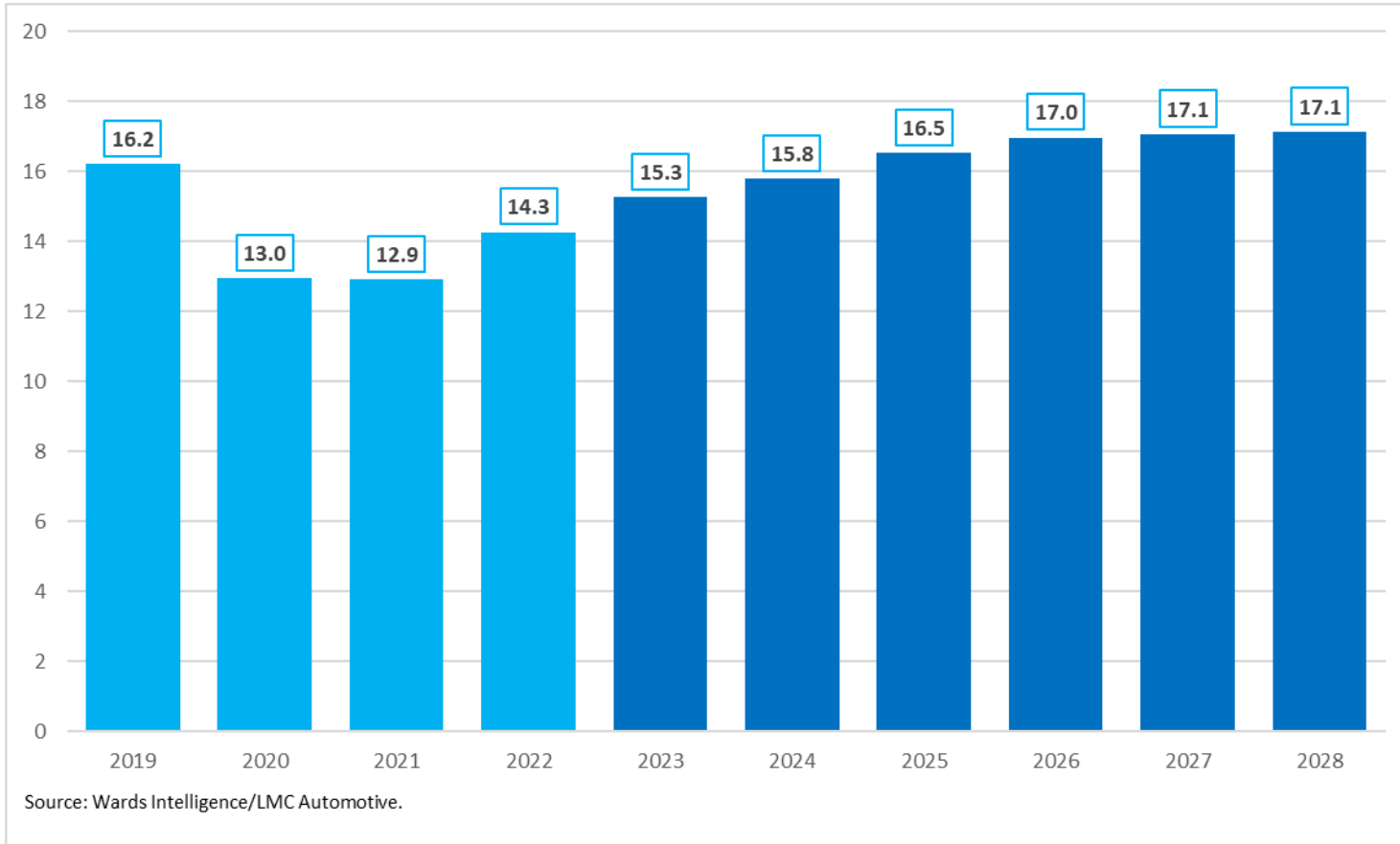
- Cumulative nominal replacement demand since the pandemic first impacted the market in March 2020 currently at 7.7 million units and still rising
- Excluding the possible impact of a recession, pricing power for at least the next three years remains on the seller side
- However, during periods of economic growth, there always will be opportunity (or temptation) to build and sell more at lower prices
- Not shown in the graph: Nearly half of the pent-up demand through 2022 was in the **fleet sector**

# % Share of Pent-up Demand by Selected Groupings Through 2022



- Compact/Midsize CUVs, which account for 21% of the U.S. market, equal roughly 40% of pent-up demand
- Low-cost, or entry-price, vehicles one-fifth the total
- Pre-pandemic, the average base price of “entry” ’20-model vehicles was \$21,000; for ’23, the average is \$24,500 (with fewer entries)
- Long-term, there is potential for an automaker(s) to attempt filling the lower-price void – right now, no indications of a significant movement to do that

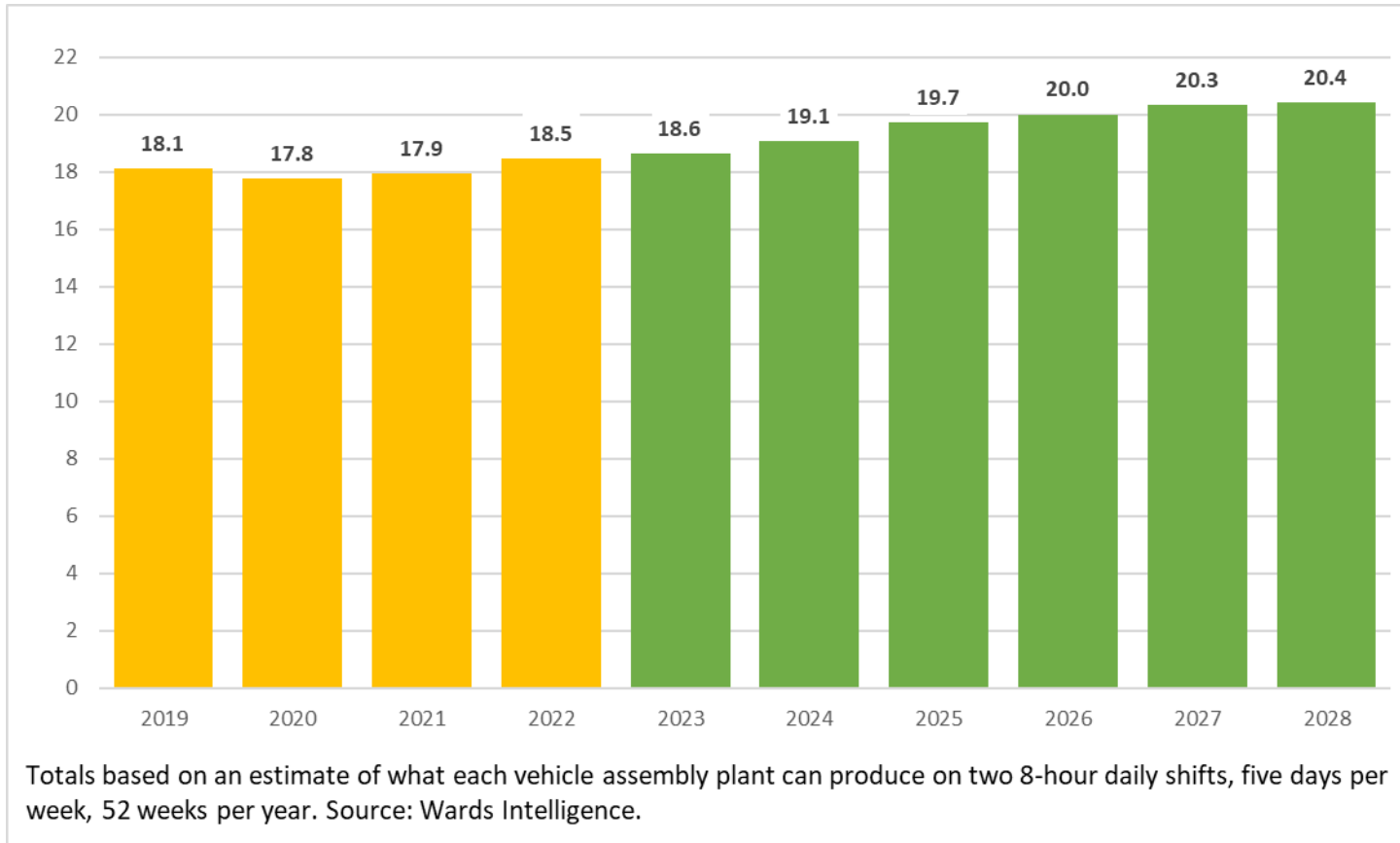
# North America Light-Vehicle Production Forecast (millions)



Year/Year % Change						
2022	2023	2024	2025	2026	2027	2028
10.4	7.1	3.4	4.7	2.6	0.6	0.4

- Supply-chain issues, including semiconductor shortages, lessen but continue in 2023 and 2024
- Production helped by increased local sourcing for the North America market
- Overall capacity also increasing
- Constrained sales volumes push back on the positives for the outlook

# North America Light-Vehicle Straight-Time Production Capacity (millions)

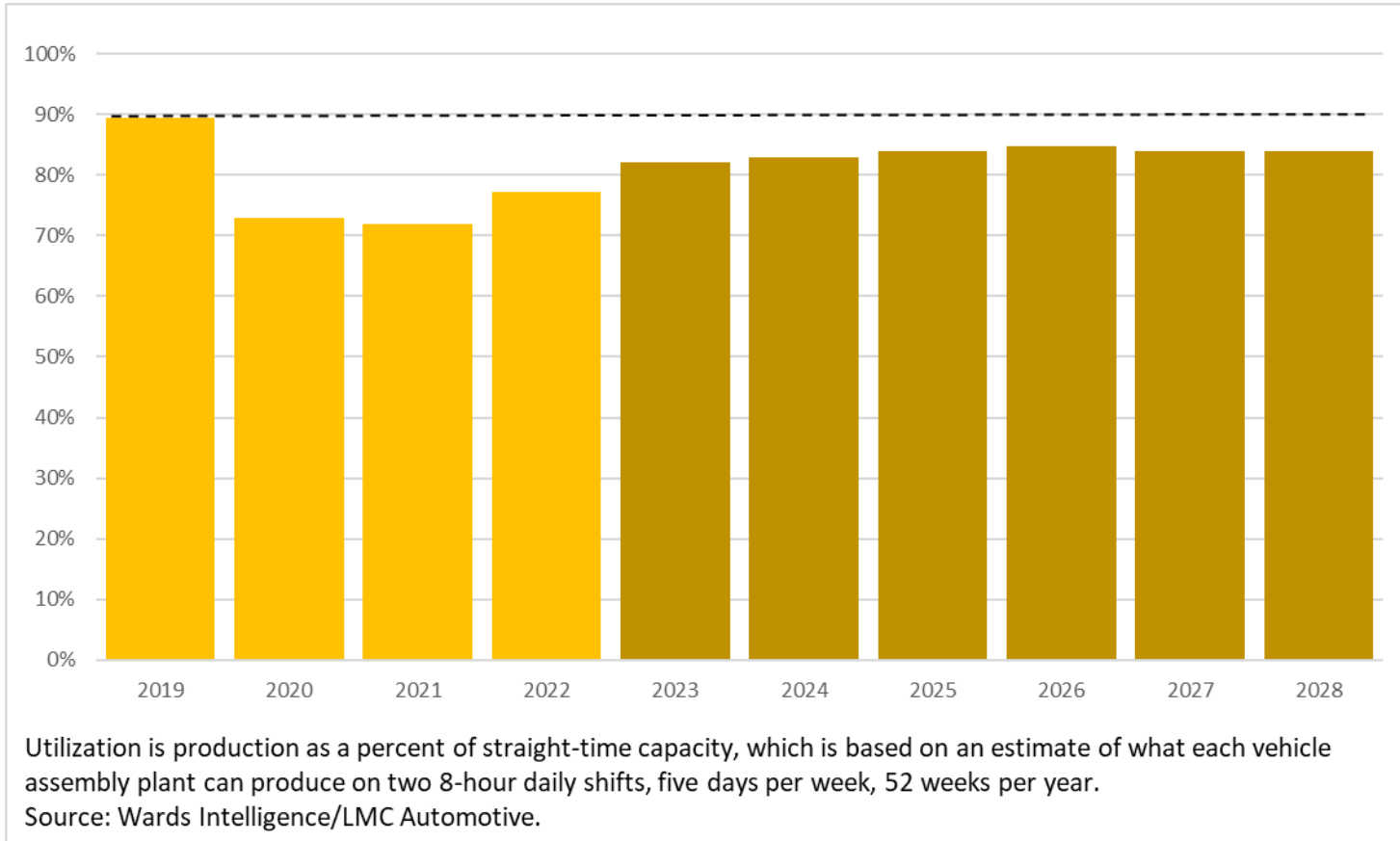


- Annual capacity forecast to rise nearly another 2 million units in 2028 from 2022
- About 300,000 of the increase attributed to Lucid and Rivian

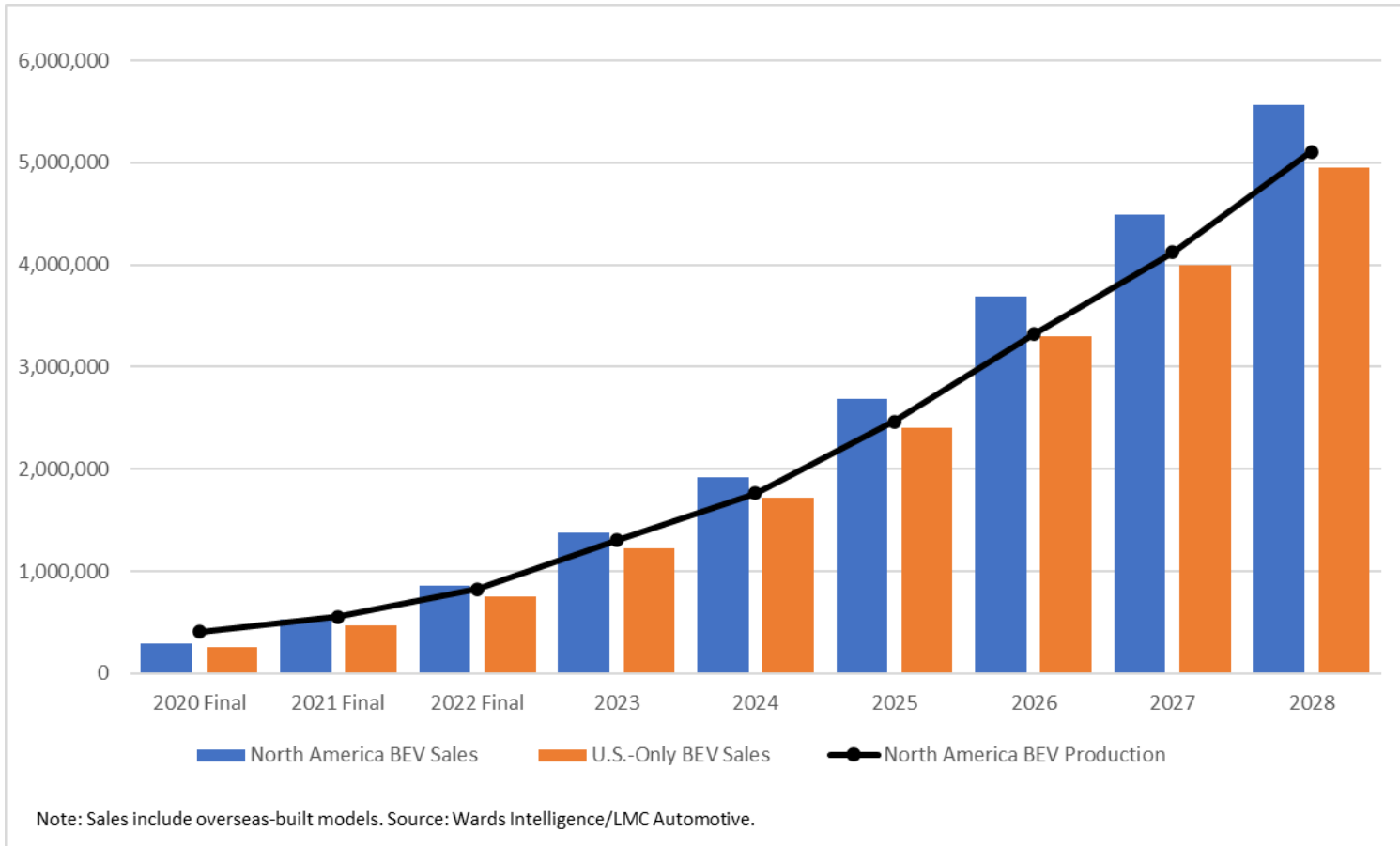


# North America Production Capacity Utilization

- Capacity utilization remains relatively weak in comparison to pre-pandemic years

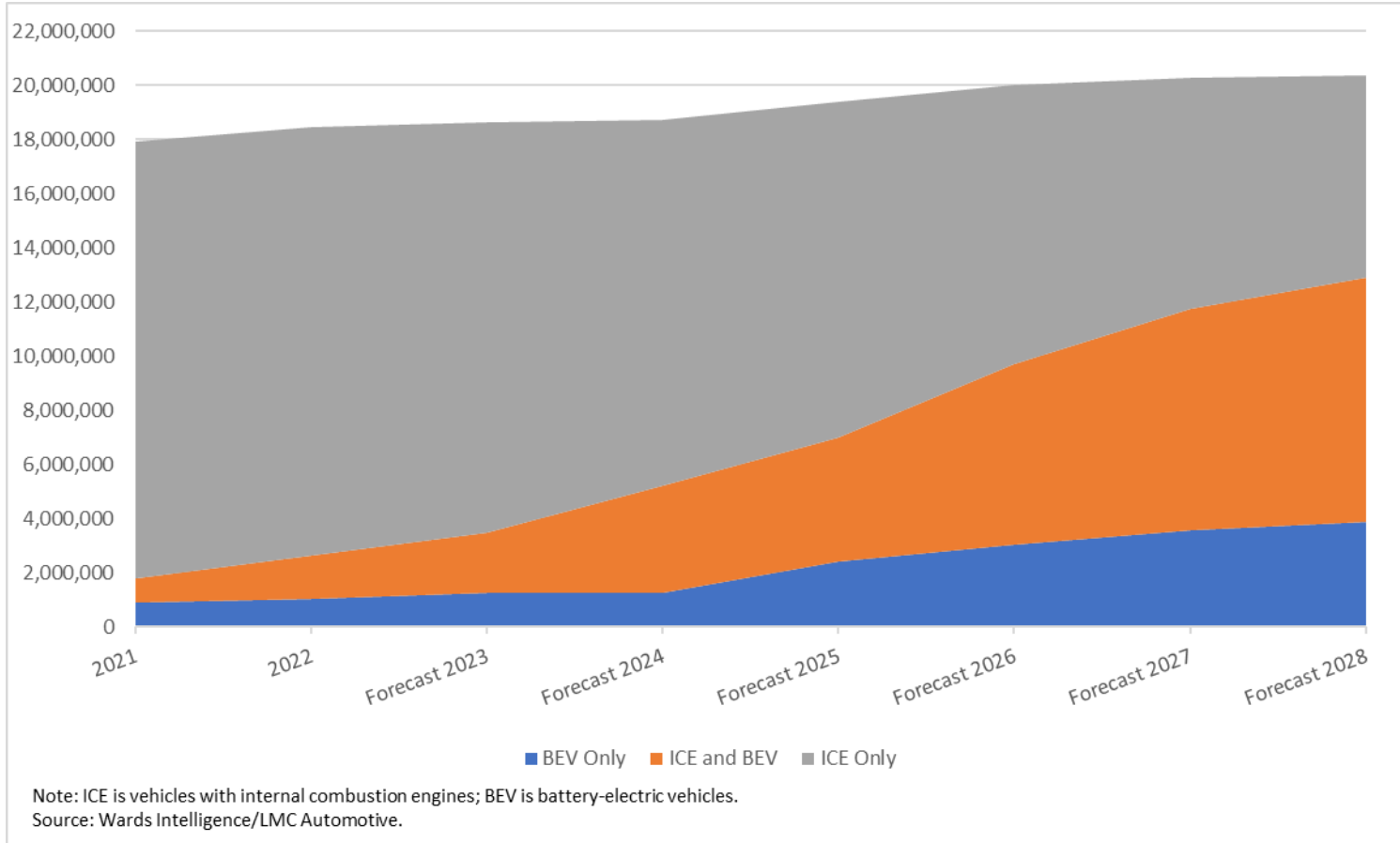


# North America BEV Light-Vehicle Forecast



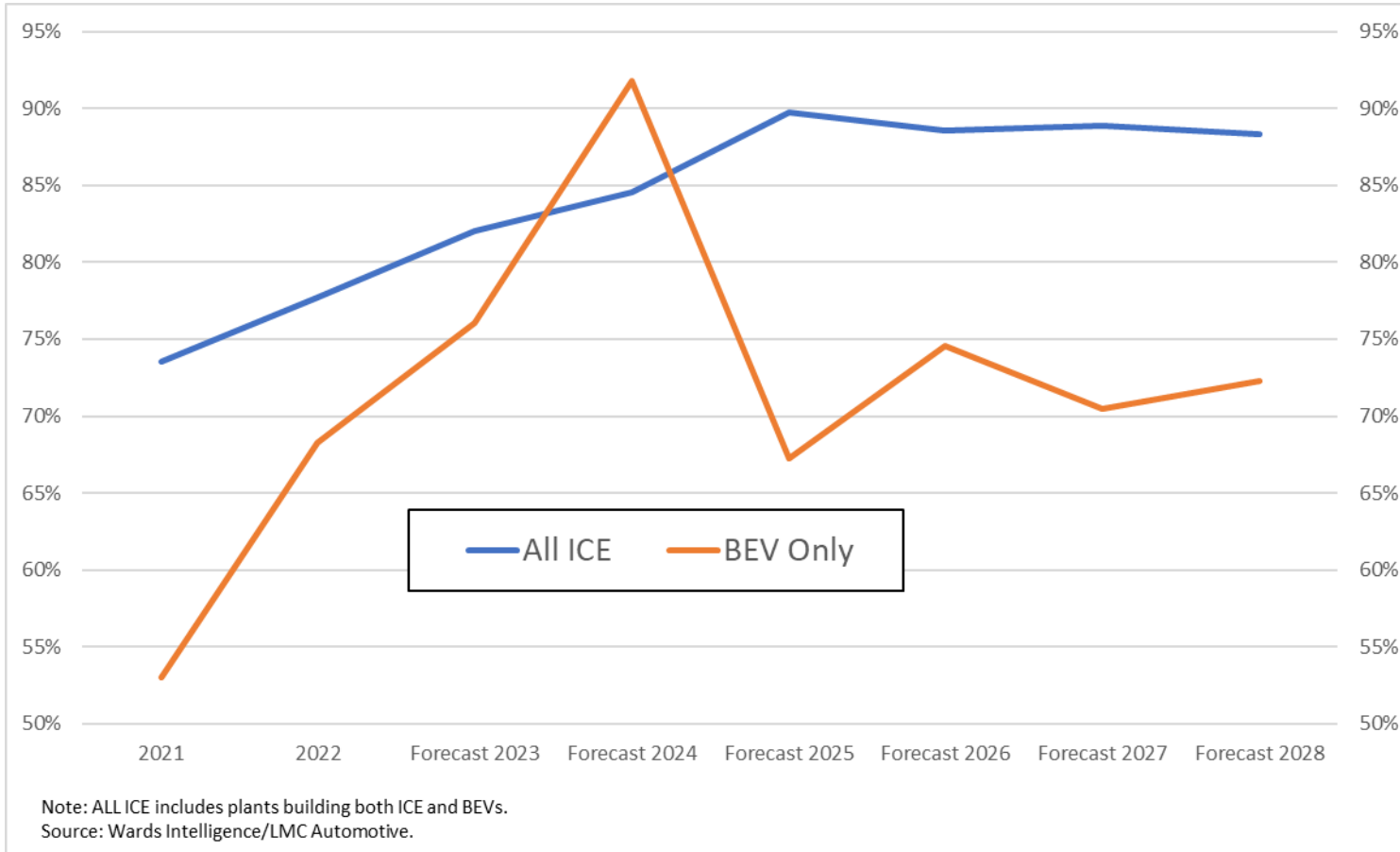
- North America sales rise to 27% of total light-vehicle volume by 2028
- Not included in the graph: PHEVs forecast to total 700,000 North America sales in 2028

# North America Light-Vehicle Straight-Time Capacity by Powertrain Type



- By 2028, plants building only BEVs will have annual capacity of 4.3 million units
- Potential capacity from plants building both ICEs and BEVs adds 10 million to potential BEV capacity
- The flexibility also means there will be additional potential capacity of 10 million units for ICE vehicles on top of the 6 million from plants only building those types

# North America Light-Vehicle Capacity Utilization: BEV-Only vs. ICE Plants



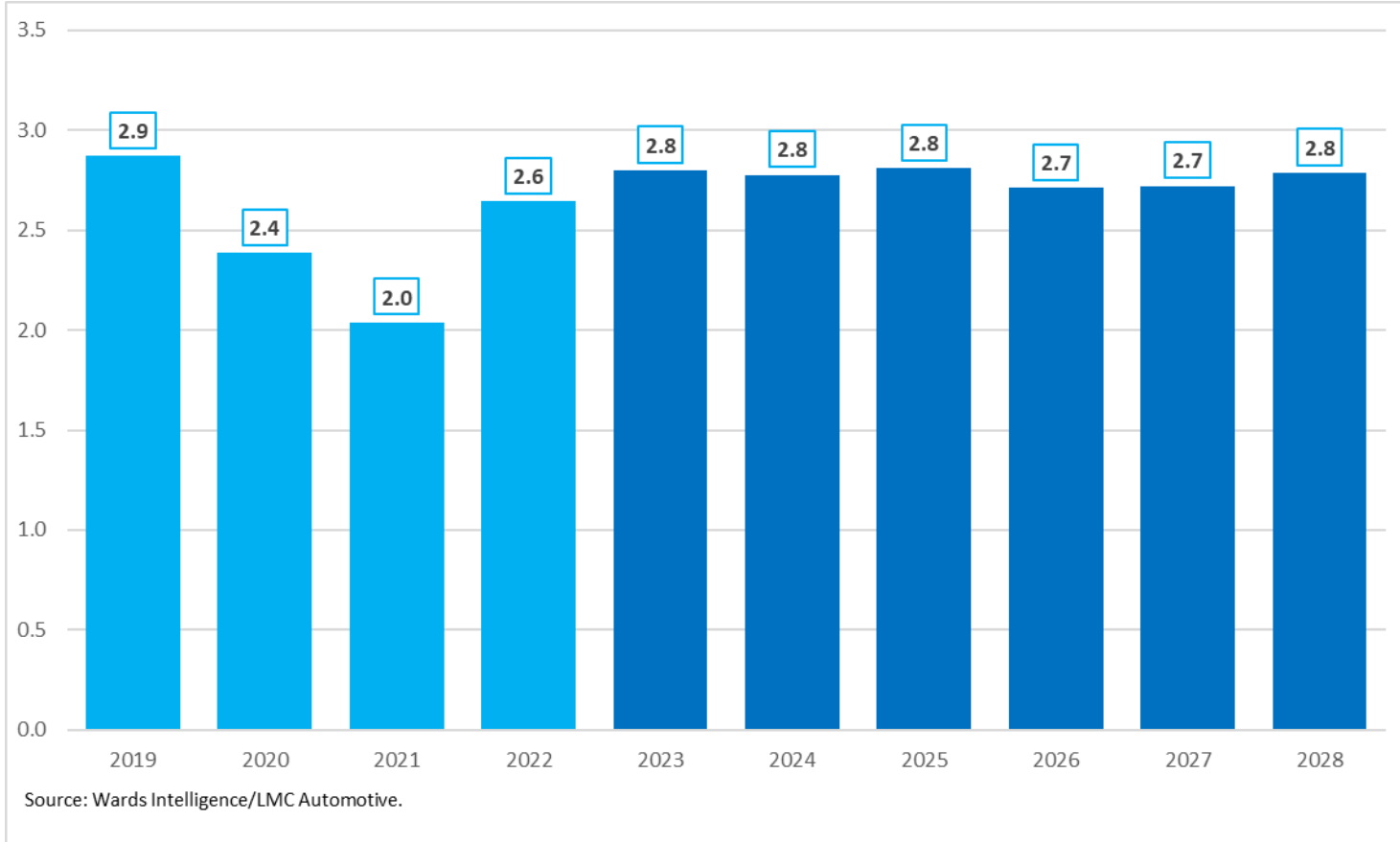
- Capacity utilization from BEV-only plants drops after capacity starts ramping up in 2025
- Combined utilization from ICE-only and BEV/ICE plants remains relatively steady

## Summary/Long-Term Trends to Track

- **Sales** volumes and **inventory** levels will be constrained as automakers continue emphasis on higher margin vehicles, including BEVs.
  - Based on current sales and production forecasts, inventory can't get back to pre-pandemic levels even in five years.
  - How much inventory automakers want to carry depends on a combination of how far down the new-vehicle price chain they want to build to and how far up they are willing to raise incentives.
  - Used-vehicles will continue in short supply for some years and at elevated prices – do they siphon sales from the higher-priced new-market or help new-vehicle sales because of higher trade-in values? (Forecast assumes the latter.)
  - The biggest case for an upside-bias scenario is that the force of pent-up demand is underestimated.
  - Huge pent-up demand also means opportunity, or strong temptation, to build more to increase sales volumes, which will lower the average cost to buy a new vehicle.
  - High levels of pent-up demand probably good for future BEV sales.
- **Pricing** power remains more in the hands of the seller than buyer.
- **Production** will be limited because of lean-inventory strategy.
- **Plant capacity** utilization remains sub-par, giving more inducement to accelerate consolidation of factories currently building ICE vehicles.
  - A ramification to transitioning capacity to BEVs is it could cannibalize overall available production to a detrimental extent, depending on the pace BEV demand grows.

# Manufacturers

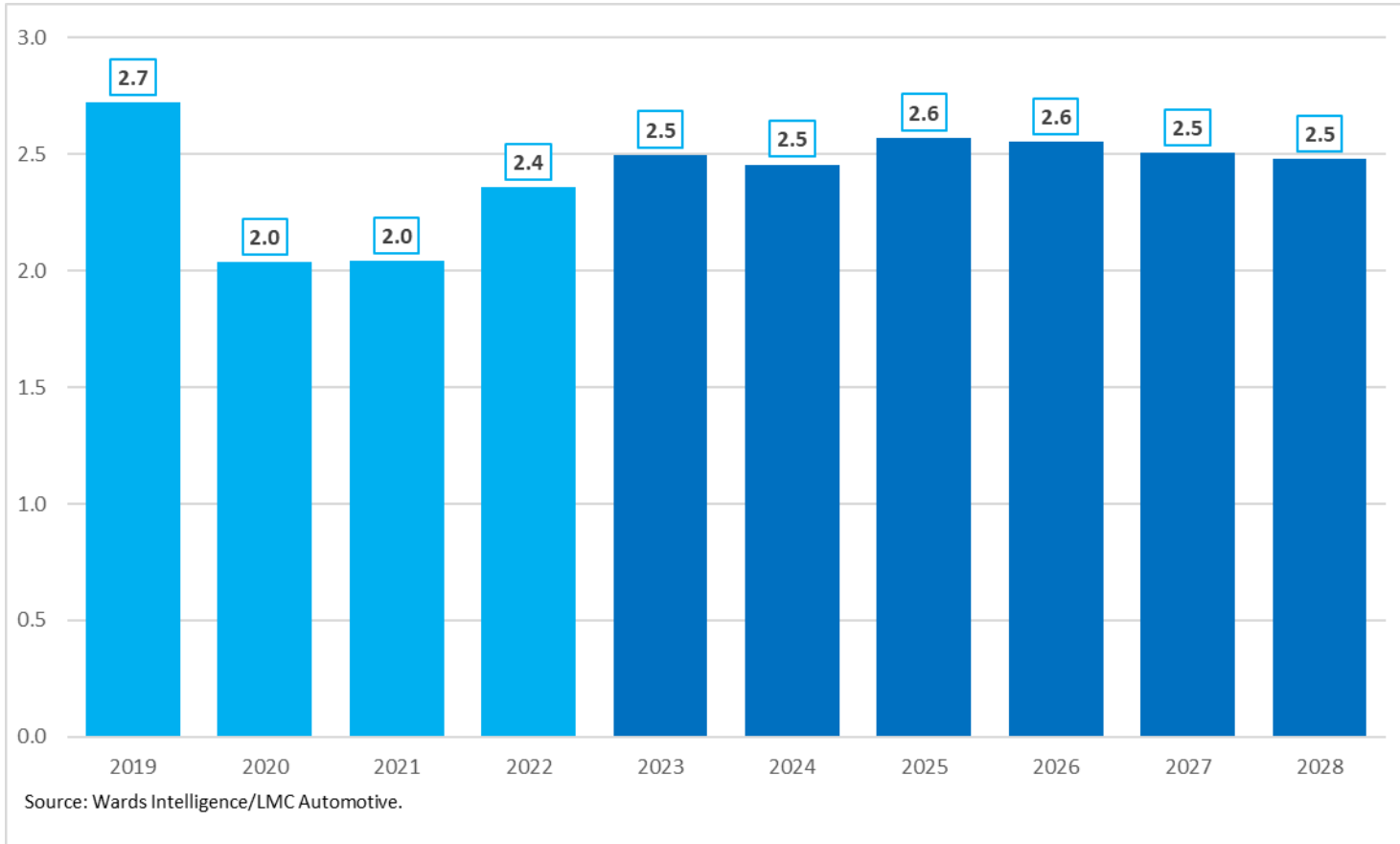
# General Motors Light-Vehicle Production (millions)



Year/Year % Change						
2022	2023	2024	2025	2026	2027	2028
29.8	5.8	-0.8	1.2	-3.5	0.3	2.4

- Production largely remains flat from 2023
- Output by 2028 forecast to be roughly one-third BEVs
- Transitioning plants to BEVs will dent capacity utilization
- Demand for BEVs it is rolling out in place of ICEs will limit overall sales

# Ford Light-Vehicle Production (millions)

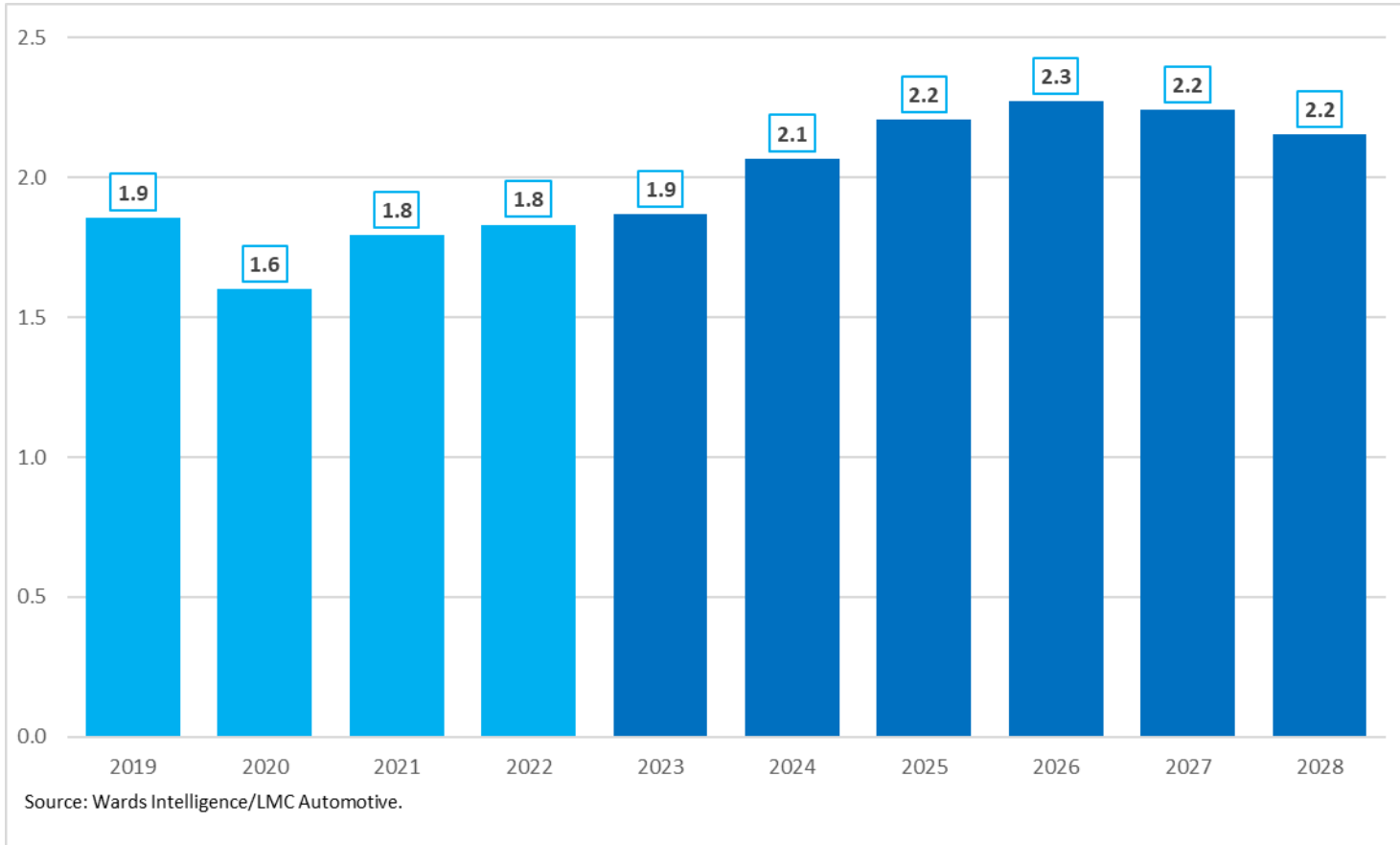


Year/Year % Change						
2022	2023	2024	2025	2026	2027	2028
15.4	6.0	-1.7	4.7	-0.8	-1.8	-1.0

- Market share forecast to remain relatively flat in North America, curtailing production gains
- Not moving as fast as GM, but transition to BEV products will limit long-term volumes
- A lot of new ICE products coming in the next couple years puts upside to market share and production



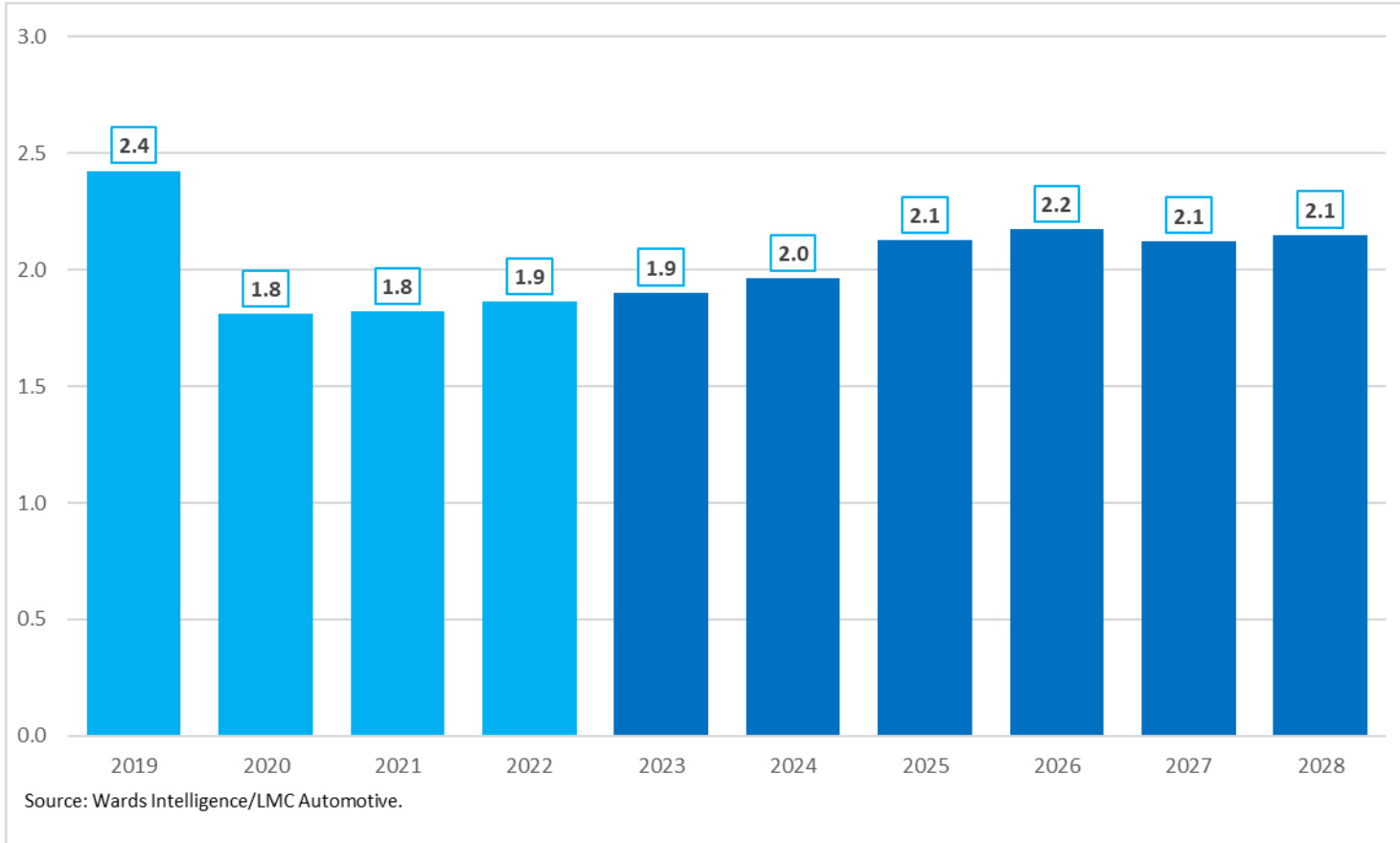
# Toyota Light-Vehicle Production (millions)



Year/Year % Change						
2022	2023	2024	2025	2026	2027	2028
2.1	2.0	10.8	6.7	3.0	-1.3	-4.0

- Increasing capacity and forecast for bump in market share over next three years
- BEV production starts ramping up at end of decade

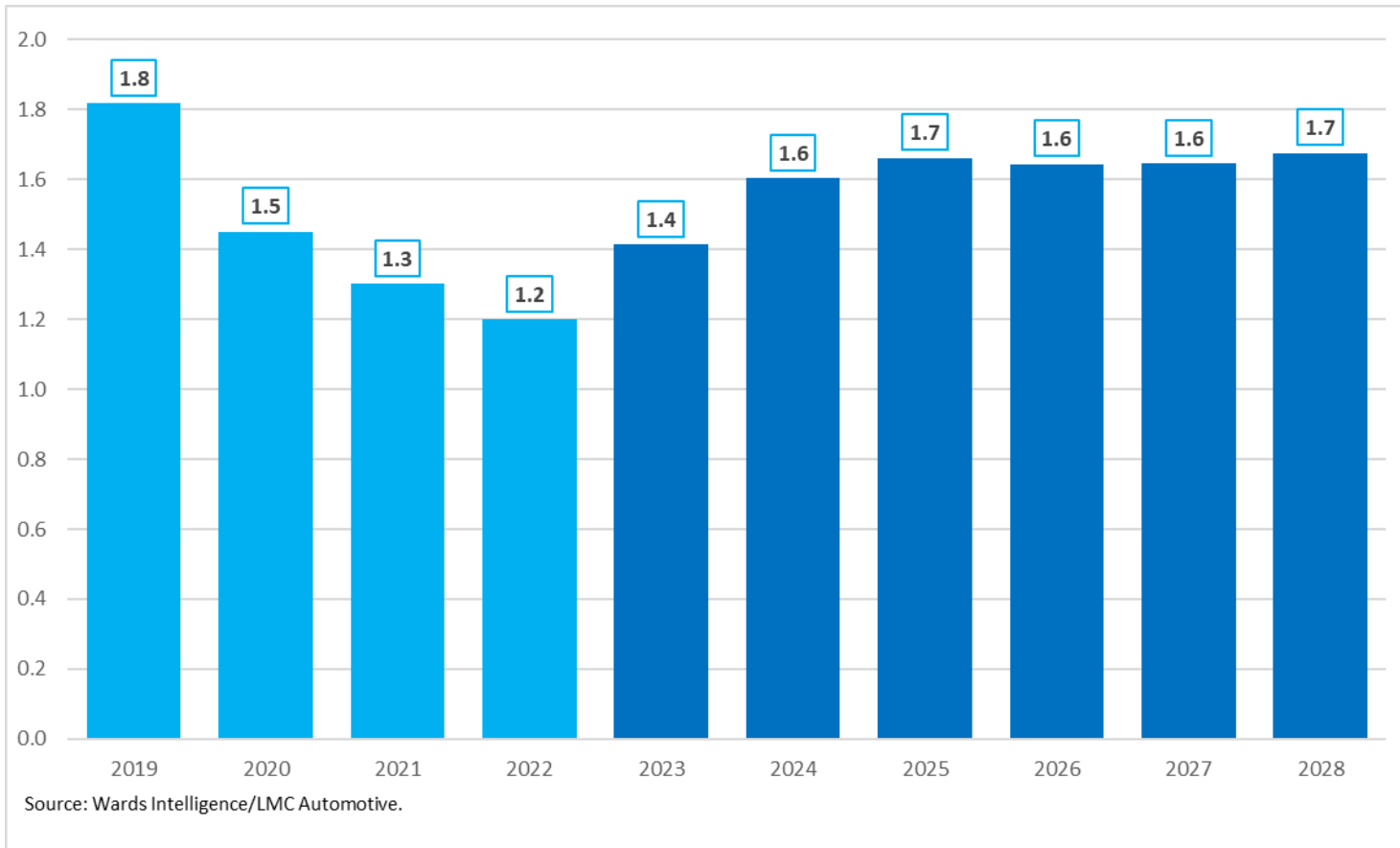
# Stellantis Light-Vehicle Production (millions)



Year/Year % Change						
2022	2023	2024	2025	2026	2027	2028
2.4	2.0	3.2	8.3	2.2	-2.2	1.2

- Market share starts to rise next year as fresh product enters the pipeline, helping production
- Production gains limited as more volume sourced from overseas

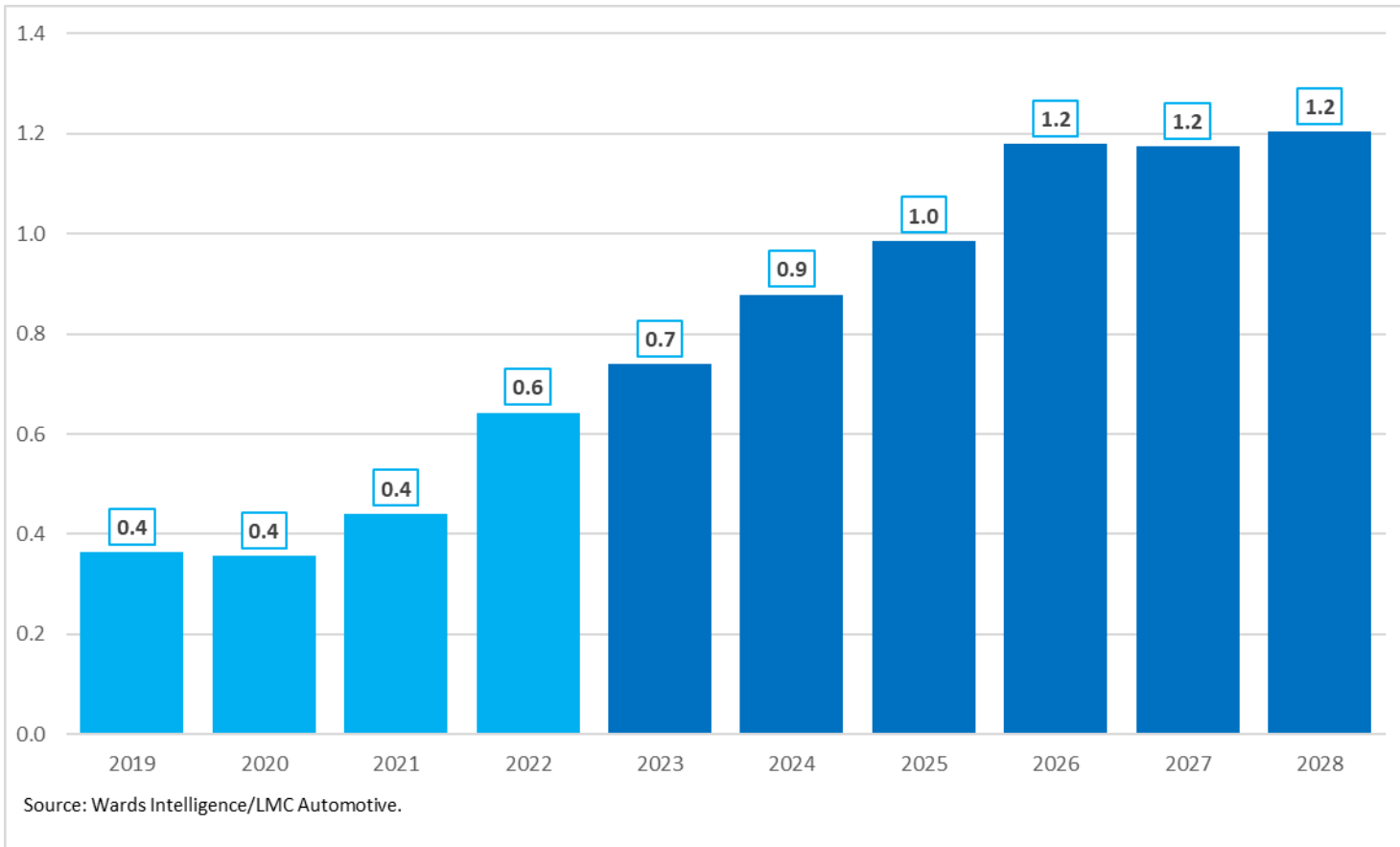
# Honda Light-Vehicle Production (millions)



Year/Year % Change						
2022	2023	2024	2025	2026	2027	2028
-7.8	17.9	13.4	3.7	-1.0	0.1	1.8

- Production bouncing back after chip shortage slashed output in 2022

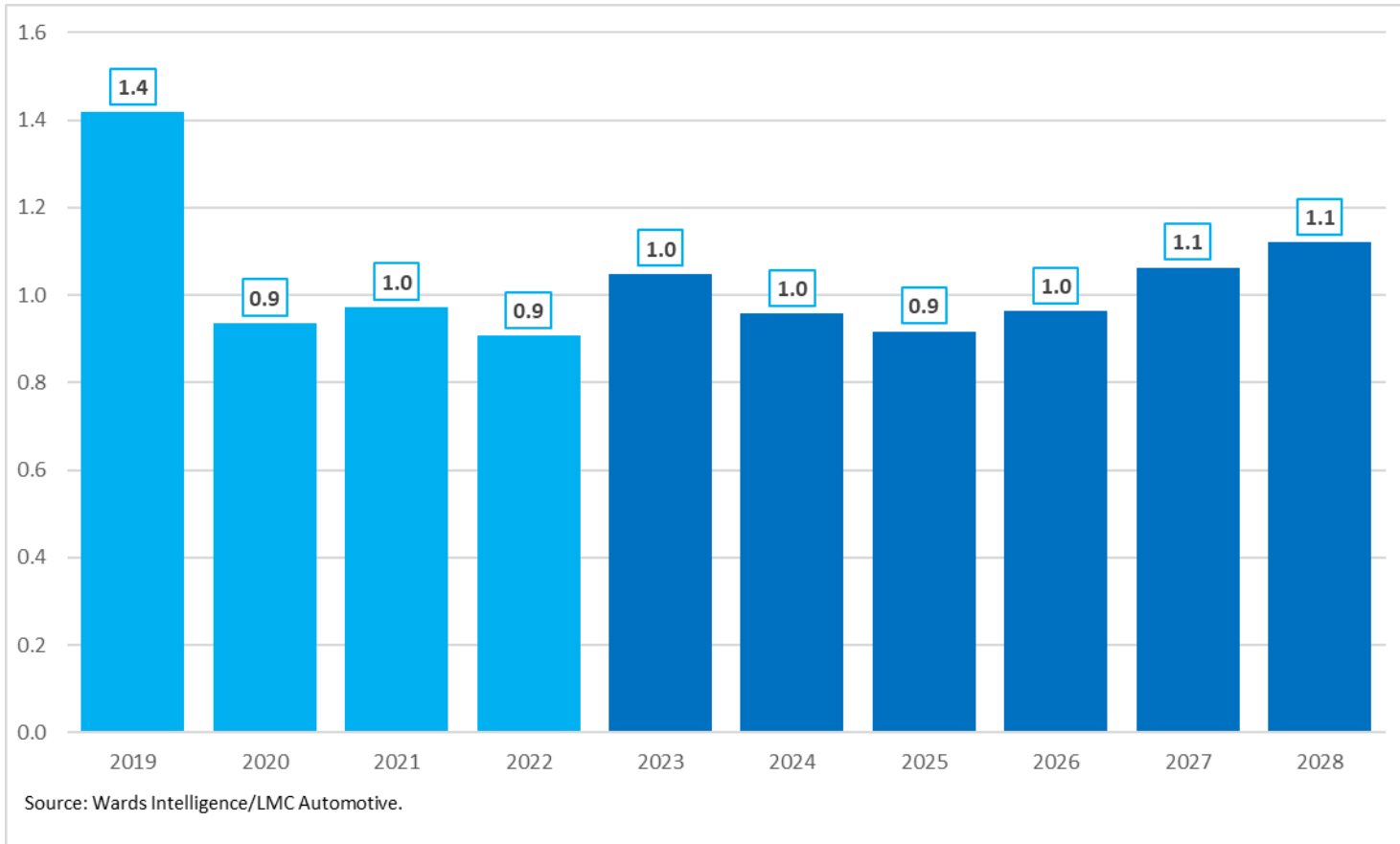
# Tesla Light-Vehicle Production (millions)



Year/Year % Change						
2022	2023	2024	2025	2026	2027	2028
45.7	15.0	18.8	12.3	19.5	-0.4	2.4

- Increased capacity, combined with stronger sales post-2024, take production to a new level

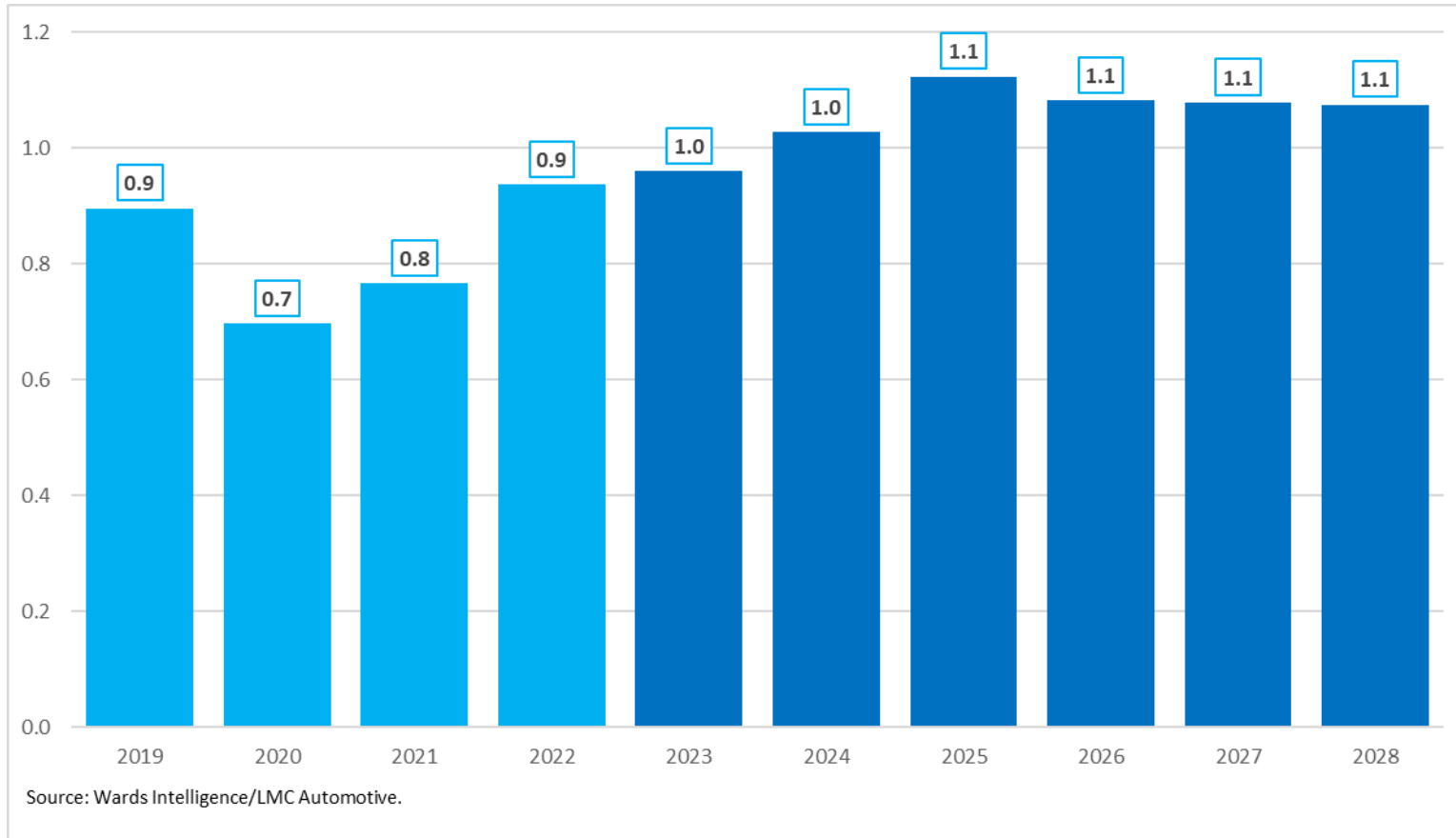
# Nissan Light-Vehicle Production (millions)



Year/Year % Change						
2022	2023	2024	2025	2026	2027	2028
-6.8	15.6	-8.7	-4.3	5.0	10.4	5.5

- Market share expected to decline slightly from 2023 over next five years, crimping production

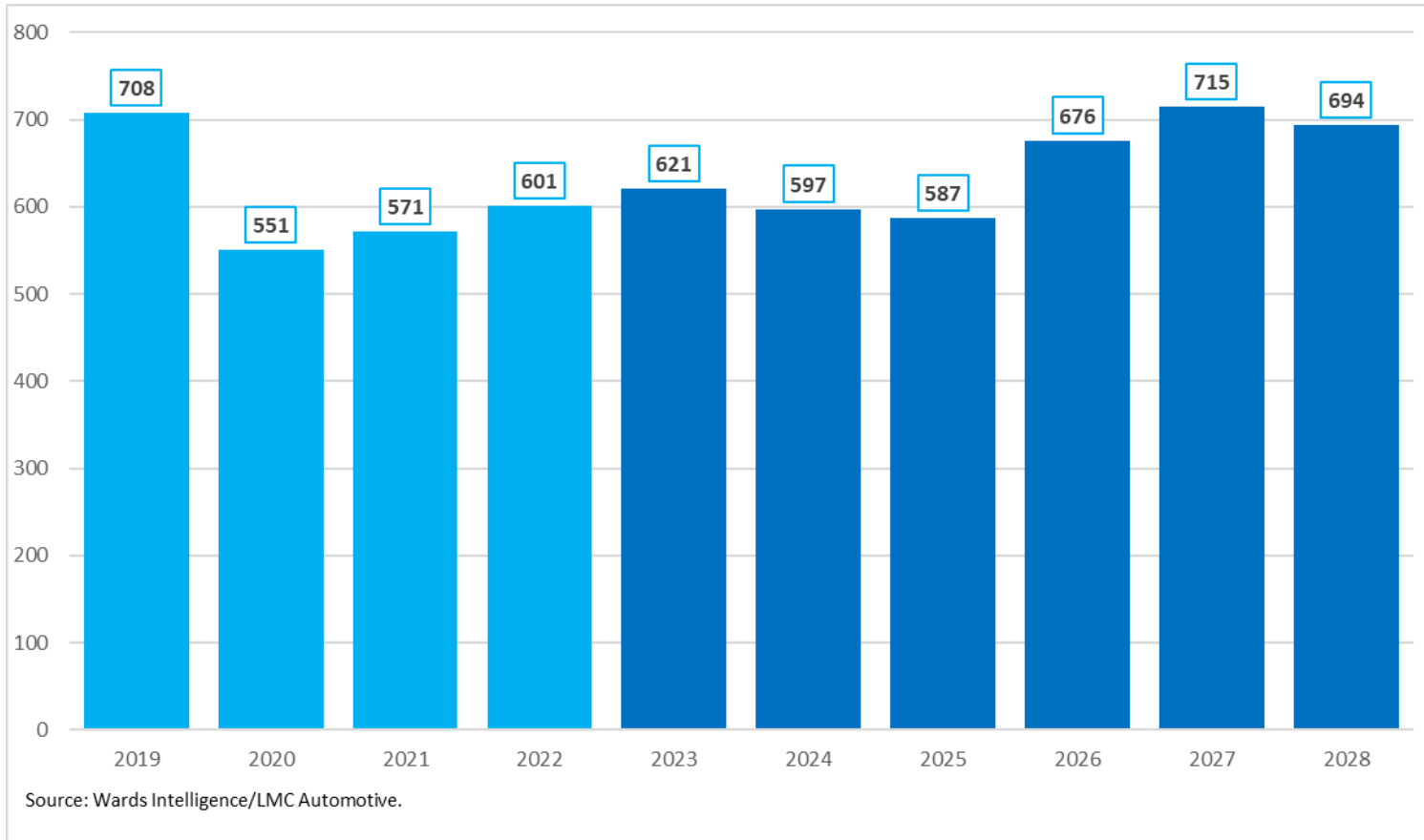
# Hyundai/Kia Light-Vehicle Production (millions)



Year/Year % Change						
2022	2023	2024	2025	2026	2027	2028
22.3	2.5	7.1	9.3	-3.6	-0.3	-0.4

- Despite growing sales and increased capacity with a new BEV plant starting in late-2024, production flattens in long-term as it continues to source half its vehicles from overseas
- Close to one-third of production will be BEVs by 2028

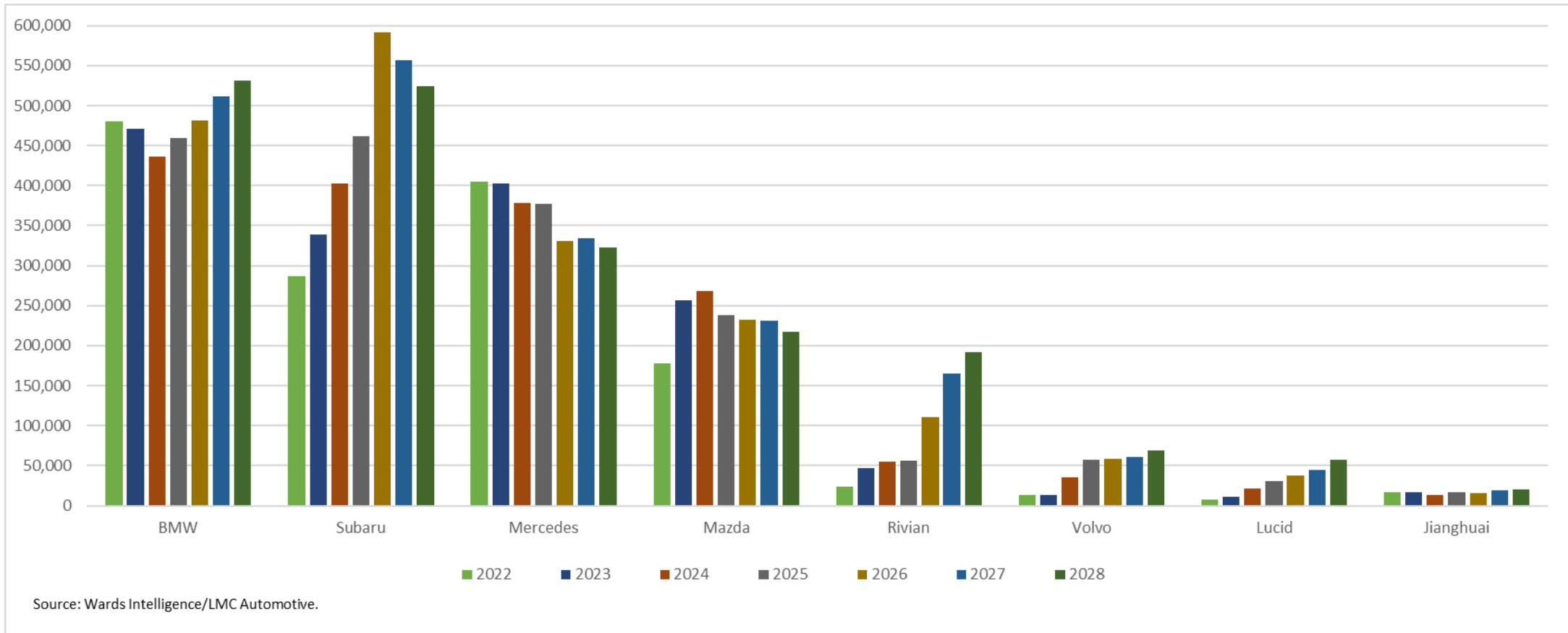
# Volkswagen Group Light-Vehicle Production (thousands)



Year/Year % Change						
2022	2023	2024	2025	2026	2027	2028
5.2	3.3	-3.8	-1.7	15.1	5.7	-2.9

- Production grows after new plant added in South Carolina in 2026 and Tennessee plant ramps up BEV output

# Production by Manufacturer: Rest of the Industry





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# Thank you

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