



OESA Automotive Supplier Barometer™ Q1 2022

Production, Planning and Electrification
March 2, 2022

Executive Summary

Supplier Barometer Index™ (SBI)

SBI Score = 52;
up from Q4 level of 34



The outlook for the first quarter improved substantially from the fourth quarter of 2021 but is only slightly optimistic on net. Concerns related to production shutdowns and labor issues eased slightly but remain at very high-risk levels. Sentiment improved sequentially across firms of all sizes but remains in pessimistic territory for the largest suppliers.



Production shutdowns due to supply chain shortages and tight labor conditions remain the top threats to the 12-month outlook

The myriad of supply chain disruptions and labor constraints continue to disrupt the automotive supply base at a high level. However, results improved slightly from the fourth quarter.

Suppliers' optimism towards a strong economy and vehicle sales continues to decline as the effects of the Omicron variant and inflation run rampant. The threat of rising interest rates on vehicle affordability and the overall cost of capital is a growing concern.



North American production is expected to exceed breakeven levels following the second consecutive year of falling short

2022 production volumes are expected to return to profitable territory but are shrouded under a veil of uncertainty. The industry expects North American production to reach 15.0 million units, 1.25 million units above median breakeven.



The primary internal and external production issues are supply chain related

Increased costs from tight supplies of inputs in addition to freight surcharges are expected to be the biggest hurdles for suppliers to overcome in meeting their required levels of production.

Labor related issues remain as absenteeism and short supply of unskilled labor continues to put pressure on the supply base.



Inventories increased substantially in 2021

Over half of all suppliers reported increased inventories compared to 2020 as sporadic production shutdowns devastated the supply base.



R&D spending as a percentage of sales remains unchanged from last year, at 4% of total sales

From the R&D budget, approximately one-quarter goes to research while three quarters is allocated to development. Advanced materials technologies are now joined by powertrain technologies in a tie for the top investment priorities. However, “industry 4.0” and autonomous technologies rose in priority in comparison to last year.

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



Suppliers are already benefitting from the drive to a Battery Electric Vehicle future

Innovation is being driven by new customers and technologies despite potential concern over program profitability, changing the way suppliers do business.

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

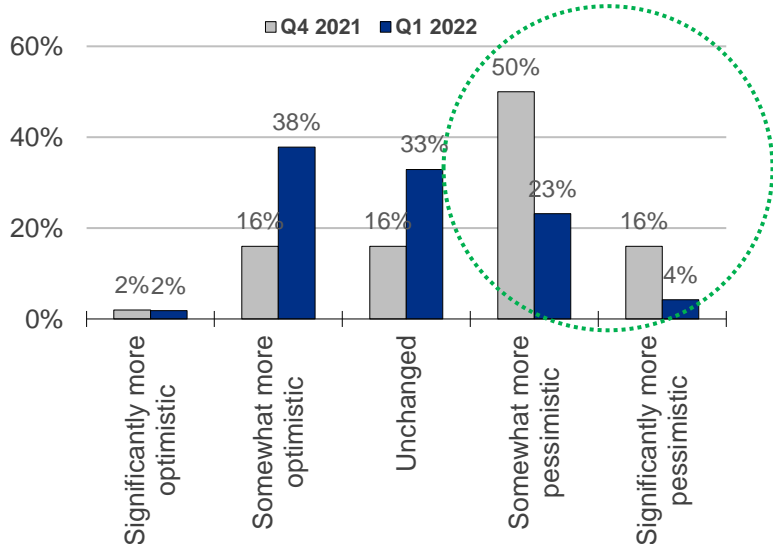
Regionally speaking, suppliers expect a 10% share of BEV production to occur first in China, followed by closely by Europe, with North America taking an estimated 7 years to reach that threshold.

Supplier Outlook

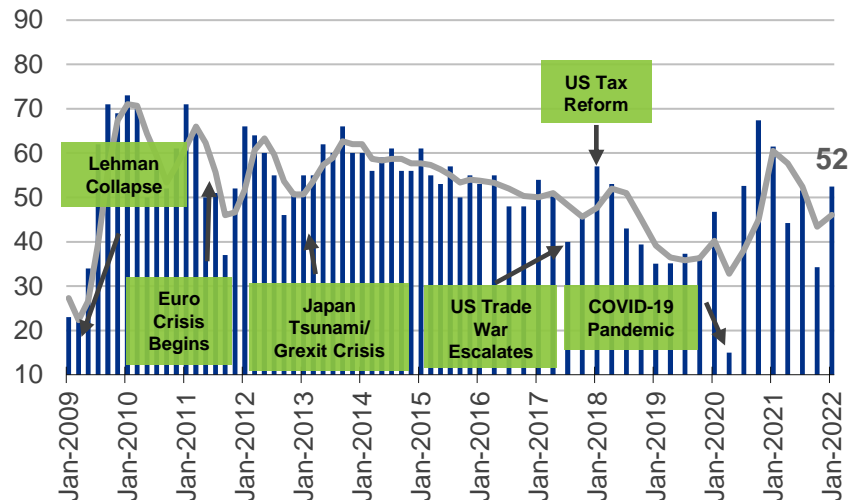
OESA Supplier Barometer: Q1 2022 Results

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

Current Supplier Outlook (Share of Respondents)



Supplier Barometer Index: (SBI and 6m Average)

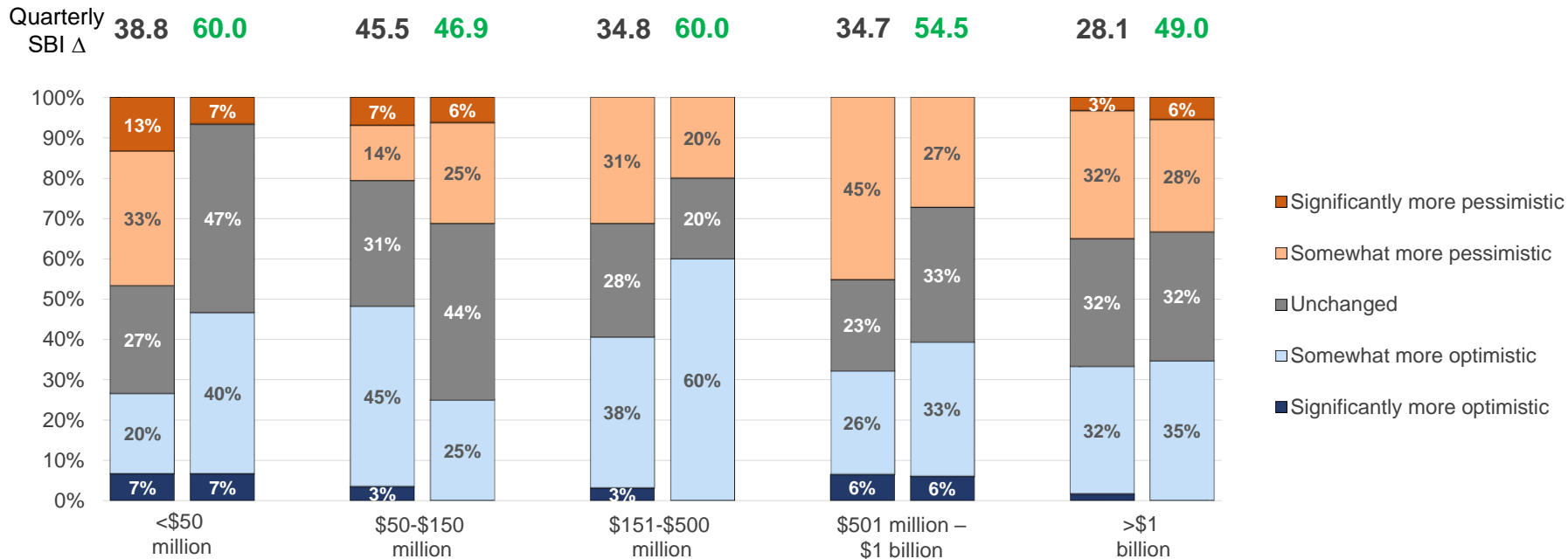


164 responses

The 12-month outlook for the first quarter recovered into marginally optimistic territory as production shutdowns due to prolonged supply chain shortages and labor issues eased slightly in comparison to the end of 2021.

OESA Supplier Barometer: Q1 2022 Results By Revenue

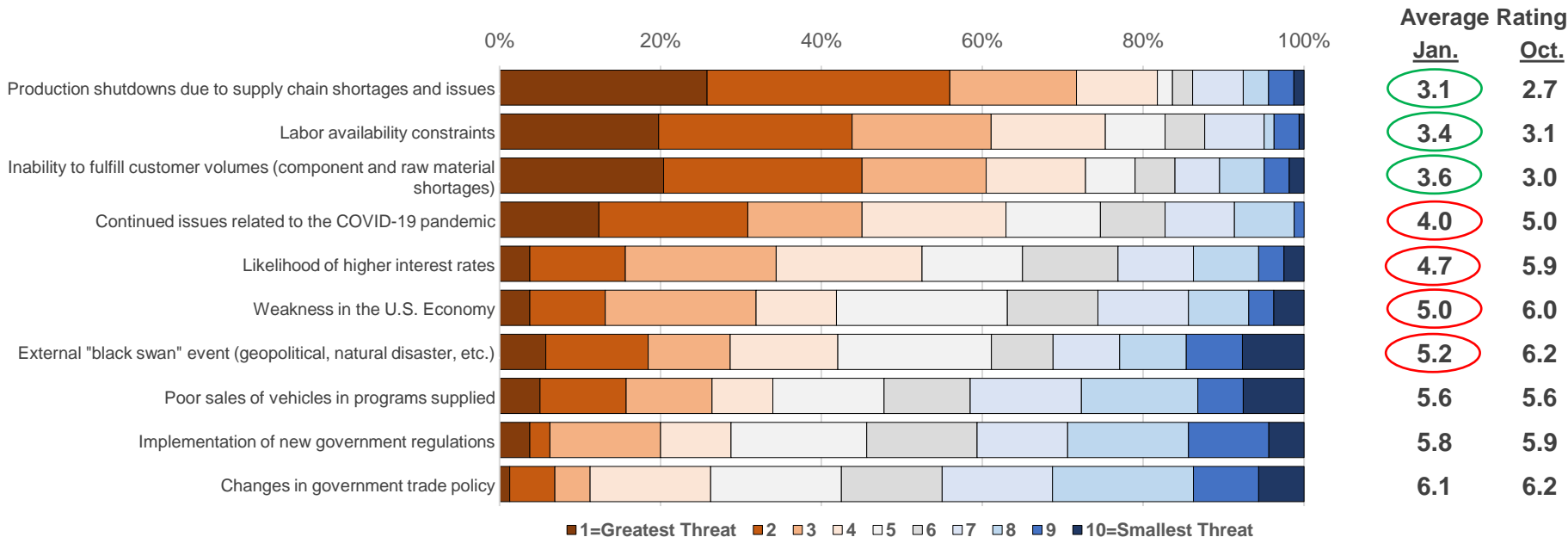
Describe the general twelve-month outlook for your business. Over the past three months, has your opinion become...?



The outlook improved across all revenue sizes, yet sentiment remains pessimistic on net for suppliers with revenue between \$50-150 million and over \$1 billion.

OESA Supplier Barometer: Industry Threats

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

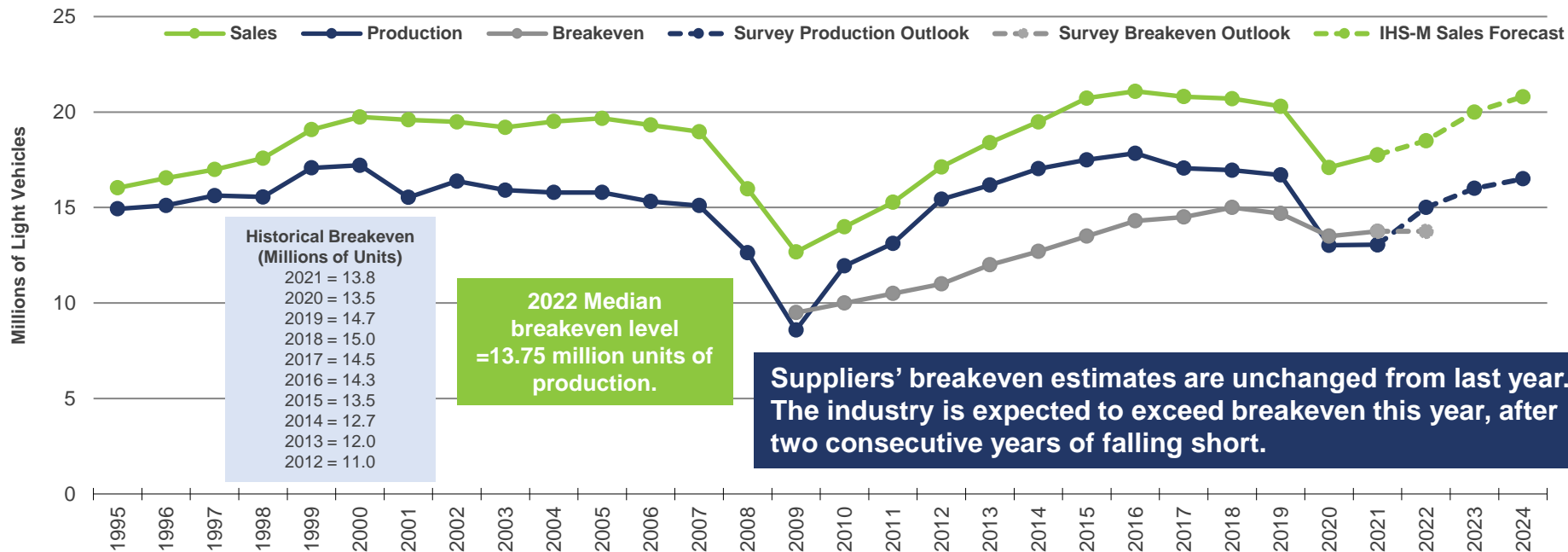


Production shutdowns due to supply chain shortages and issues, labor availability, and the inability to fulfill customer volumes remain as the top threats to the 12-month industry outlook but improved sequentially.

Production, Planning & Electrification

OESA Supplier Barometer: Industry Threats

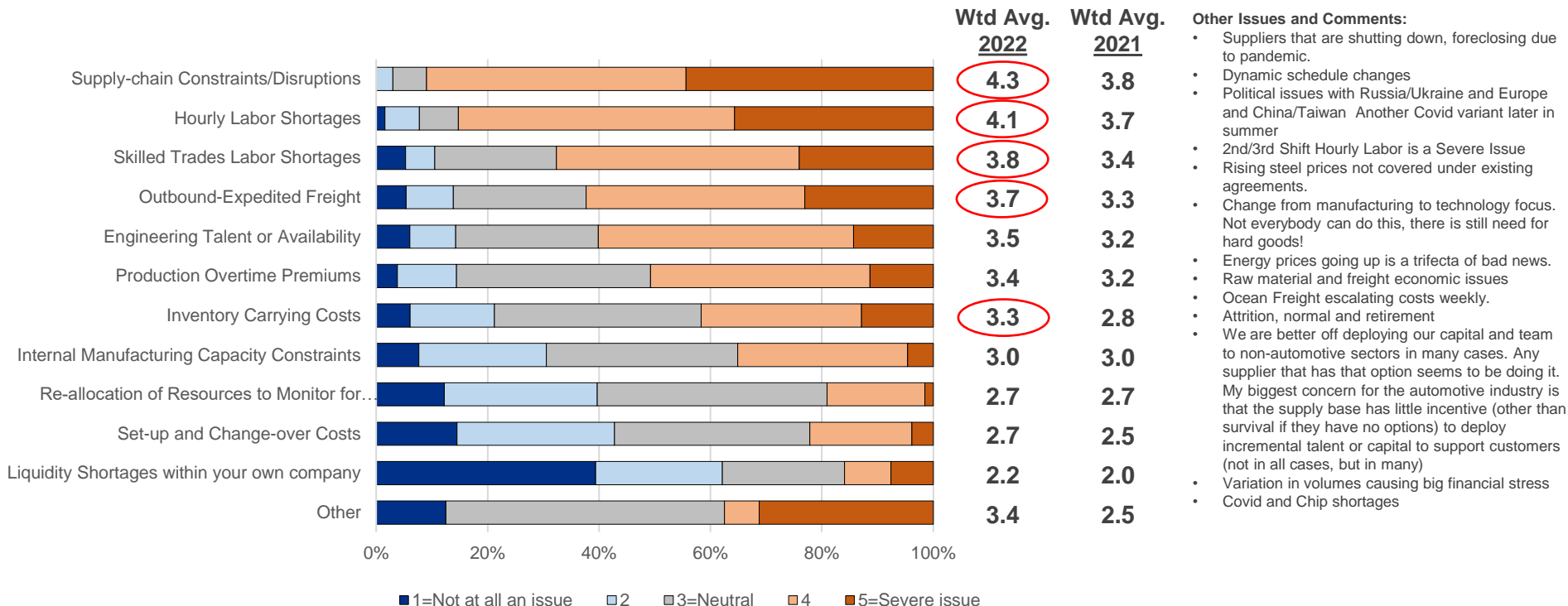
Considering North America light duty vehicle production, estimate the required 2022 industry volume needed to achieve breakeven in your North American operations?



Source: IHS Markit (History, Sales and Production); IHS Markit (Sales Forecast)

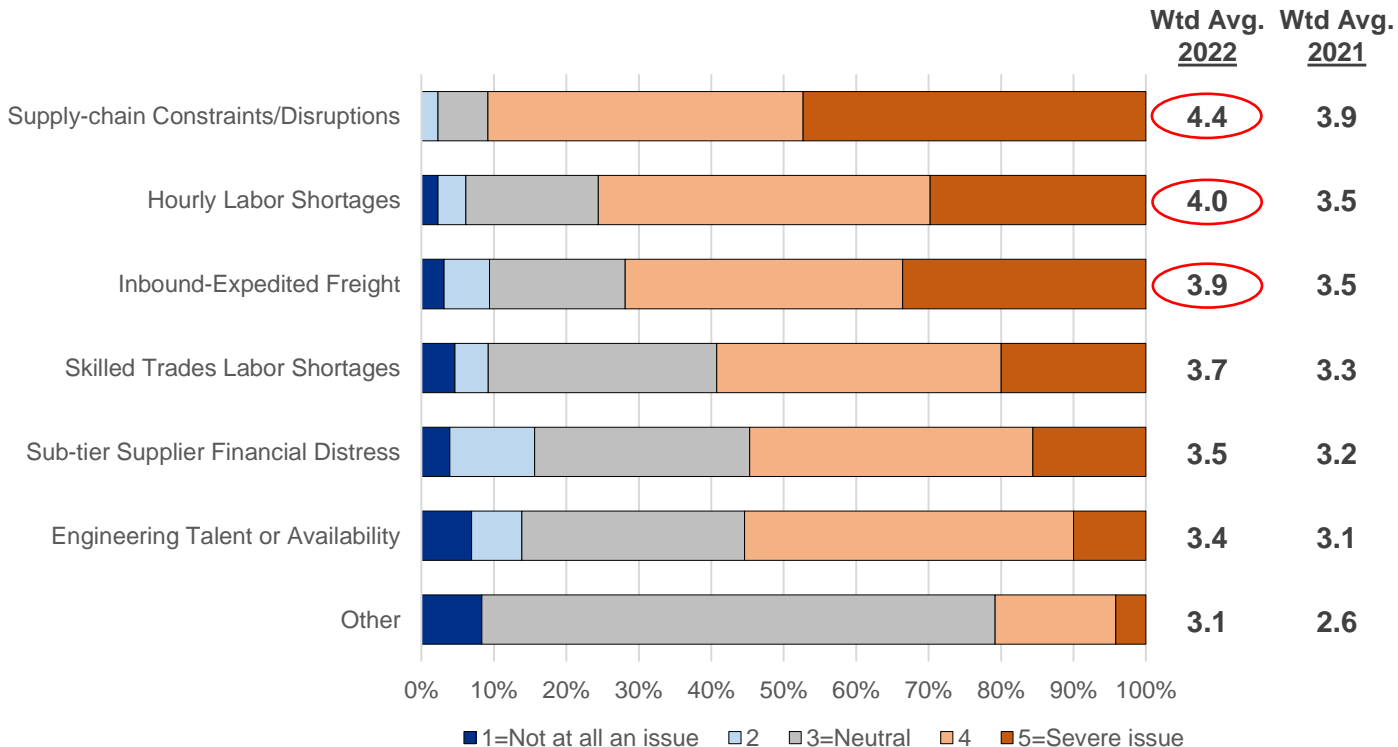
Production Planning: Internal Issues

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



Production Planning: External Issues

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



Other Issues and Comments:

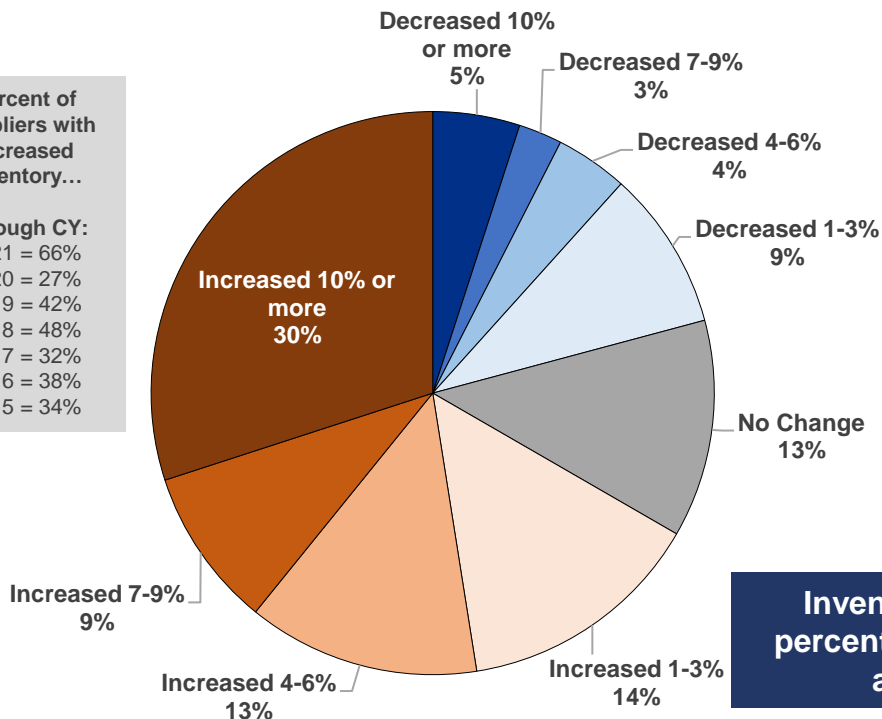
- Inflation and price increases
- Labor constraints are expected to continue to drive supply chain constraints
- Trucking & Sea Freight availability
- Need support from Automakers to address the increases in component costs and inbound freight costs that Tier 1's are stuck in the middle of and causing great financial distress.
- Most things will get worse before they get better.
- Sub-supplier material increases & subsequent recovery attempts from OEMs or seeking alternative materials
- Sub-tier supplier financial distress. Two ways to look at it; if you are looking at overall finance distress would be 3, if you look at stop ship and price it is a 5 due to price increased - so overall a 4
- Main issues will remain high risk
- Supplier not getting labor hired and in place trained in time.

Production Planning: Finished Goods Inventory

Compared to average 2020 levels, how did your average 2021 finished goods inventory levels change?

Percent of suppliers with increased inventory...

Through CY:
2021 = 66%
2020 = 27%
2019 = 42%
2018 = 48%
2017 = 32%
2016 = 38%
2015 = 34%



Comments:

Decreased

- Supply chain disruptions and shortages (3)
- High demand
- Non-chip component inventories have escalated greatly since they cannot be used due to chip shortages. Therefore, finished goods inventory is down.
- Tried to reduce inventory costs
- Trying to increase inventory turns.
- Our own supply constraints reduced safety stock

Unchanged

- No change, but loss of labor due to layoffs not returning.

Increased

- Inaccurate customer forecasts (12)
- Unstable customer production (11)
- Lead time/component shortage preparation (5)
- Logistics Issues (4)

Inventories increased on net across the supply base, with the percentage of suppliers reporting an increase up 39 ppts. to 66%, as sporadic production shutdowns have taken a toll.

Production Planning: Research & Development Spending

For 2022, estimate your R&D spending as a percent of total sales.

	Lower Quartile	Median Value	Upper Quartile
R&D Share of Total Sales			
2022	2%	4%	5%
2021	2%	4%	6%
2020	2%	4%	7%
2019	2%	4%	6%
2018	3%	4%	5%
2017	2%	4%	6%
2015	2%	3%	5%

R&D Spending is essentially unchanged from last year, at 4% of total sales. Approximately 75% of the R&D budget is allocated towards the development of specific programs, while 25% is allocated to researching future technologies, equal to last year.

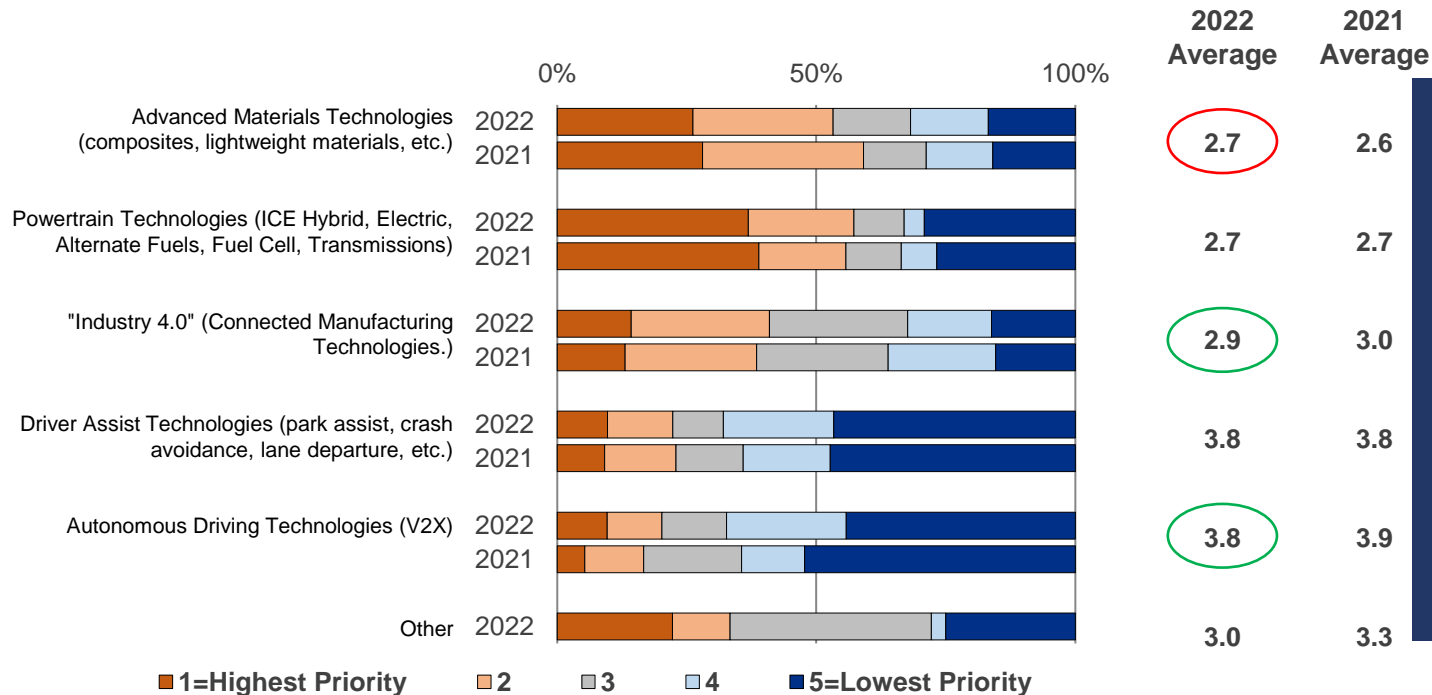
For 2022 R&D budget, estimate the percent allocated to research and percent allocated to development.

	Lower Quartile	Median Value	Upper Quartile
Research budget (for future technologies)			
2022	20%	25%	40%
2021	20%	25%	38%
2020	10%	25%	40%
2019	10%	20%	30%
2018	20%	32%	44%
2017	10%	20%	40%

	Lower Quartile	Median Value	Upper Quartile
Development budget (for specific programs)			
2022	60%	75%	80%
2021	63%	75%	80%
2020	60%	78%	90%
2019	70%	80%	90%
2018	50%	67%	80%
2017	58%	75%	85%

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?

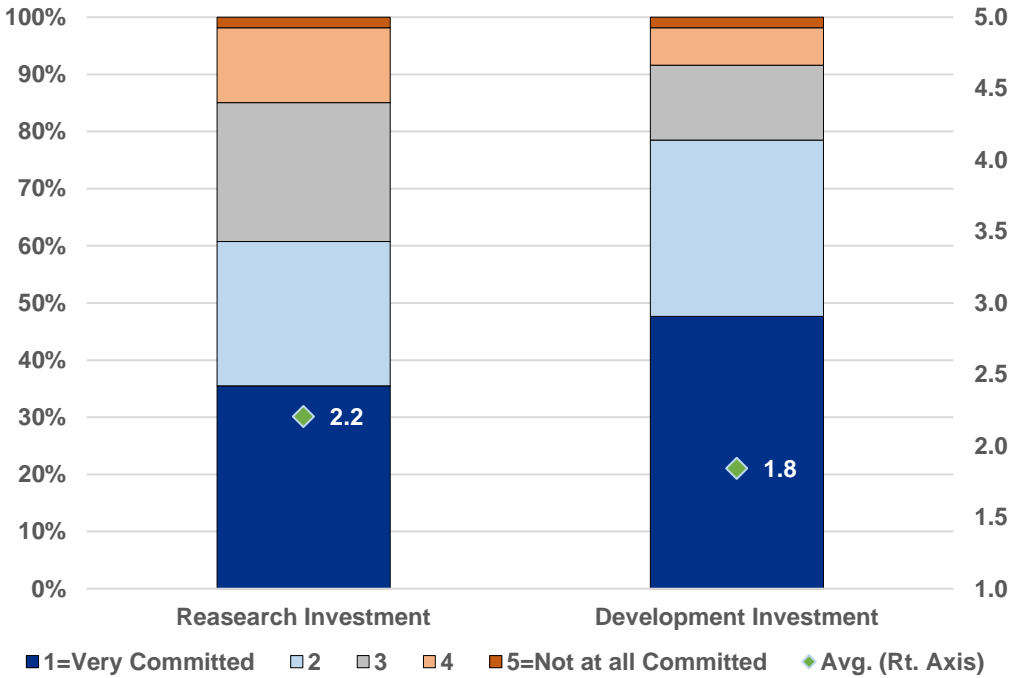


Advanced materials technologies are now joined by powertrain technologies in a tie for the top investment priorities.

The industry is focusing more on industry 4.0 and autonomous technologies in comparison to last year

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:

- The aftermarket demands a constant supply of new products
- Philosophy is customer driven. Research typically an output of customer pain point resolution rather than "invented here" approach.
- Technology is a big factor for success

Electrification: Risks and Opportunities

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

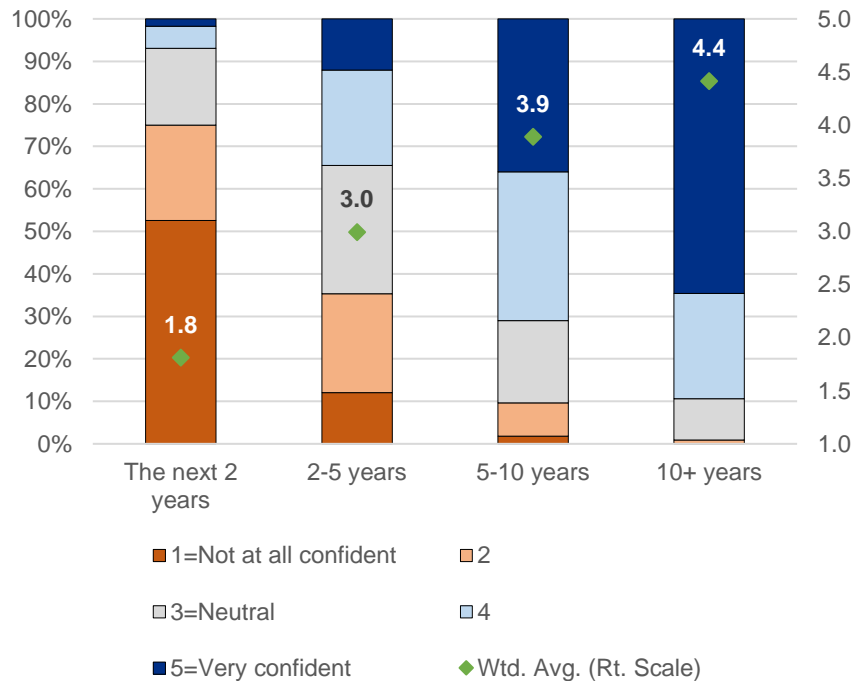


Other Issues and Comments:

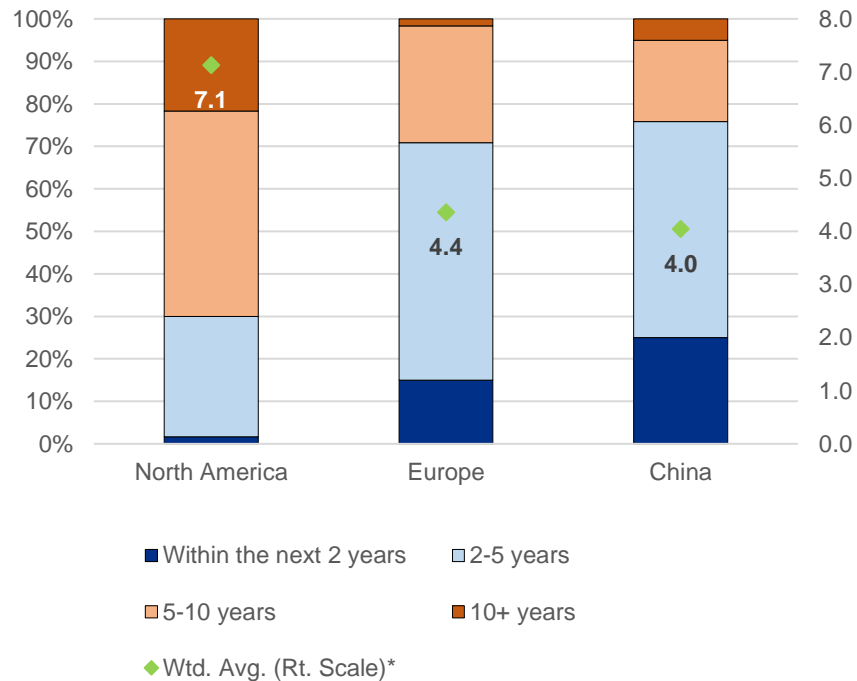
- Customers are taking BEV tech in-house, eliminating opportunities for suppliers like us
- Late to market. Competitiveness. US customers
- BEV products need chips
- BEV programs are just as short sighted as ICE programs.
- Low-cost countries relocating to the US driving margins lower.
- Low volumes
- Uncertain volumes
- Uncertainty in volumes is challenging to manage profit expectations
- not a big impact on our business
- Volume assurances
- Concerned about when volumes will be achieved
- Bloodbath in supply base. eDrive systems are being unsourced, the ones that are outsourced are left to 20 suppliers to fight over.

Electrification: Supplier Outlook

How confident are you that global BEV production will reach a substantial portion (10% of total production) within...



How confident are you that global BEV production will reach a substantial portion (10% of total production) within...



* Assumes mid-point of each range, Greater than 10 Years = 11.5 Years



Join. Engage. Advance.

OESA Automotive Supplier Barometer is a survey of the top executives of OESA regular member companies. The OESA Automotive 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. www.oesa.org.

RSM US LLP is the leading provider of audit, tax and consulting services focused on the middle market, with nearly 10,000 professionals nationwide. It is a licensed CPA firm and the U.S. member of RSM International, a global network of independent audit, tax and consulting firms with more than 41,000 people in 116 countries. RSM uses its deep understanding of the needs and aspirations of clients to help them succeed. For more information, visit rsmus.com, like us on Facebook at [RSM US LLP](https://www.facebook.com/RSMUSLLP), follow us on Twitter [@RSMUSLLP](https://twitter.com/RSMUSLLP) or connect with us on [LinkedIn](https://www.linkedin.com/company/rsmusllp).



Survey Methodology

- Data collected Jan. 26 – Feb. 7 via invitation to online survey.
- Executives of OESA supplier companies.
- 129 complete survey responses were received, with 164 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@oesa.org

Joe Zaciek
Senior Manager
Research and Industry Analysis
248.430.5960
jzaciek@oesa.org

Larry Keyler
RSM Global Automotive Leader
317.805.6205
lawrence.keyler@rsmus.com

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