

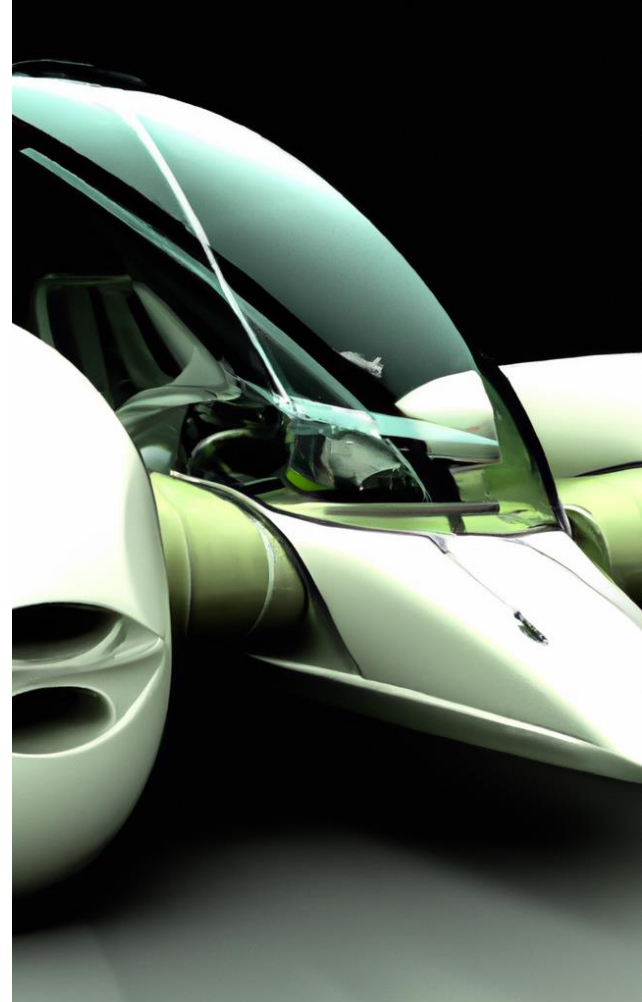
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Original Equipment Suppliers

Deloitte.

MEMA OE Suppliers Vehicle Supplier Barometer Q1 2024

Production, Planning & Electrification

March 20, 2024



MEMA OE Supplier Barometer: Executive Summary

Supplier Barometer Index (SBI)

SBI Score = 43;

up from Q4 level of 39



The outlook for the first quarter of 2024 reflects market pressures that extend from the end of 2023. Results posted the eighth straight quarter of building pessimism on net, yet levels eased across firms of all sizes except firms with revenue between \$500 mils - \$1 billion.

Commercial vehicle supplier sentiment is more pessimistic (41) in comparison to light vehicle supplier sentiment (45).



Concerns related to poor sales of vehicles in programs supplied overtook issues related to the UAW Strike as the number one threat to the industry over the next 12-months. Anecdotes point to softening electric and commercial vehicle markets as the primary areas of concern.

Concerns over a weakening U.S. economy, labor availability, higher interest rates, production shutdowns, the inability to fulfill customer volumes and residual issues related to the UAW strike eased sequentially.

Threats of external “black swan” events, the implementation of new government regulations, and changes in government trade policies grew from prior quarter.



New orders and production fell slightly over the past month and year with the moderate expansion in light vehicle pulled down by commercial vehicle. Increasing costs continue to hurt suppliers in both markets.



Although suppliers estimate that the likelihood of a recession is low in the next 12-months, most feel at least somewhat prepared if one were to occur.

MEMA OE Supplier Barometer: Executive Summary



Light Vehicle suppliers' breakeven estimates are up 100 thousand units from last year to 14.0 million units. The industry is expected to again exceed breakeven this year, after outperforming breakeven by 1.7 mils. in 2023.

Suppliers continue to expect moderate production volume margins in 2024 and note that their breakeven point is largely dependent on program performance.



The top internal production issues are related to labor and inventory carrying costs. External issues are related to sub-tier supplier financial distress and supply chain risks.

Despite continued labor and supply chain issues, all internal and external production issues showed improvement from 2023.



Suppliers are prioritizing lean manufacturing, supply chain management optimization, product portfolio optimization and automation investment as the top priorities of their cost management strategies.



Inventories increased again in 2023.

Inventories increased on net across the supply base, with the percentage of suppliers reporting an increase at 57%, down 5 pts. from 2021.



R&D spending is expected to be in-line with last year, at 3% of total sales on average.

From the R&D budget, approximately one-third goes to research while two-thirds is allocated to development as suppliers are planning to allocate this year's budget more towards researching future technologies.

Advanced materials and industry 4.0 are the top investment priorities. However, industry 4.0 and powertrain technologies declined in investment prioritization from last year

Despite economic and political uncertainty, suppliers feel very committed to R&D investment in the near-term.



Suppliers continue to benefit from the shift toward higher Battery Electric Vehicle adoption.

Innovation is being driven by new customers and technologies despite overwhelming skepticism that OEMs will achieve quoted BEV volumes and rising cost pressures.

Suppliers expect it will still take 5-10 years for BEV production to reach 25% of global vehicle output.

Regionally speaking, suppliers expect a 25% share of BEV production to occur first in China, followed by closely by Europe, with North America taking an estimated 8 years to reach that threshold.

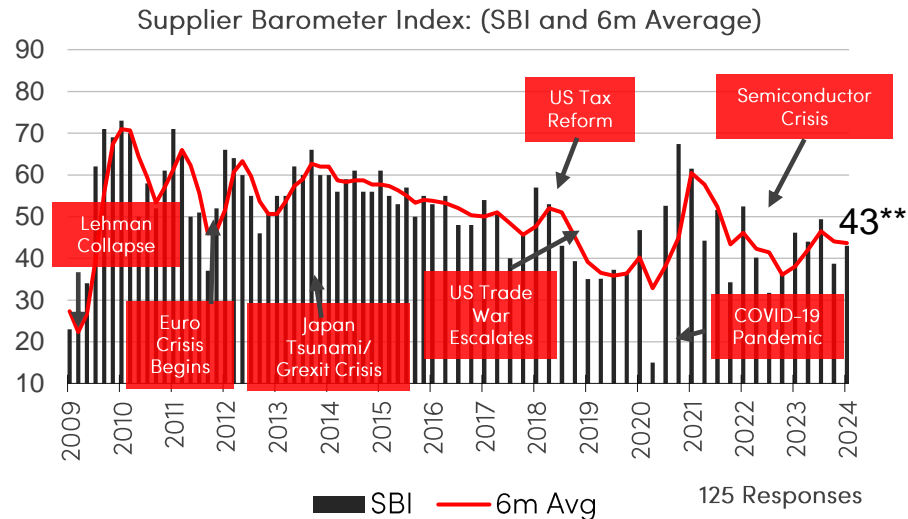
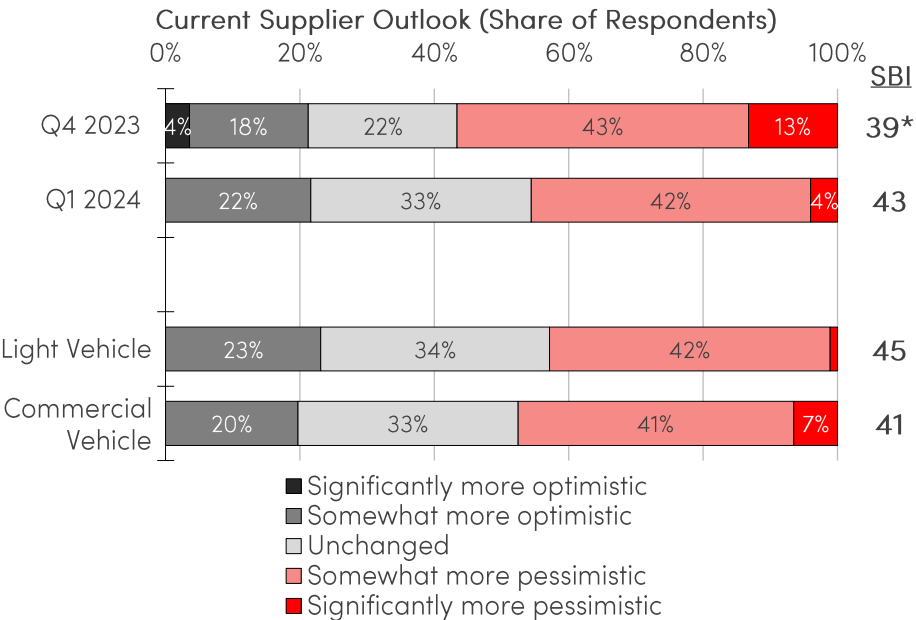


Supplier Outlook

Q1 2024 Vehicle Supplier Barometer

MEMA OE Supplier Barometer: Q1 2024 Results

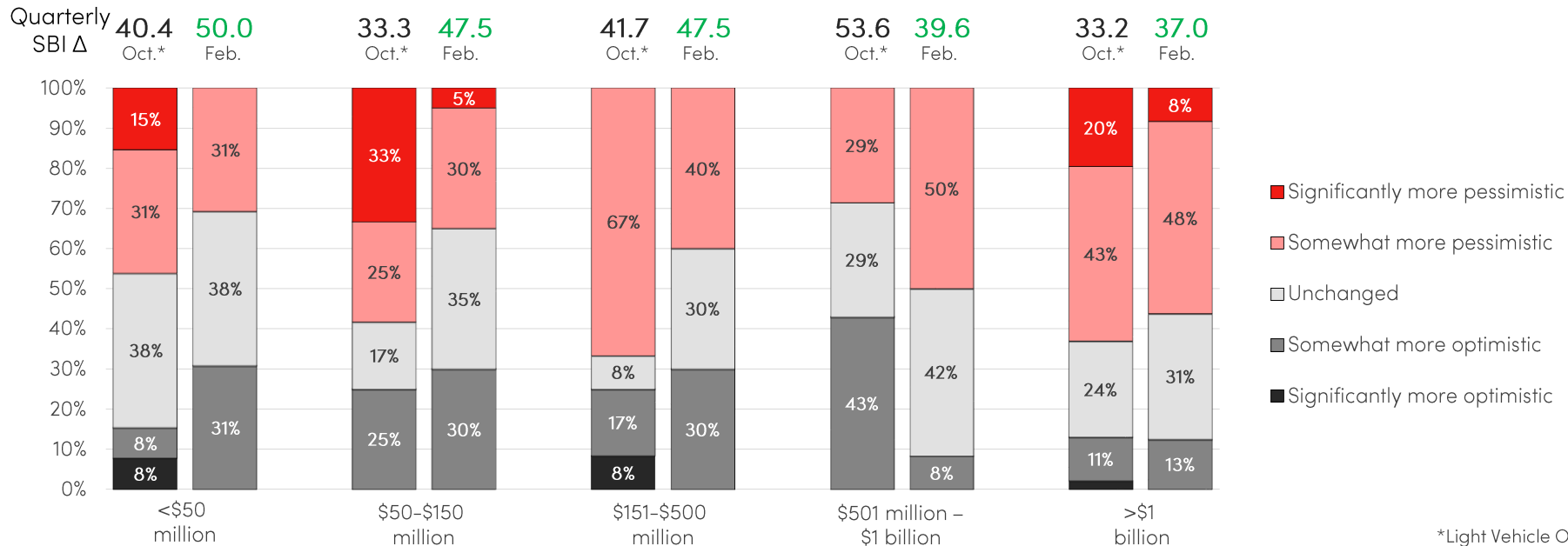
Describe the general twelve-month outlook for your business. Over the past three months, has your opinion become...?



The outlook for the first quarter improved 4 points from the fourth quarter of 2023 to a level of 43, but marks eight consecutive quarters of building pessimism.

MEMA OE Supplier Barometer: Q1 2024 Results by Revenue

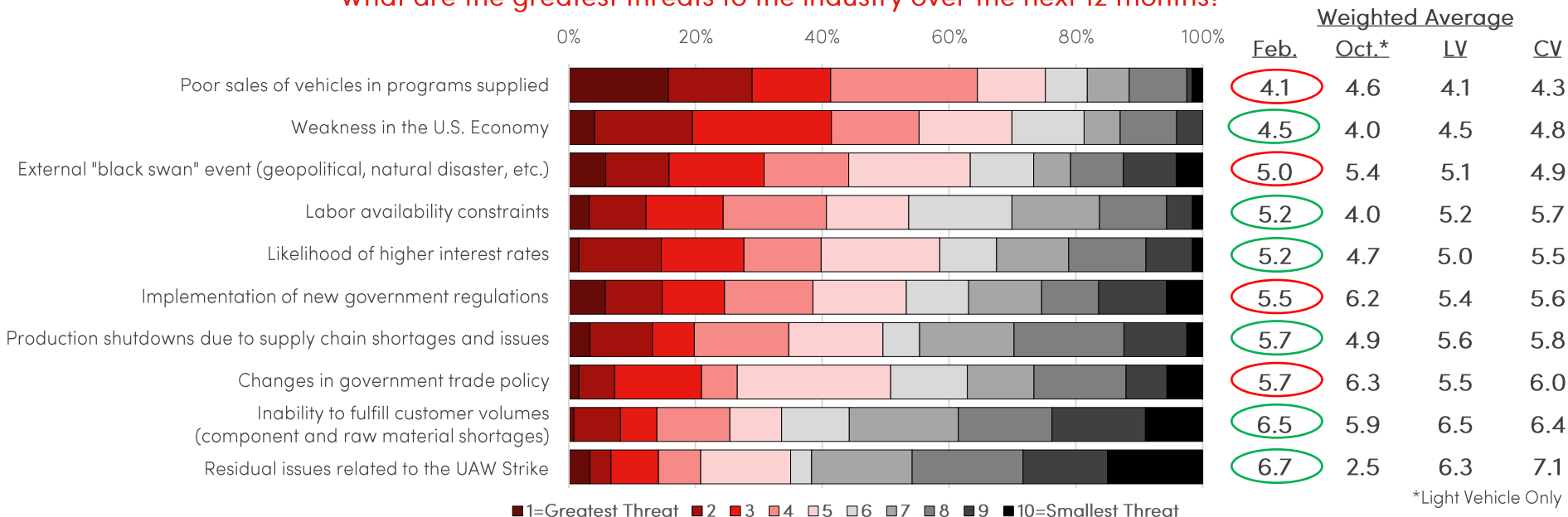
Describe the general twelve-month outlook for your business. Over the past three months, has your opinion become...?



Net pessimism eased across firms of all sizes except firms with revenue between \$500 mils - \$1 billion.

MEMA OE Supplier Barometer: Industry Threats Results

What are the greatest threats to the industry over the next 12 months?



Poor sales of vehicle in programs supplied is the greatest threat to the industry over the next 12-months. However, industry threats that have plagued suppliers for years extended their improvement into 2024.

MEMA OE Supplier Barometer: Industry Indicators

For the following indicators, please indicate what change, if any, your company has experienced over the following time frames.

	Total Industry		Light Vehicle		Commercial Vehicle	
	12-month	1-month	12-month	1-month	12-month	1-month
	Chg.	Chg.	Chg.	Chg.	Chg.	Chg.
New orders	48	49	55	52	42	47
Production	48	50	53	53	43	46
Employment	51	50	55	53	46	45
Supplier Deliveries	57	54	57	56	55	53
Inventories	54	60	53	57	52	64
Customers' Inventories	64	55	69	58	53	51
Costs	87	72	90	74	82	69
Backlog of Orders	44	44	49	46	37	41
New Export Orders	48	46	48	47	47	45
Imports	51	50	52	50	48	47

Diffusion Index = Σ (% Responding Decelerated x 0, % Responding Unchanged x 50, % Responding Accelerated x 100)

Lower Limit = 0

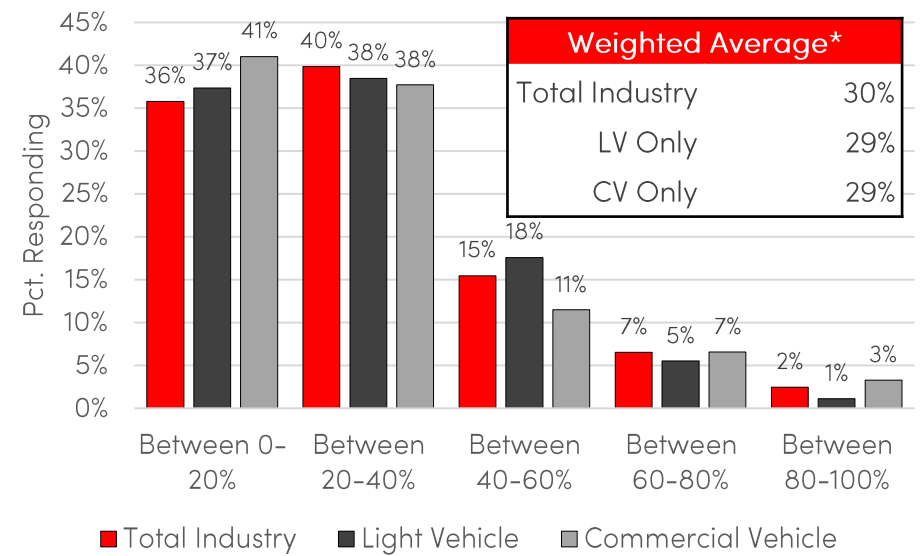
Neutral = 50

Upper Limit = 100

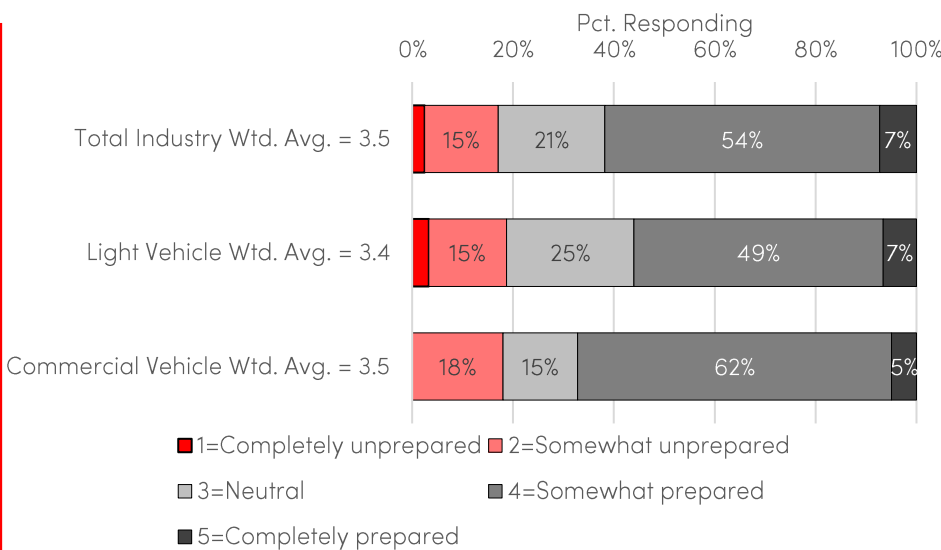
New orders and production fell slightly over the past month and year with the moderate expansion in light vehicle pulled down by commercial vehicle. Increasing costs continue to hurt suppliers in both markets.

MEMA OE Supplier Barometer: Recession Expectations & Preparedness

Please estimate the probability of a U.S. recession occurring in the next 12-months.



How prepared is your company if a U.S. recession were to occur in the next 12-months?



*Assumes the mid-point of each range

Although suppliers estimate that the likelihood of a recession is low in the next 12-months, most feel at least somewhat prepared if one were to occur.

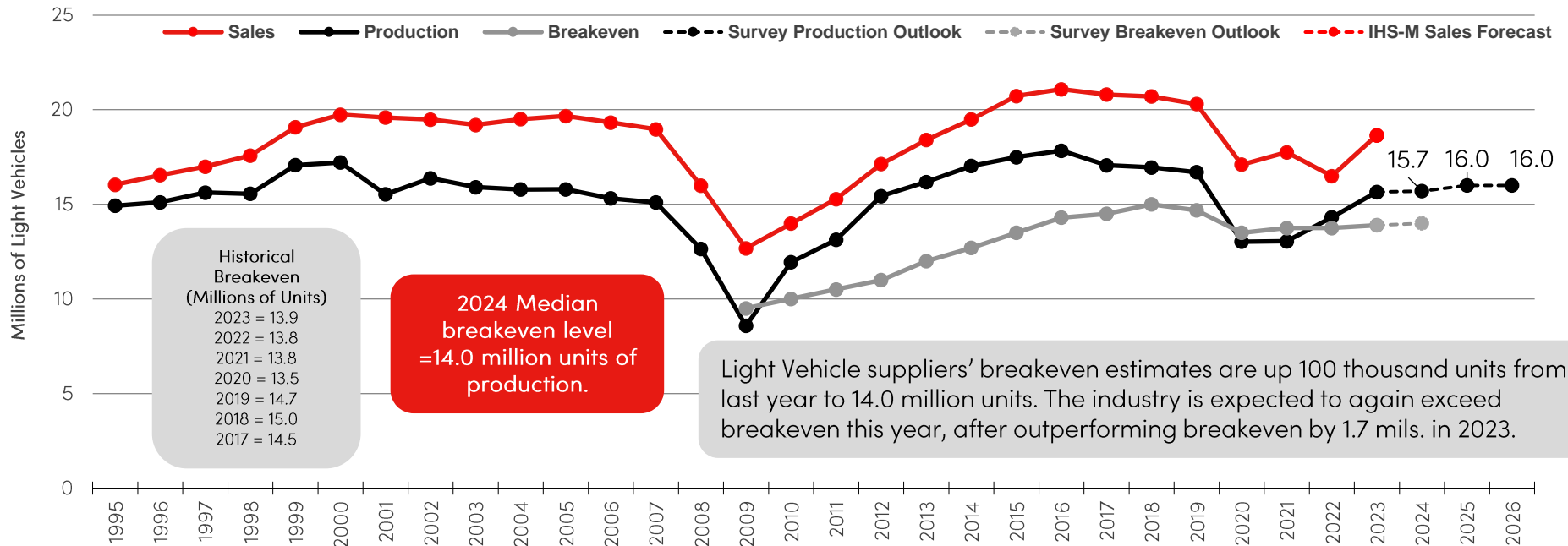


Production

Q1 2024 Vehicle Supplier Barometer

MEMA OE Supplier Barometer: Light Vehicle Industry Outlook and Breakeven

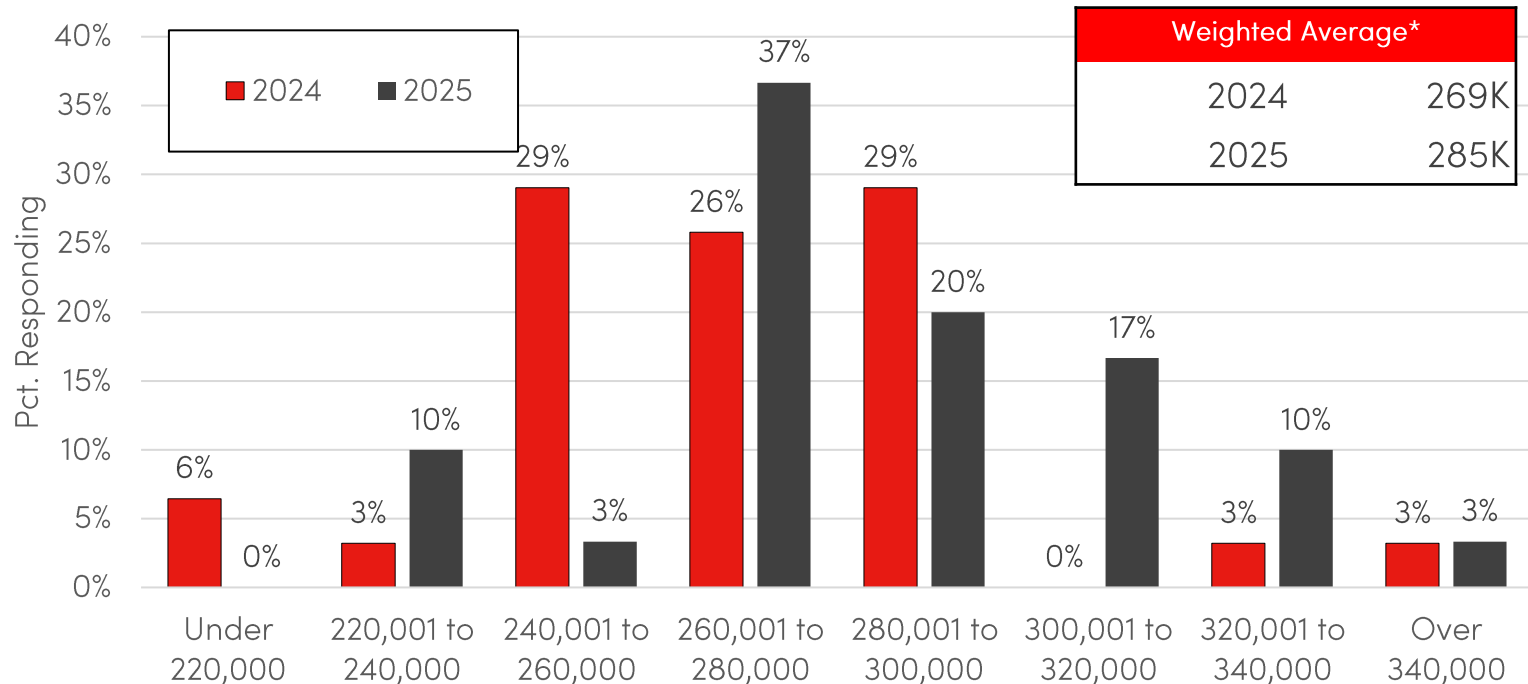
Considering North America light duty vehicle production, estimate the required 2024 industry volume needed to achieve breakeven in your North American operations?



Source: S&P Global Mobility (History, Sales and Production); S&P Global Mobility (Sales Forecast)

MEMA OE Supplier Barometer: North American Class 8 Truck Forecast

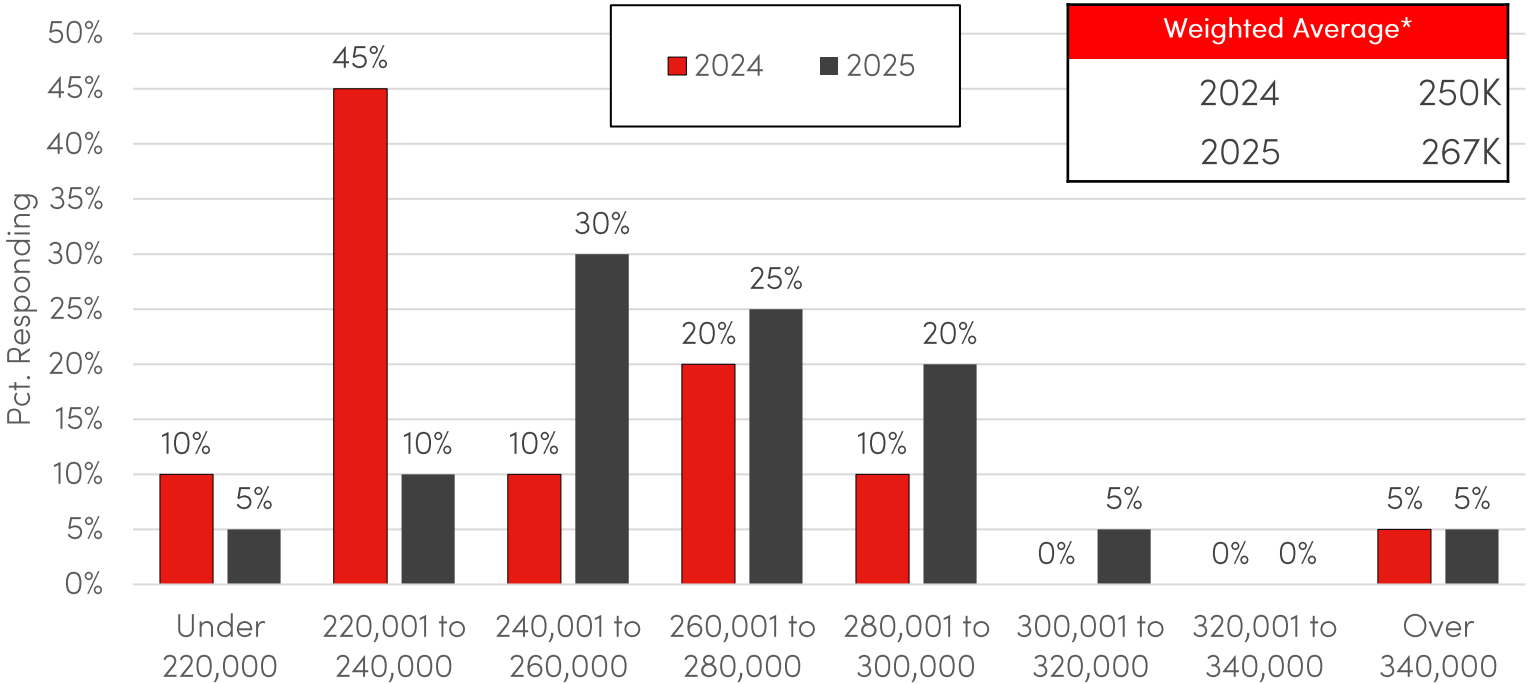
What are your 2024 and 2025 forecasts for the North American Class 8 truck production?



* Assumes the mid-point of each range, under 220k = 210k, over 340k = 350k

MEMA OE Supplier Barometer: North American Class 5-7 Truck Forecast

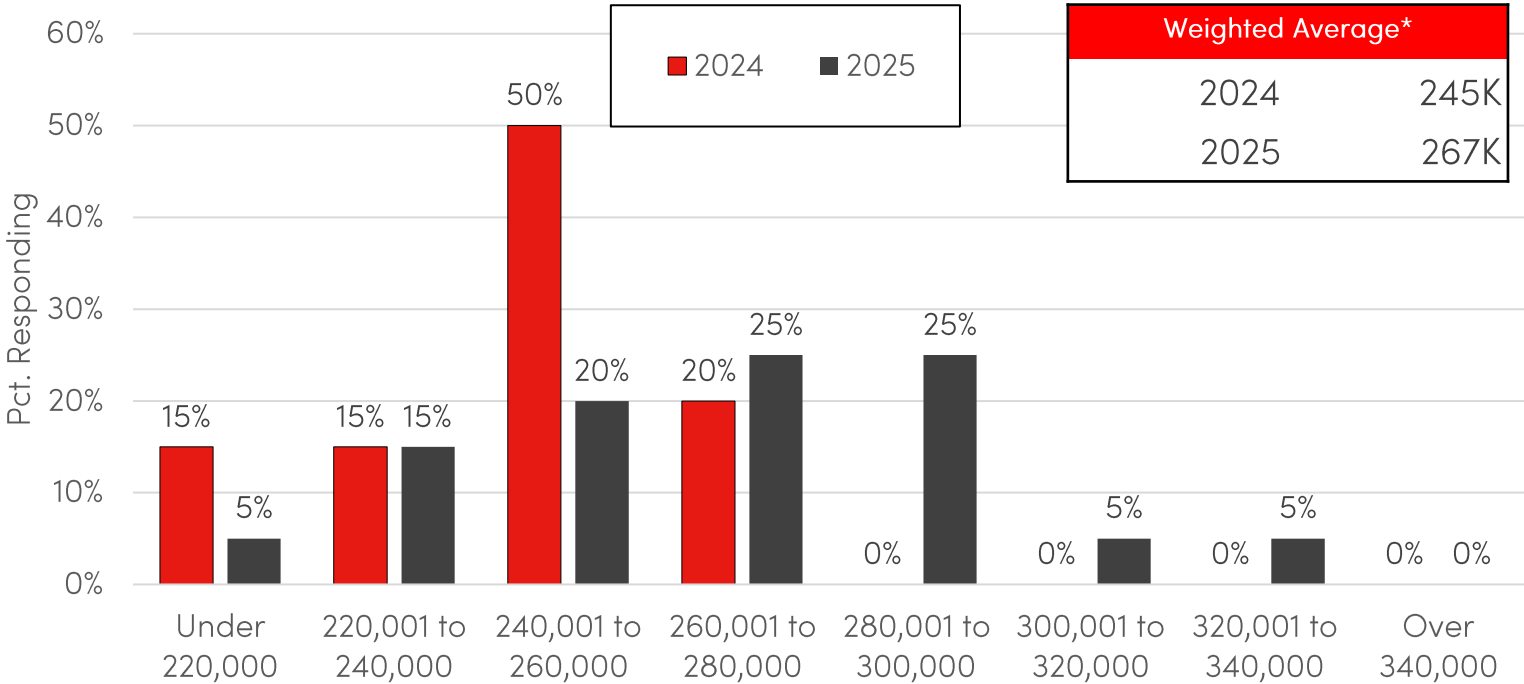
What are your 2024 and 2025 forecasts for the North American Class 5-7 truck production?



* Assumes the mid-point of each range, under 220k = 210k, over 340k = 350k

MEMA OE Supplier Barometer: North American Trailer Forecast

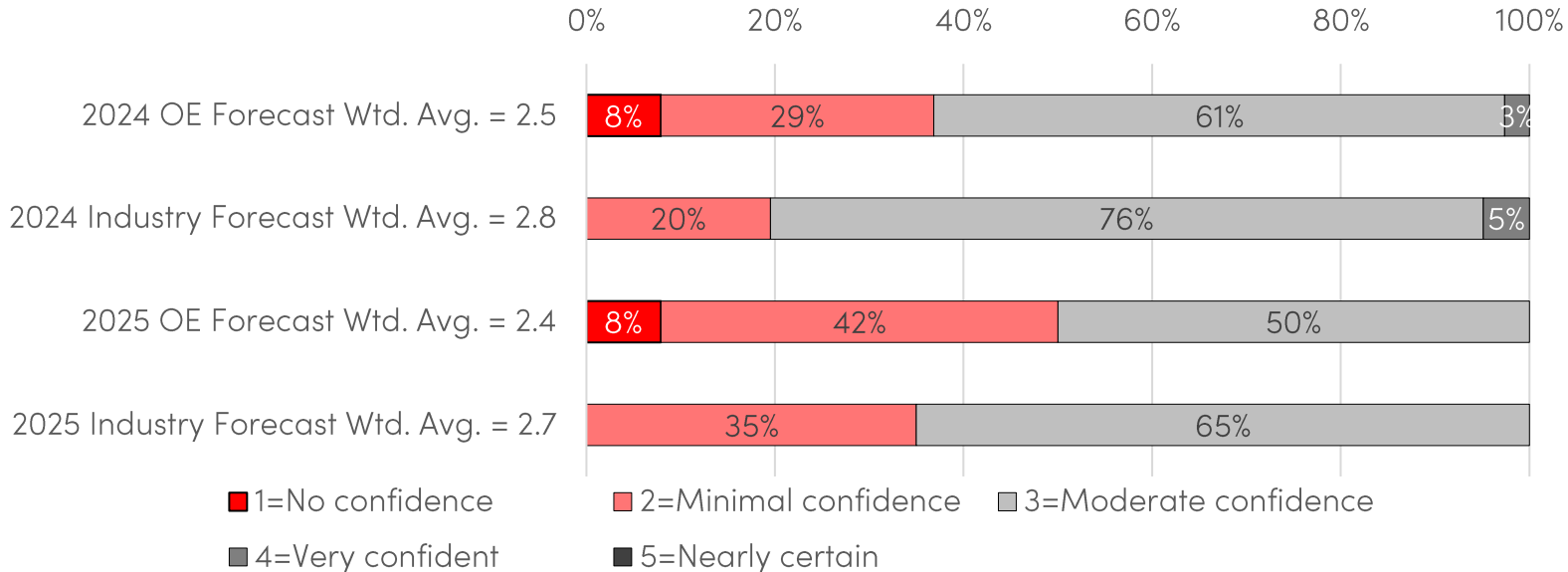
What are your 2024 and 2025 forecasts for the North American trailer production?



* Assumes the mid-point of each range, under 220k = 210k, over 340k = 350k

MEMA OE Supplier Barometer: Commercial Vehicle External Forecast Confidence

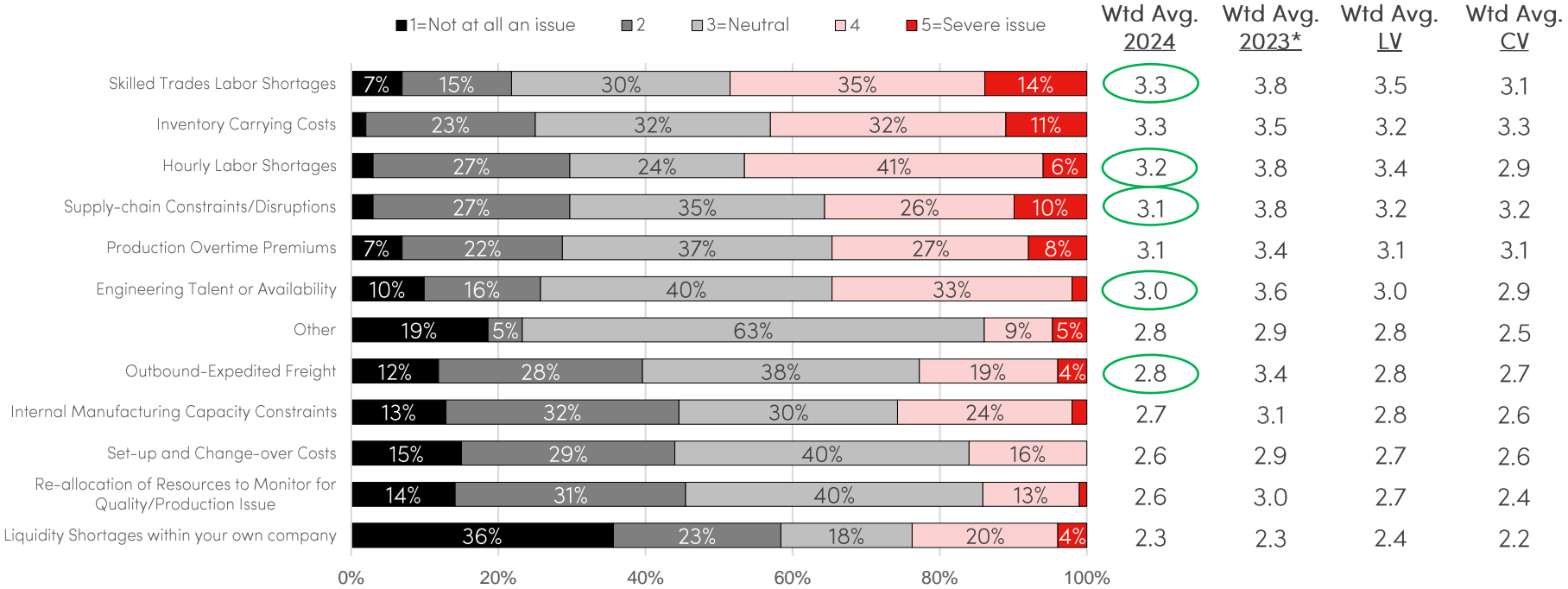
Please rate your current level of confidence in the commercial vehicle forecasts you are receiving by their source:



Commercial Vehicle suppliers are skeptical of both the OE and industry forecasts they have received, but are more confident in the industry forecasts by comparison.

MEMA OE Supplier Barometer: Production Planning: Internal Issues

Over the next 12 months, identify which of the following internal issues you will face as you meet required levels of production?

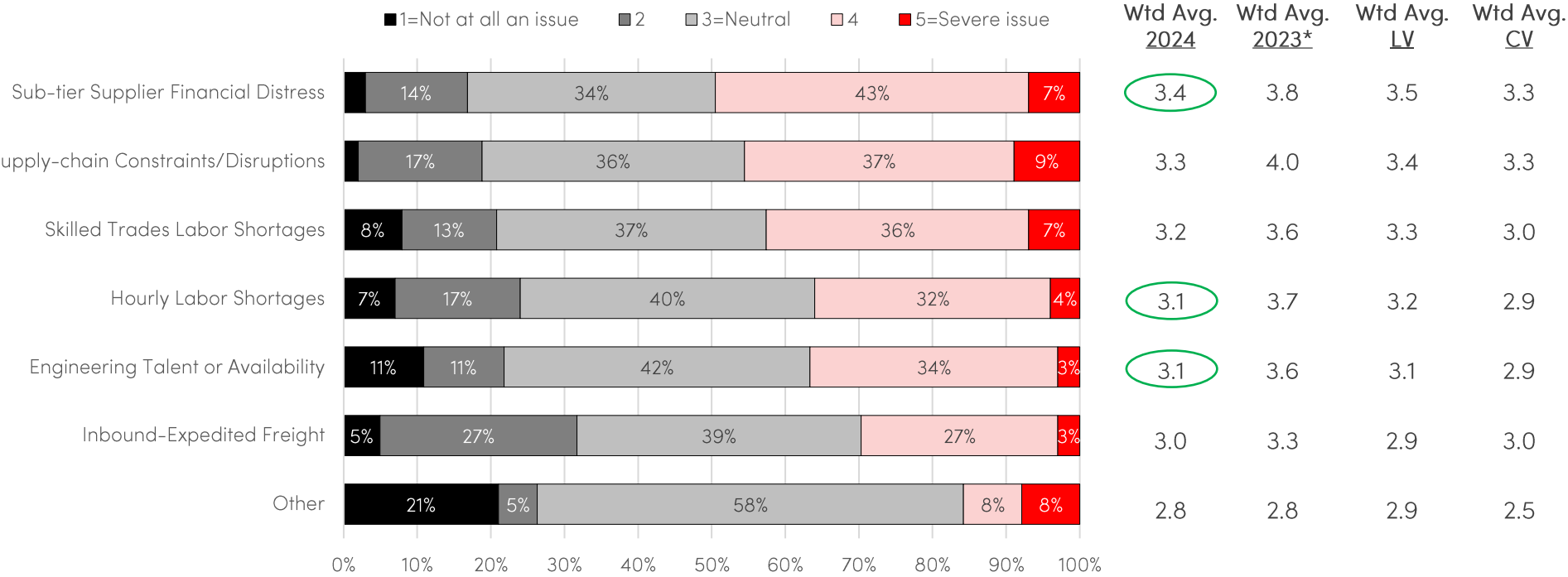


*Light Vehicle Only

MEMA OE Supplier Barometer: Production Planning: External Issues

Over the next 12 months, identify which of the following external issues you will face as you meet required levels of production?

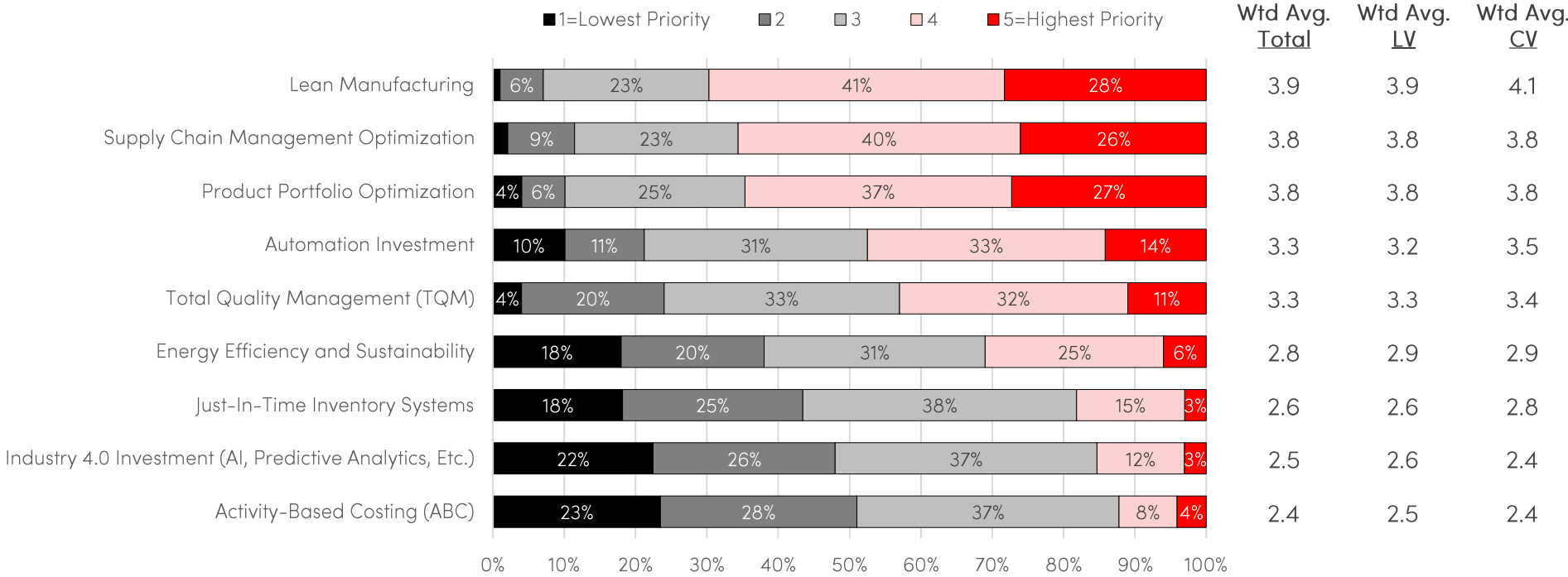
■ 1=Not at all an issue ■ 2 ■ 3=Neutral ■ 4 ■ 5=Severe issue



*Light Vehicle Only

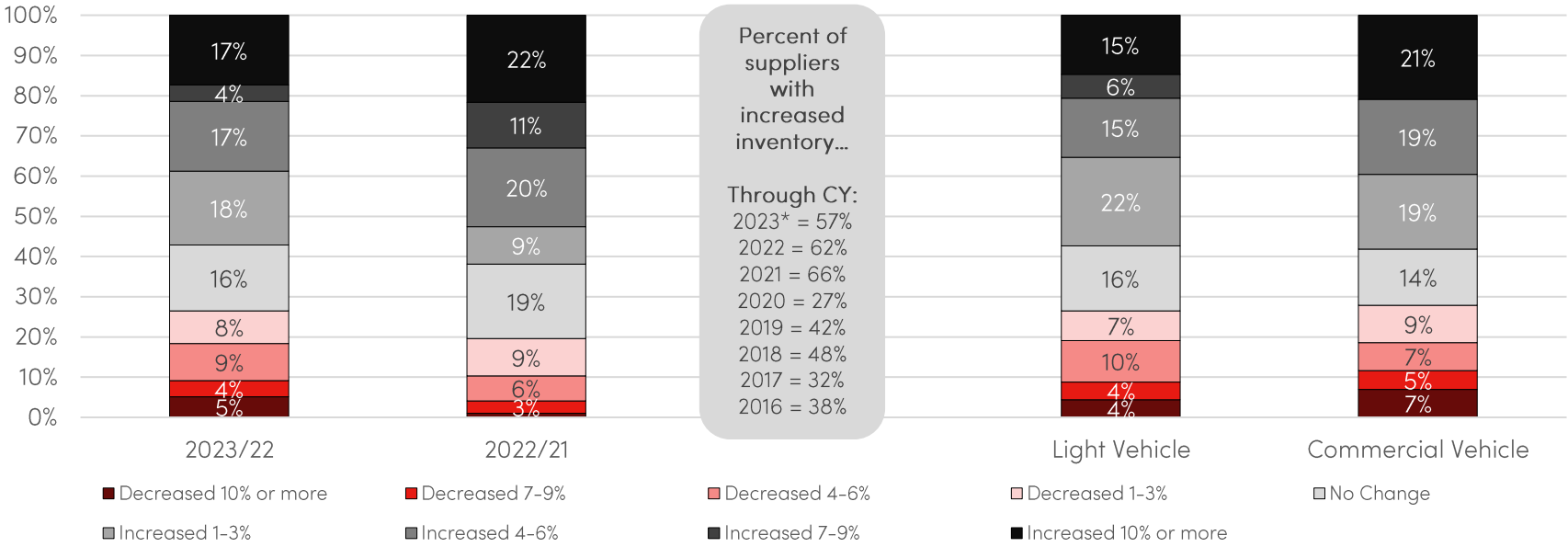
MEMA OE Supplier Barometer: Production Planning: Cost Management Strategy

Of the following, what are your company's highest priorities for its cost management strategy?



MEMA OE Supplier Barometer: Production Planning: Finished Goods Inventory

Compared to average 2022 levels, how did your average 2023 finished goods inventory levels change?



*Data prior to 2023 Light Vehicle only

Inventories increased on net across the supply base, with the percentage of suppliers reporting an increase at 57%, down 5 ppts. from 2022.



Planning

Q1 2024 Vehicle Supplier Barometer

MEMA OE Supplier Barometer: Research & Development Spending

For 2024, estimate your R&D spending as a percent of total sales.

	Lower Quartile	Median Value	Upper Quartile
R&D Share of Total Sales			
2024*	2%	3%	4%
LV	1%	3%	4%
CV	3%	3%	5%
2023	2%	3%	5%
2022	2%	4%	5%
2021	2%	4%	6%
2020	2%	4%	7%
2019	2%	4%	6%
2018	3%	4%	5%

For 2024 R&D budget, estimate the percent allocated to research and percent allocated to development.

	Lower Quartile	Median Value	Upper Quartile
Research budget (for future technologies)			
2024*	20%	30%	50%
LV	20%	30%	48%
CV	11%	30%	50%
2023	18%	33%	50%
2022	20%	25%	40%
2021	20%	25%	38%
2020	10%	25%	40%
2019	10%	20%	30%
2018	20%	32%	44%

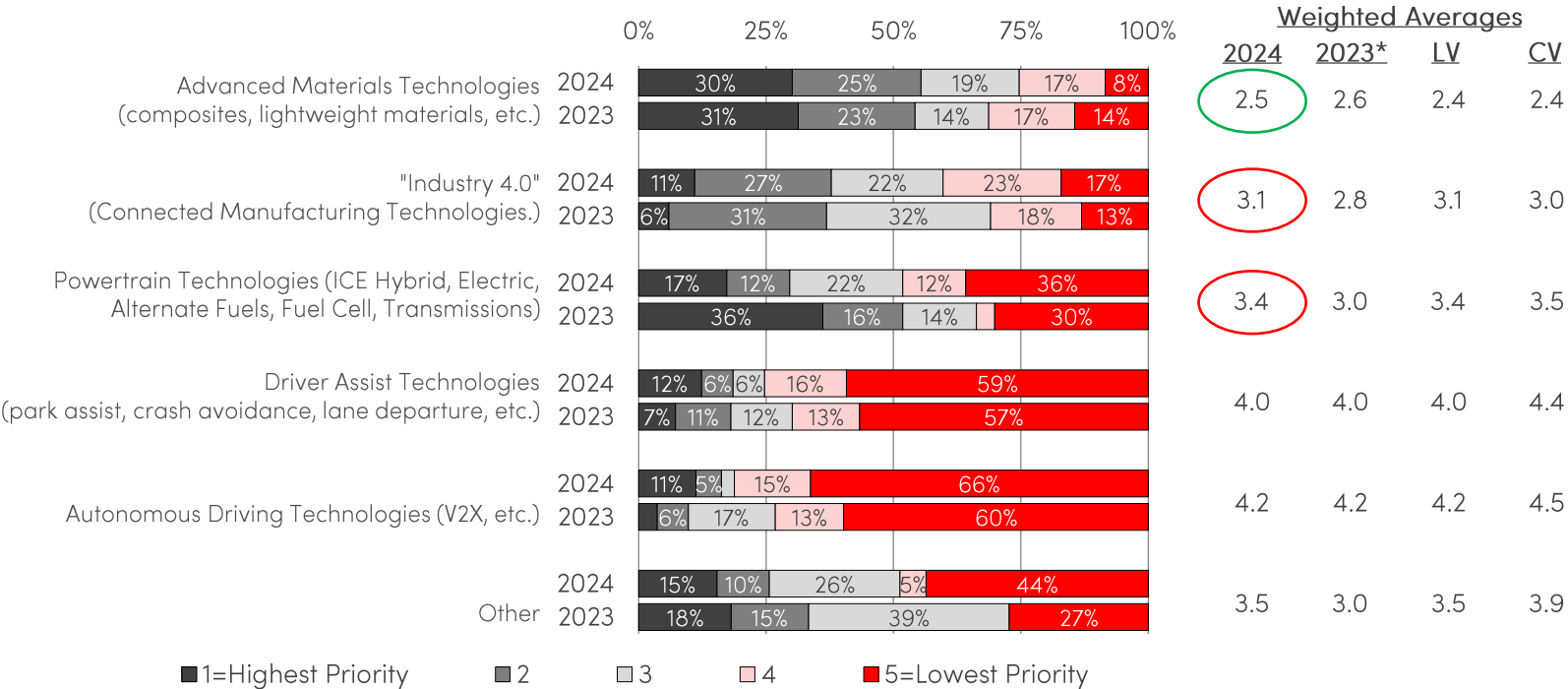
	Lower Quartile	Median Value	Upper Quartile
Development budget (for specific programs)			
2024*	50%	70%	80%
LV	53%	70%	80%
CV	50%	70%	89%
2023	50%	67%	83%
2022	60%	75%	80%
2021	63%	75%	80%
2020	60%	78%	90%
2019	70%	80%	90%
2018	50%	67%	80%

*Data prior to 2023 Light Vehicle only

R&D spending is expected essentially unchanged from last year, at 3% of total sales, while the increased emphasis on the research budget continues from last year.

MEMA OE Supplier Barometer: Research & Development Technology Investments

If you had additional dollars for R&D investment, rating in terms of importance, how would you allocate it across the following technology areas?



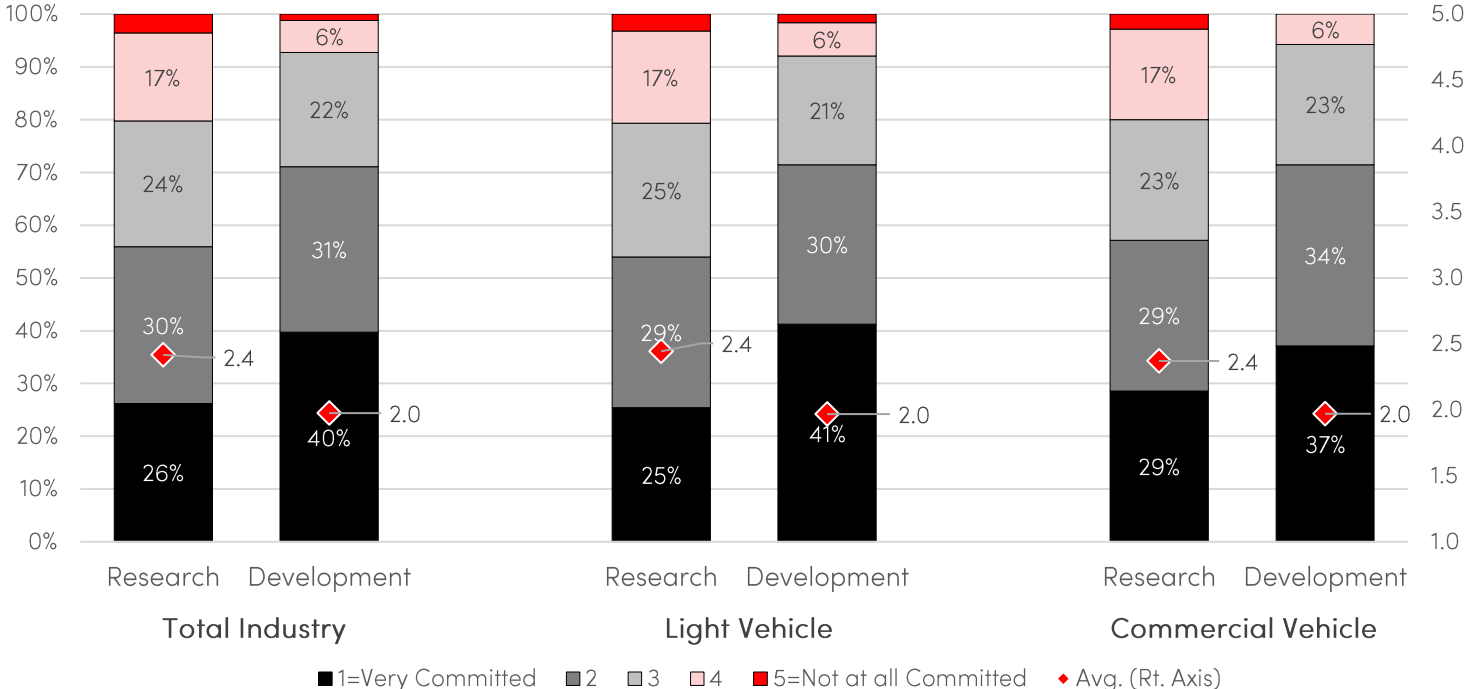
Advanced materials and industry 4.0 are the top investment priorities. However, industry 4.0 and powertrain technologies declined in investment prioritization from last year.

■ 1=Highest Priority ■ 2 ■ 3 ■ 4 ■ 5=Lowest Priority

*Light Vehicle Only

MEMA OE Supplier Barometer: Research & Development Technology Investments

How committed is your organization to its R&D spending over a 2-3 year time horizon in the face of economic uncertainty?



Comments:

- Part of both budget and strategic planning.
- It is a must. And we also love it. It is deeply imbedded in our DNA individually and culturally.
- Dedicated to launching new awarded business which requires new processes and equipment

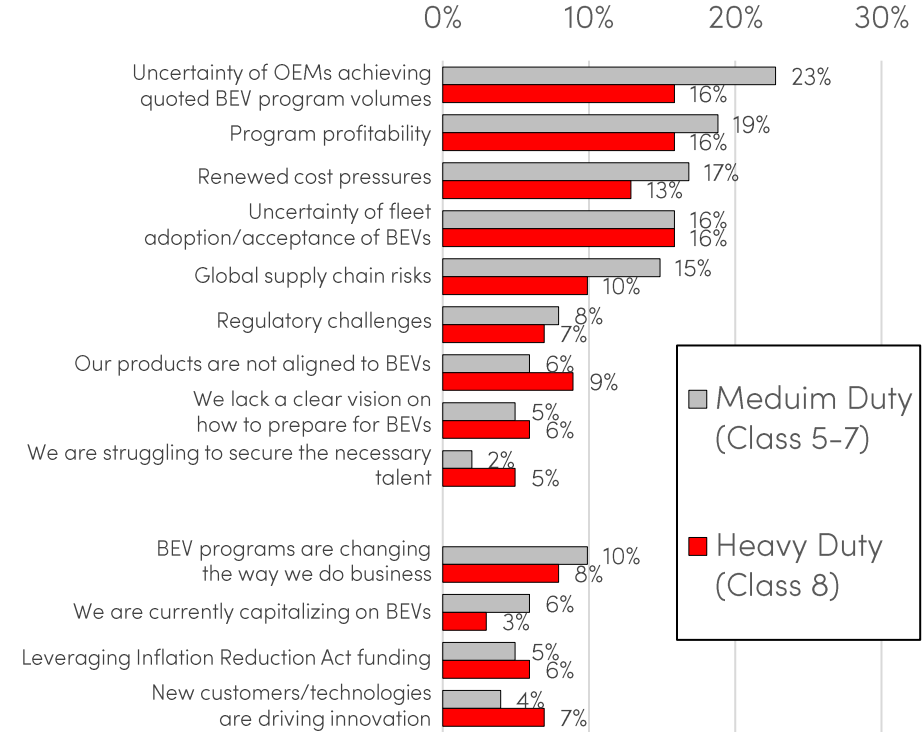
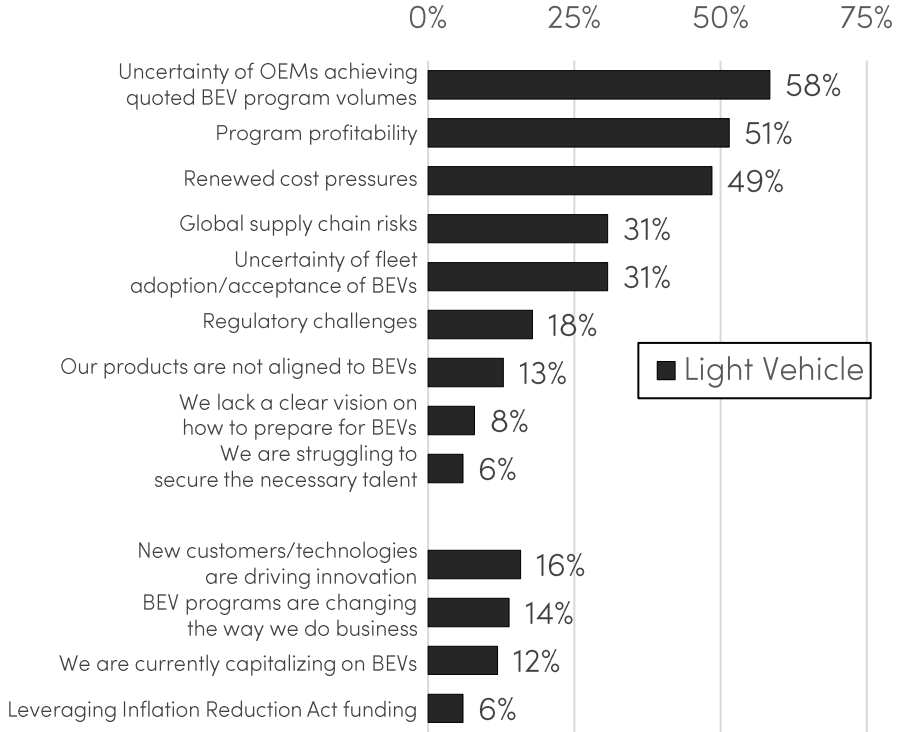


Electrification

Q1 2024 Vehicle Supplier Barometer

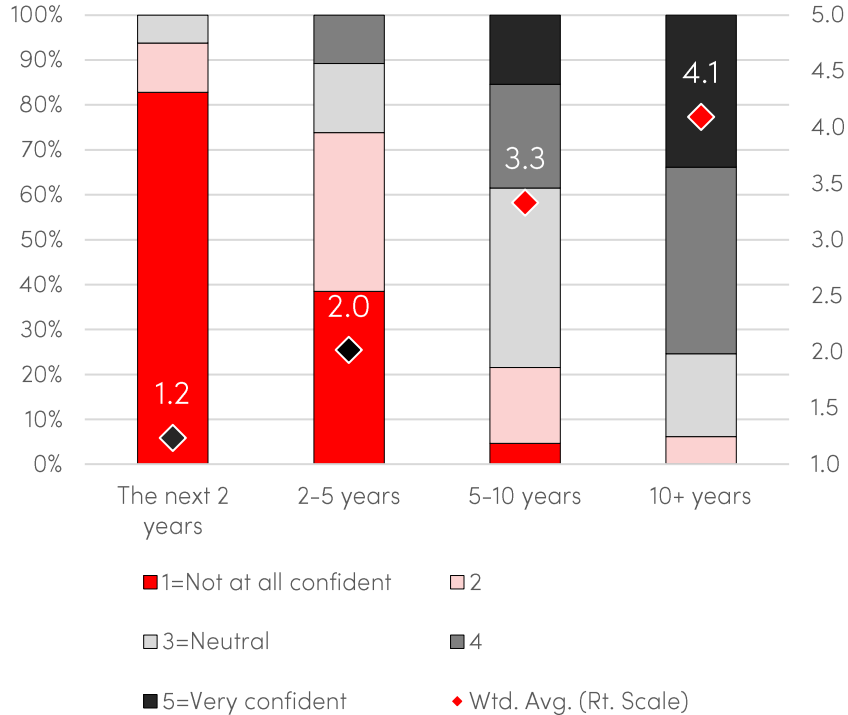
MEMA OE Supplier Barometer: BEV Challenges and Opportunities

What are your biggest challenges/opportunities as the industry prepares for a Battery Electric Vehicle (BEV) future?

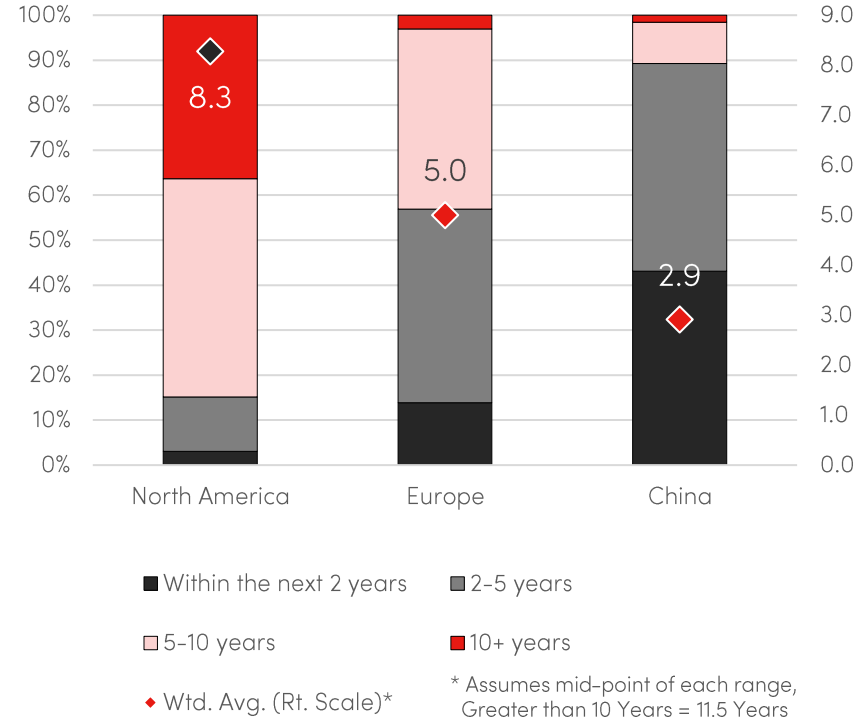


MEMA OE Supplier Barometer: Electrification: Supplier Light Vehicle Volume Outlook

How confident are you that global light vehicle BEV production will reach a substantial portion (25% of total production) within...

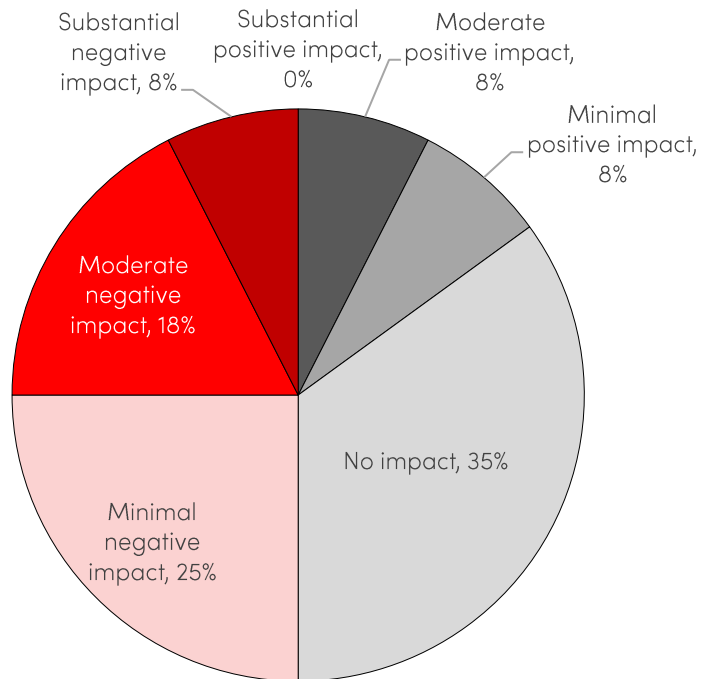


In what time frame do you believe a substantial level of light vehicle BEV production (25% of total production) will occur?



MEMA OE Supplier Barometer: Electrification: Commercial Vehicle CARB Implications

To what degree do the pending CARB regulations pose to your business?



What changes are you seeing to your business because of the CARB regulations?

Positive Impact:

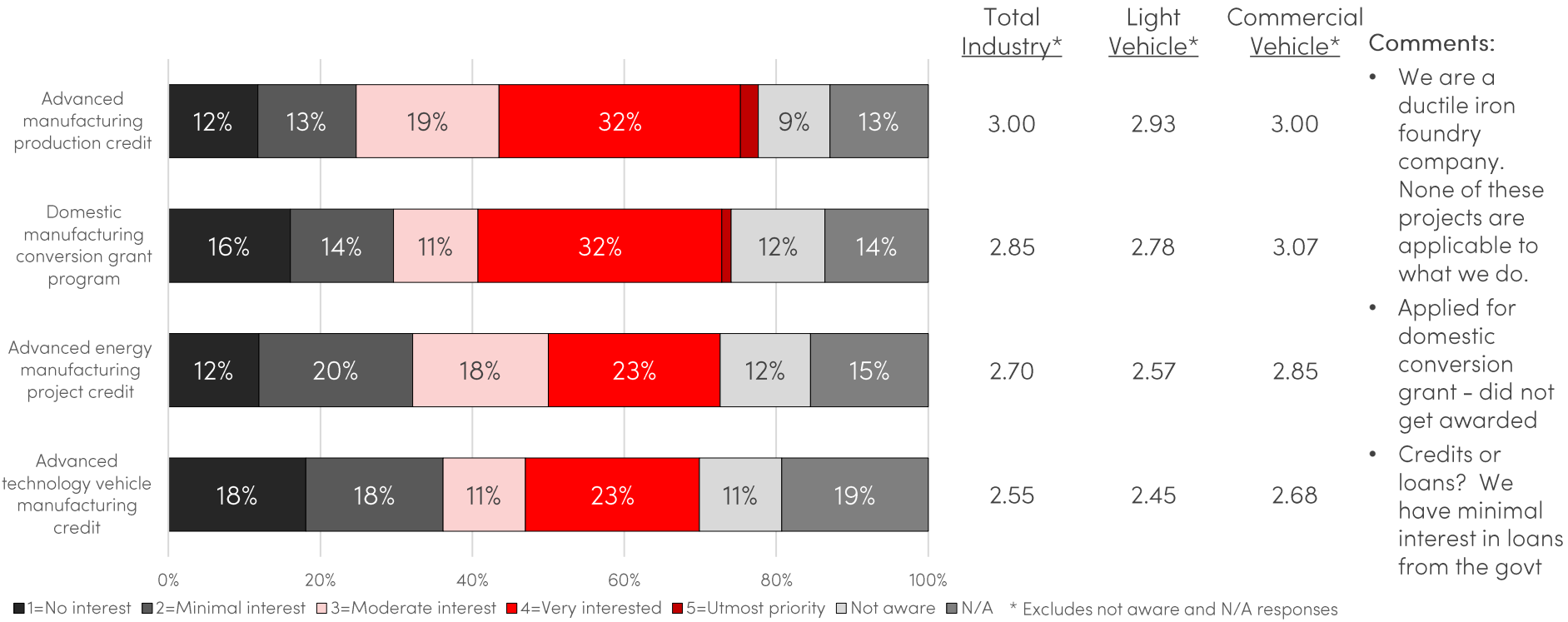
- Will benefit on the prebuy of trucks pre-regulation.
- We currently have the appropriate balance of ICE vs BEV business

Negative Impact:

- Light weighting
- With the 2027 Emissions standard on the horizon, we are seeing fleets spending their capital on trucks vs. trailers.
- OE focus on CARB keeps them from other product changes/investments
- Higher cost equipment can force fleets to down-spec or purchase fewer pcs. of equipment - loss of sales/margin
- Push to develop EV compatible products
- Increased emphasis on ESG reporting to key customers
- OEM resources/capital stretched too thin-- having to subsidize EV development and sales while also having to invest in ICE to meet customer demand, while having little certainty about regulatory stability.

MEMA OE Supplier Barometer: Electrification: IRA Credits and Programs

Please rate your company's interest in pursuing funds from the following Inflation Reduction Act credits and programs.



MEMA OE Supplier Barometer: Appendix



MEMA OE Vehicle Supplier Barometer is a survey of the top executives of MEMA regular member companies. The MEMA OE Vehicle Supplier Barometer takes the pulse of the suppliers' twelve-month business sentiment. In addition, it provides a snapshot of the industry commercial issues, business environment and business strategies that influence the supplier industry. [mema.org](https://www.mema.org)

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Survey Methodology

- Data collected February 13 – 27 via invitation to online survey.
- Executives of MEMA OE supplier companies.
- 103 complete survey responses were received, with 125 responses total.

The information and opinions contained in this report are for general information purposes. Comments are edited only for spelling and may contain grammatical errors due to their verbatim nature. Responses to this survey are confidential. Therefore, only aggregated results will be reported, and individual responses will not be released or shared.

Antitrust Statement:

Respondents/participants should not contact competitors to discuss responses, or to discuss the issues dealt with in the survey. It is an absolute imperative to consult legal counsel about any contacts with competitors. All pricing and other terms of sale decisions and negotiating strategies should be handled on an individual company basis.

Contacts

Mike Jackson
Executive Director
Strategy and Research
248.430.5954
mjackson@mema.org

Joe Zaciek
Director
Research and Industry Analysis
248.430.5960
jzaciek@mema.org

Jason Coffman
US Automotive Consulting Lead
Deloitte Consulting, LLP
jasoncoffman@deloitte.com

MEMA Original Equipment Suppliers
25925 Telegraph Road
Suite 350
Southfield, Michigan 48033