



Detroit – Washington D. C.

A faint, light blue world map is visible in the background, centered behind the main title text.

The Supplier Sector: The Theory of Everything

May 29, 2015

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OESA – Original Equipment Suppliers Association

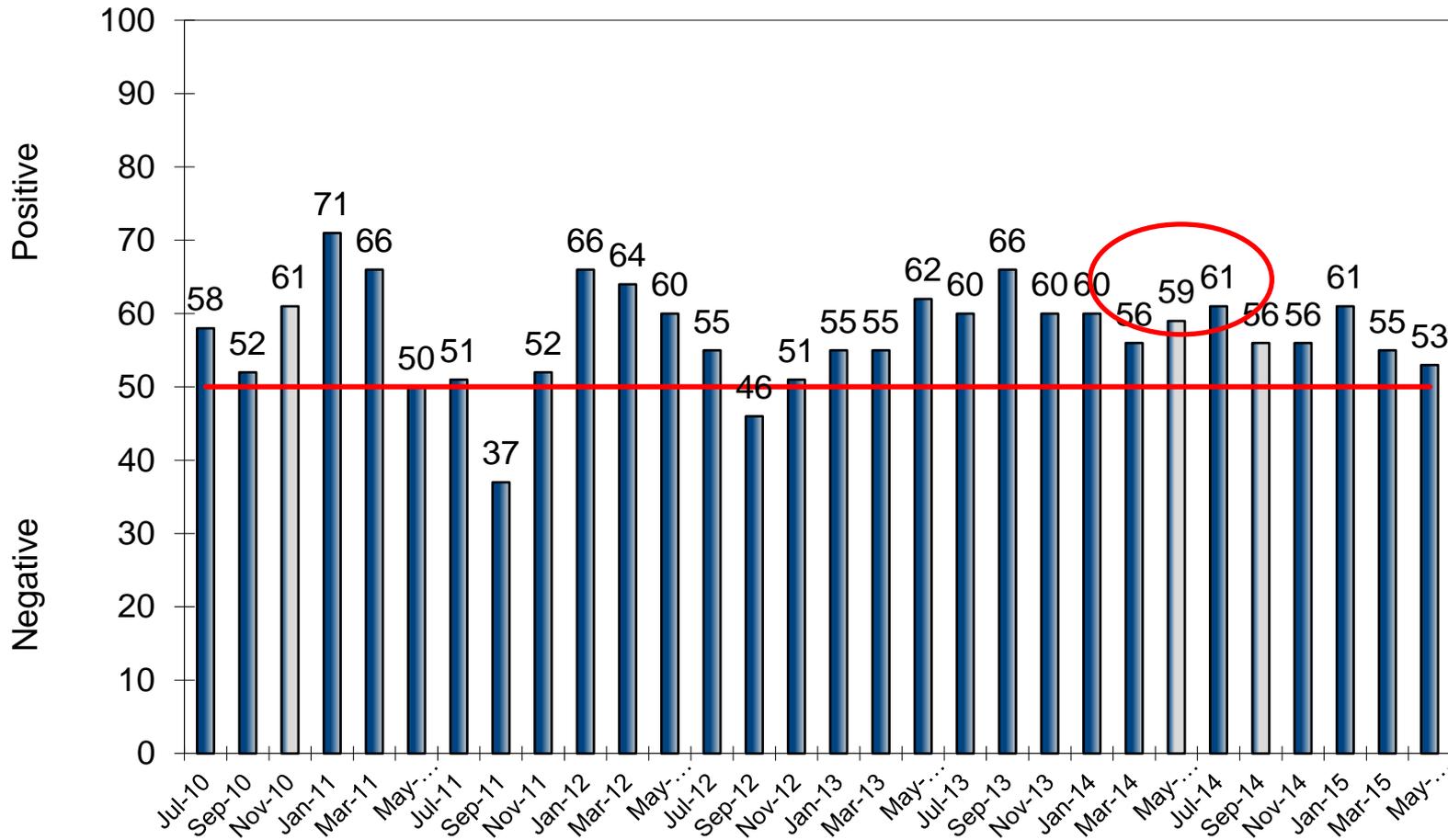
The Theory of Everything

- **Everything will be on the suppliers' plate this year:** product launches, incremental volumes, recall responses, plant and equipment launches It will be a massive, simultaneous equation
- **We have to have discipline** which means going back to our basic, guiding principles
- **At the same time, evolve the species** which means adjusting to a new clock speed, incorporate learning from outside, and on and on
- **A safe prediction:**
 - It will definitely not be a love story

But the good story line will continue.

OESA Automotive Supplier Sentiment Index

Compared to two months ago,
how has your 12 month outlook changed?



North America

2015-2017 Production Forecast Comparison

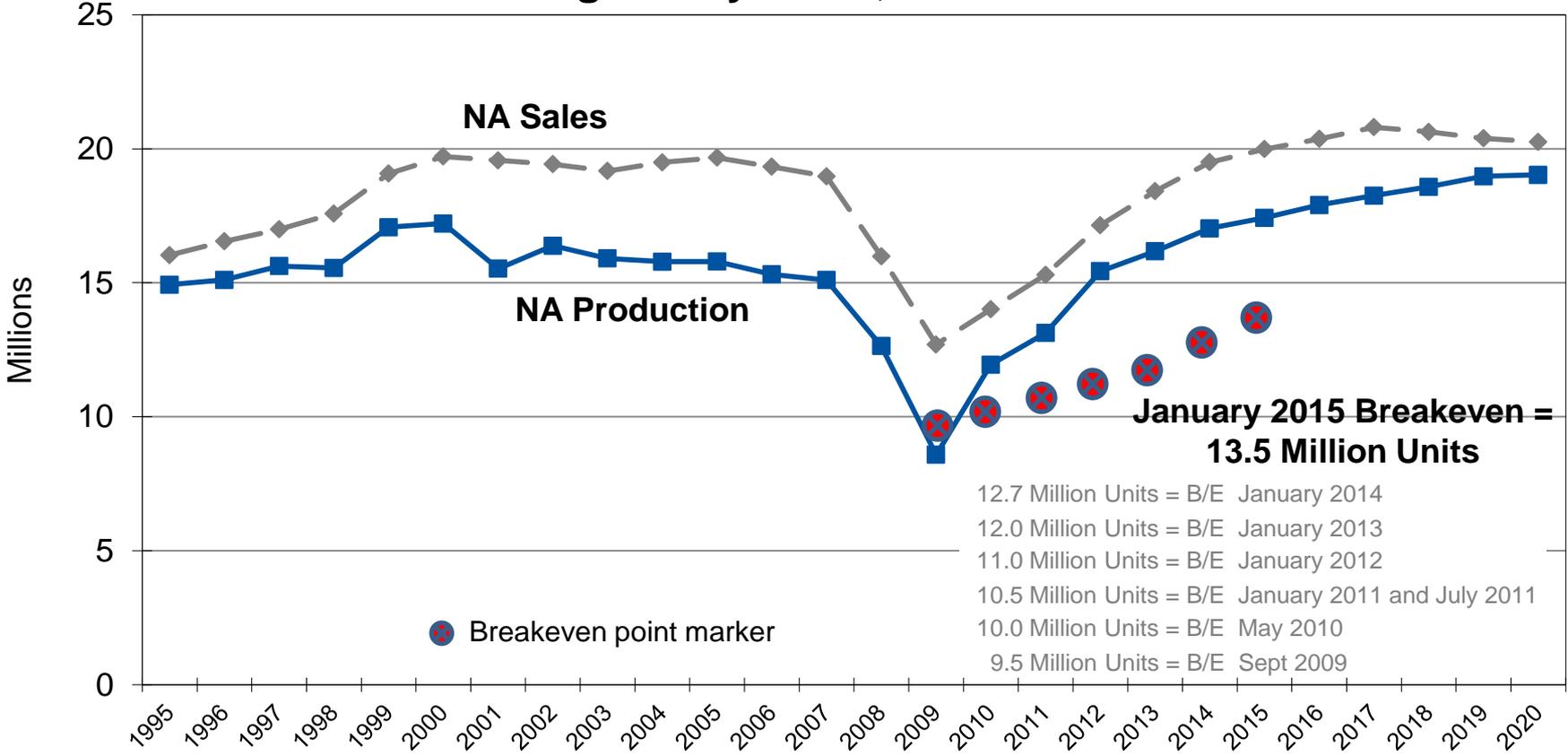
(Volumes represent NA Car, Lt Truck class 1-5)



(in millions)	2015					2016 Forecast	2017 Forecast
	1Q Actual	2Q Forecast	3Q Forecast	4Q Forecast	2015 Forecast		
	4.28	4.53 ↓0.05	4.21 ↑0.01	4.16 ↑0.03	17.18 ↑0.01	17.67 ↑0.20	18.40 ↑0.08
 driven by 	4.26	4.49 ↑0.03	4.38 ↑0.03	4.27 ↑0.03	17.40 ↓0.04	17.92 Δ0	18.29 ↓0.05
	4.27	4.54 ↓0.01	4.40 ↑0.07	4.24 ↑0.02	17.45 ↓0.01	17.90 ↑0.01	18.25 ↑0.05
	4.25	4.67 ↓0.04	4.27 ↑0.06	4.00 ↑0.01	17.20 ↓0.11	17.90 ↓0.06	18.18 ↑0.01
	4.20	4.50 ↑0.09	4.40 ↑0.13	4.20 ↑0.02	17.30 ↑0.09	17.80 ↑0.32	17.90 na
 SUSQUEHANNA FINANCIAL GROUP, LLLP	4.25	4.48 ↓0.04	4.26 ↓0.01	4.33 ↑0.14	17.31 ↓0.01	17.57 ↓0.06	17.83 ↓0.35
Forecast Average	4.25	4.55	4.33	4.17	17.31	17.84	18.20
Forecast Spread	0.08	0.18	0.19	0.27	0.27	0.25	0.50
2014 Average	4.20	4.41	4.17	4.22	17.00		

Considering North America light duty vehicle production, estimate the required 2015 industry volume needed to achieve breakeven in your North American operations (in millions of units).

North American Light Duty Sales, Production and Breakeven

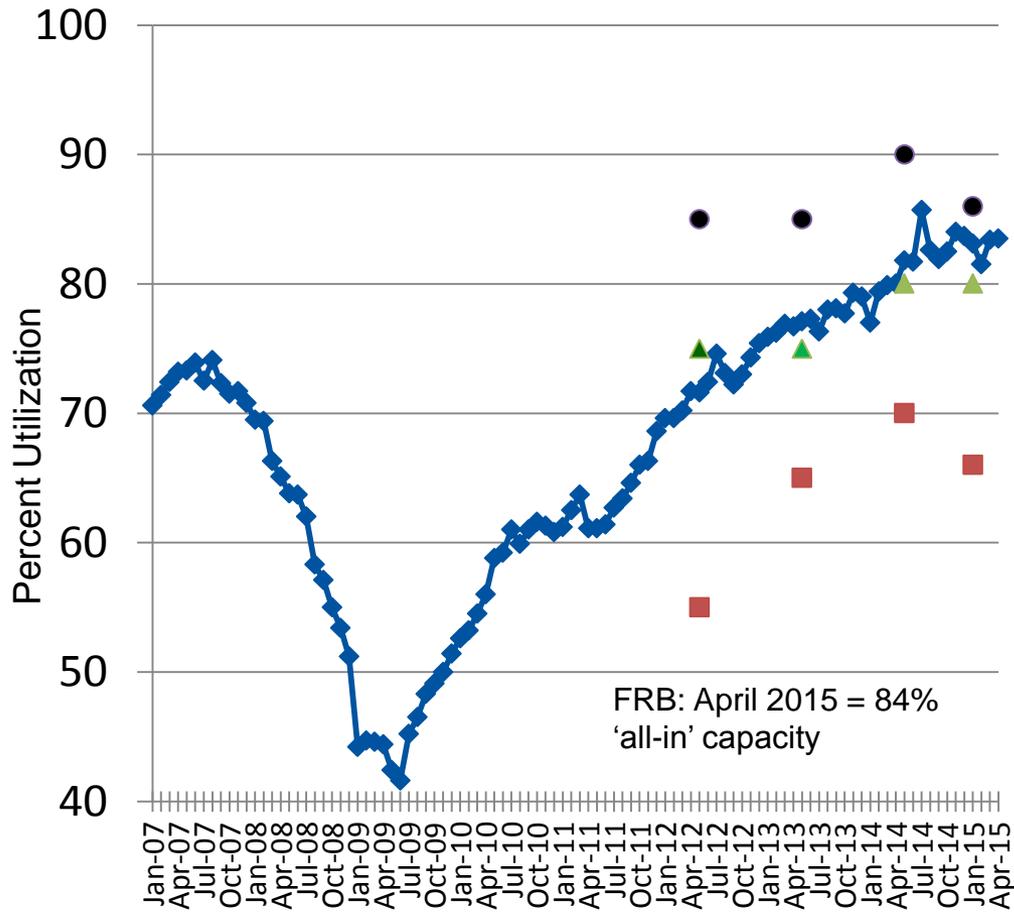


Production will increase by 102 percent between 2009 and 2015 (using a 17.4 million projection) while breakeven levels will increase by just 42 percent

Sources: IHS Automotive (May 2015) and January 2015 OESA Automotive Supplier Barometer



Supplier Utilization: The Story is the Lower Quartile



The US Federal Reserve and OESA state that the US supply base is running approximately at **80% capacity utilization – looking at all available capacity (the blue line and the middle dot)**

The **lower quartile** companies are operating 66% including all available capacity – a dramatic increase from 55% just three years earlier

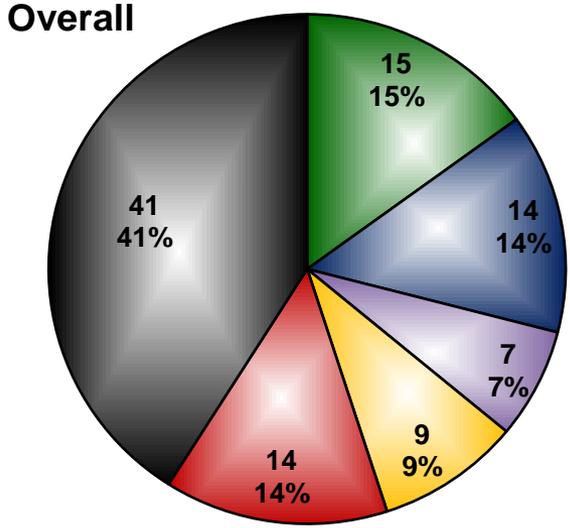
*When asked about utilization rates, the **upper quartile** of companies are running at 86% utilization – and this is at a 17.3 million unit level. What happens when we hit 18.2 million units in 2017?*

Dots = Capacity Utilization data from the OESA Automotive Supplier Barometer May 2012, May 2013, May 2014, January 2015

NAICS 3363 capacity utilization corrected in April 2013 to reflect updates in FRB dataset



Supply Chain Constraints are Occurring, Not Systemically, But Through the Entire Supply Chain and in Mission Critical Areas



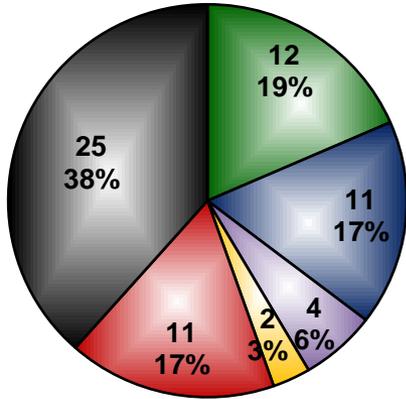
2015

- Powertrain
- Chassis
- Exterior
- Interior/HVAC
- Electrical/Electronics
- We don't have any supply chain constraints

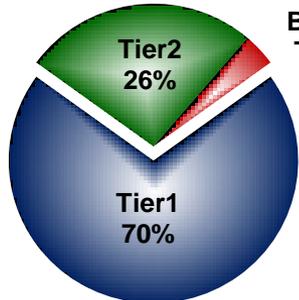
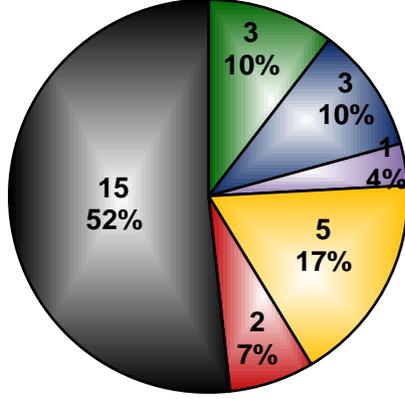
Question: There has been a great amount of discussion about sourcing constraints down through the supply chain. What system area(s) is/are your most significant supply chain constraint(s)?

2015 Sourcing Constraints by Tier

Tier1s



Tier2 and below

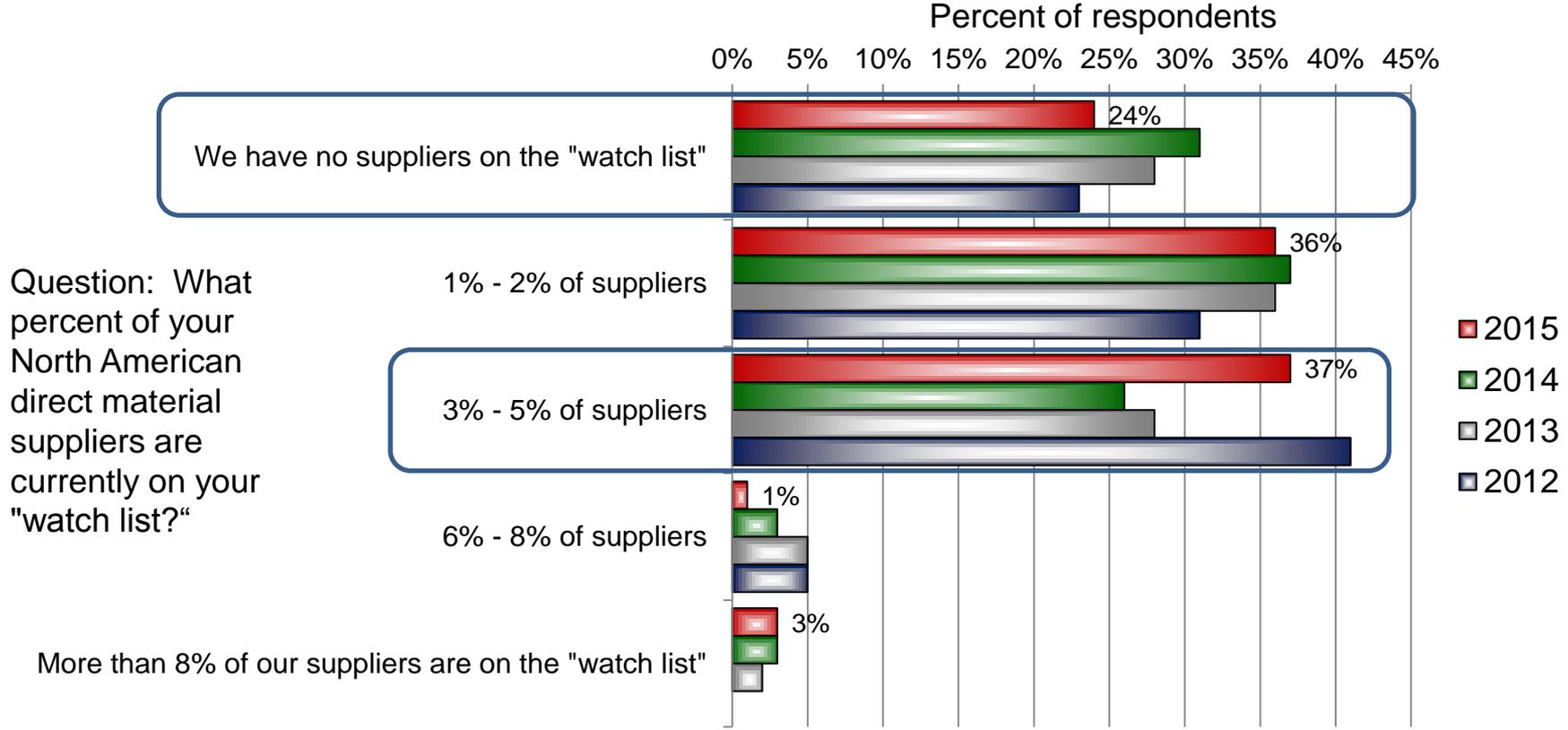


Tier structure of respondents

Note: Year-over-year overall constraints are shown in the appendix



Suppliers are Being Added to Watch Lists

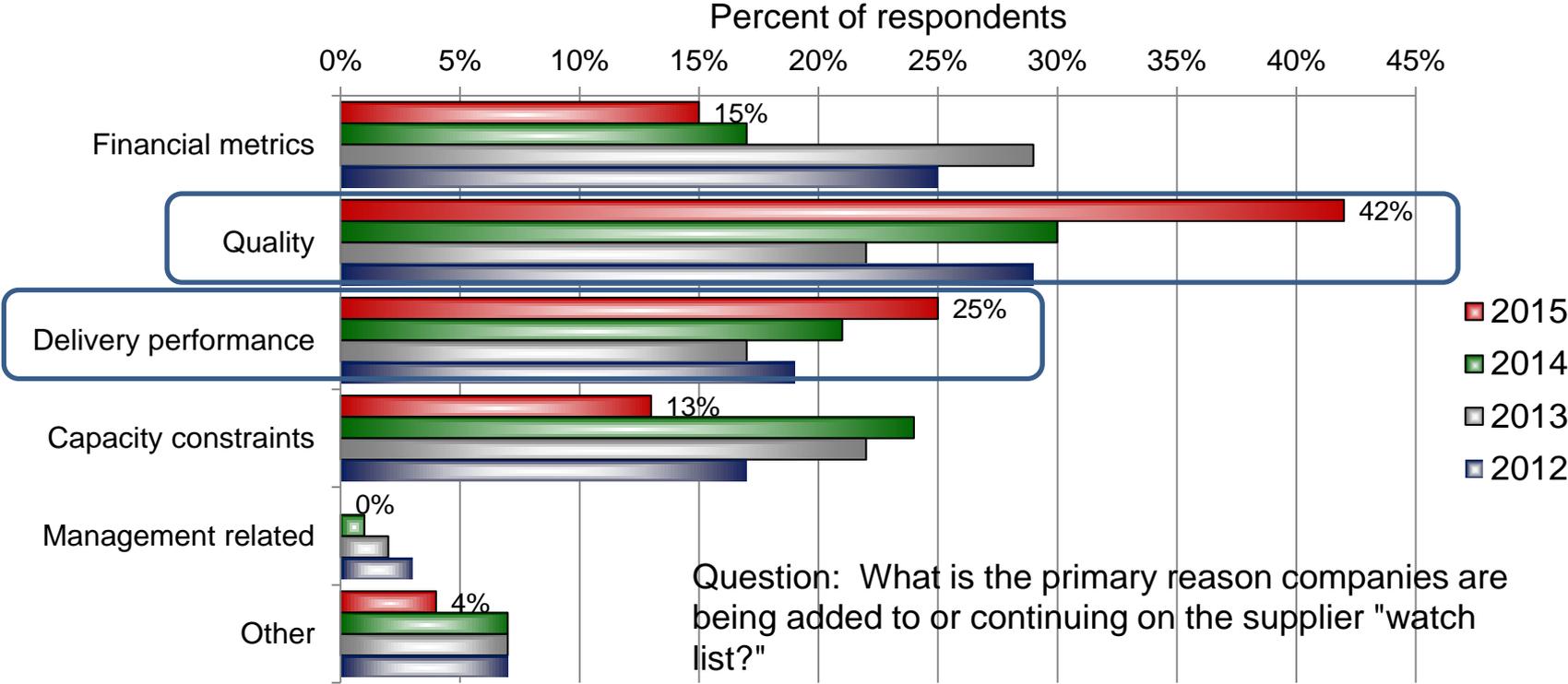


Comments

- Quality, price and consolidation is driving this watch list.
- In comparison to five years ago, the numbers have come down significantly.
- Only a couple of suppliers on this list.
- We do not have a watch list.



And For the Usual Reasons And in the Last Few Months Since This Survey, Management-Related Issues are a Concern



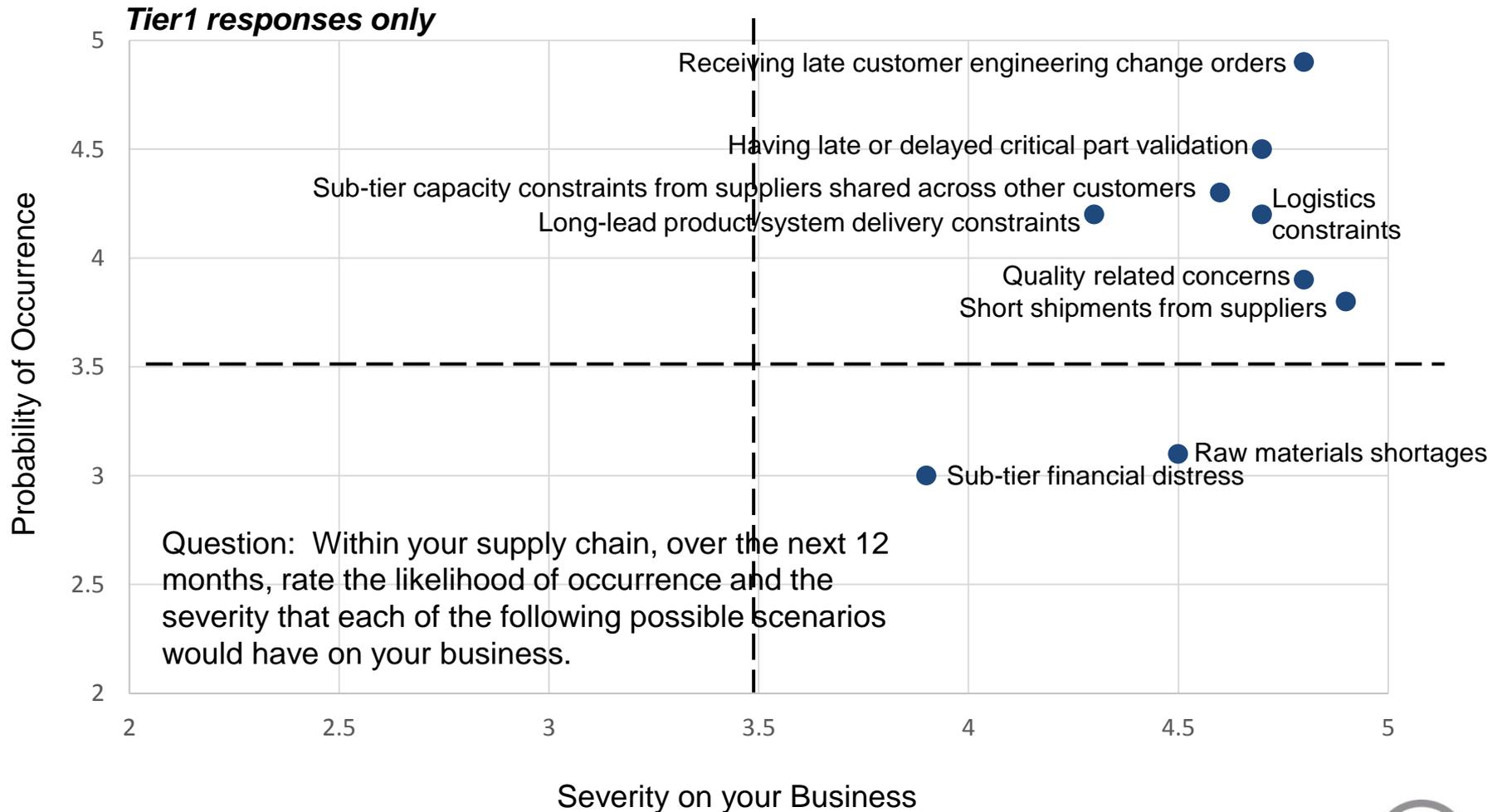
Comments

- There is generally not one reason. It starts with a quality or delivery issue and gets worse from there, unless we are alerted and assist the supplier with countermeasures.
- Quality but financial is a close second.
- Suppliers becoming more leveraged to support increased capacities is the main concern.
- 1) quality, 2) delivery, 3) financial viability



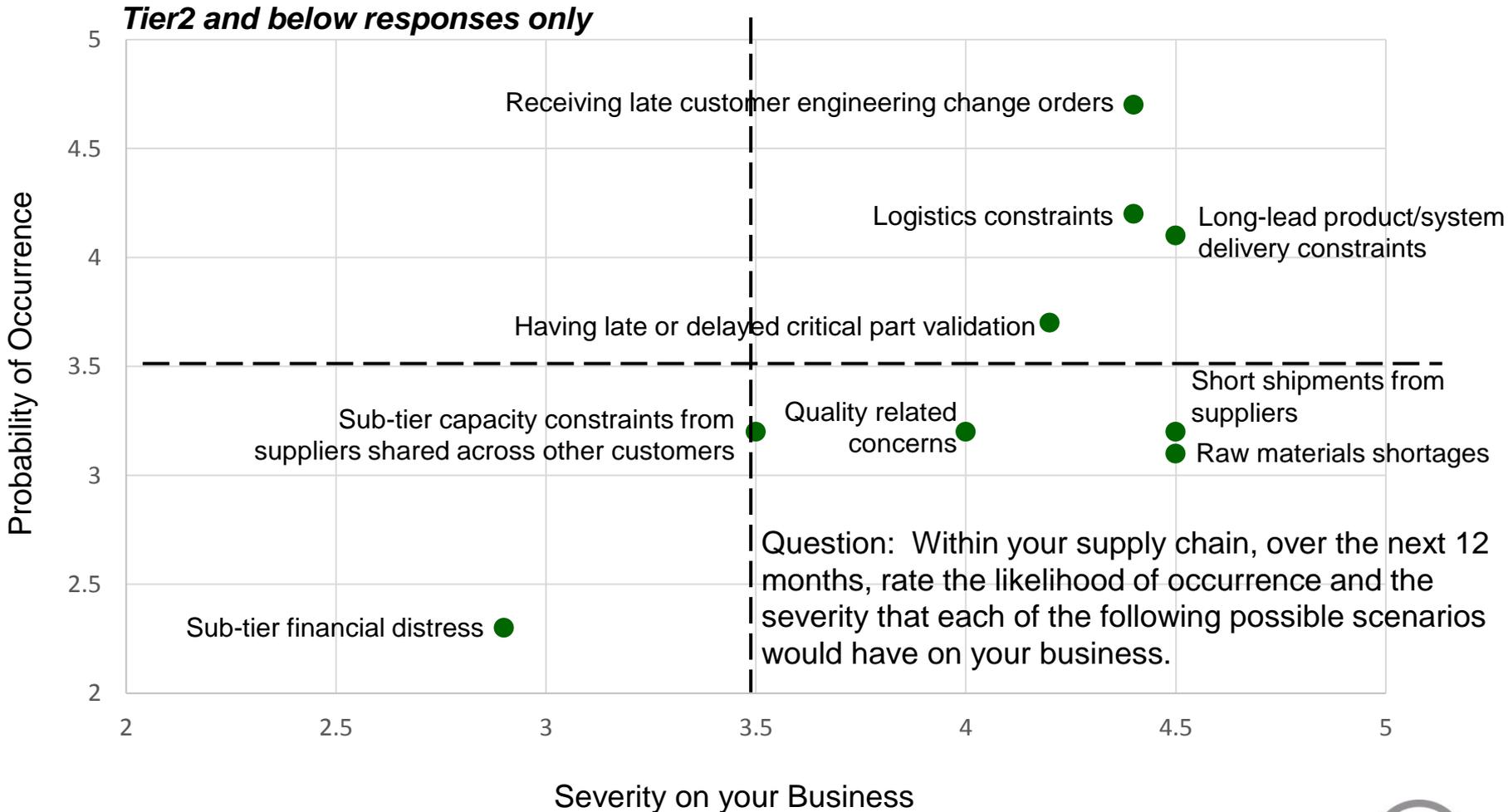
Top Line Production Schedules Remain Strong – Getting the Production Done Is Getting Stressful (Tier 1 View)

Rating scale for both probability and severity is 1-7, with 7 being highly likely of occurrence and very severe

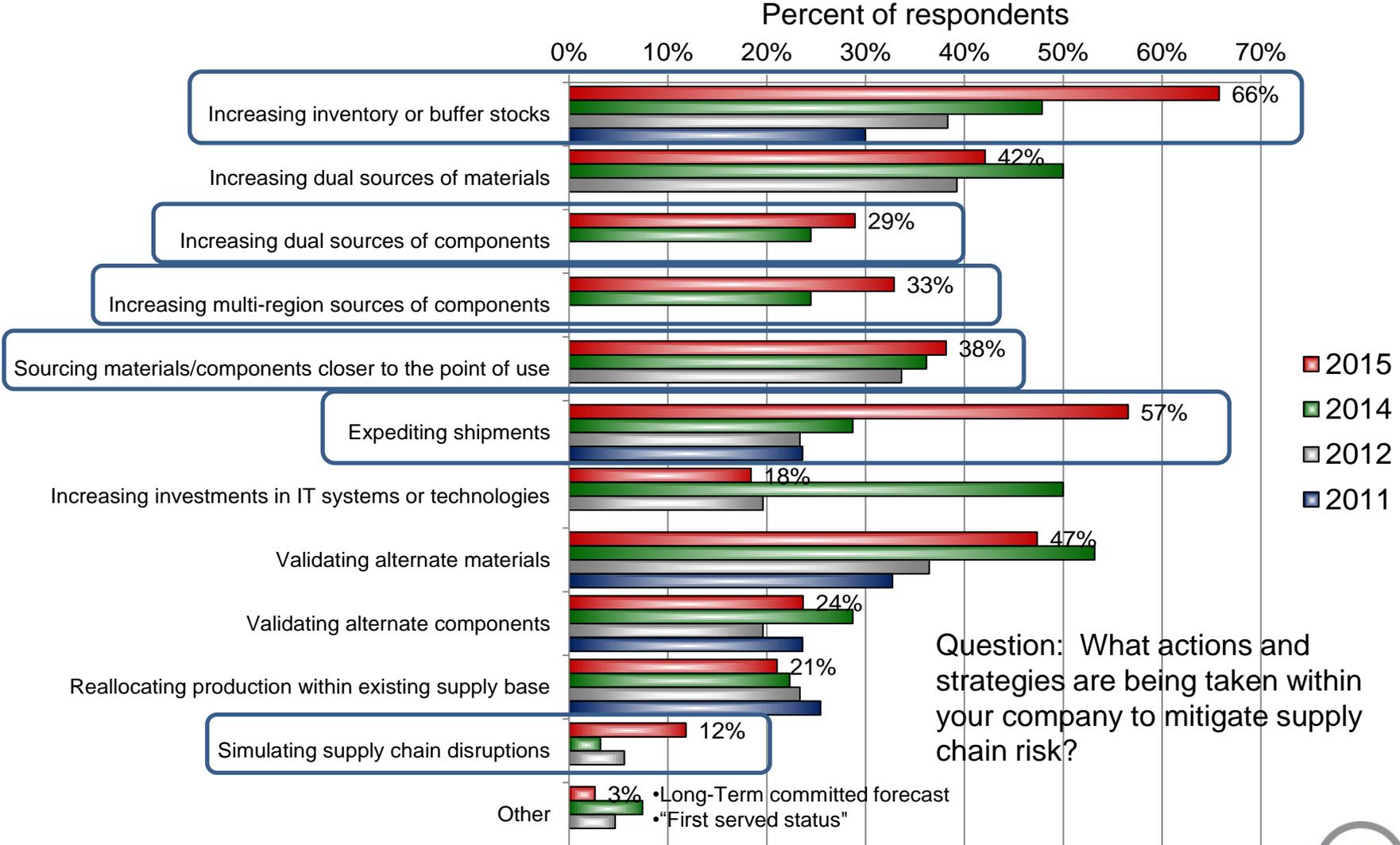


Top Line Production Schedules Remain Strong – Getting the Production Done Is Getting Stressful (Tier 2 View)

Rating scale for both probability and severity is 1-7, with 7 being highly likely of occurrence and very severe

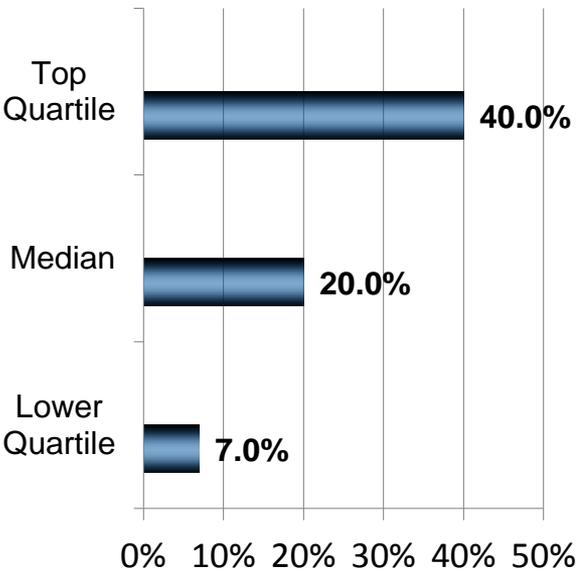


Margins are Being Squeezed Given the Wide Range of Countermeasures Taking Place



Material costs for North American production that is purchased outside of the United States.

Estimate the percent of your current material costs for North American production that is purchased outside of the United States (percent of dollar value).



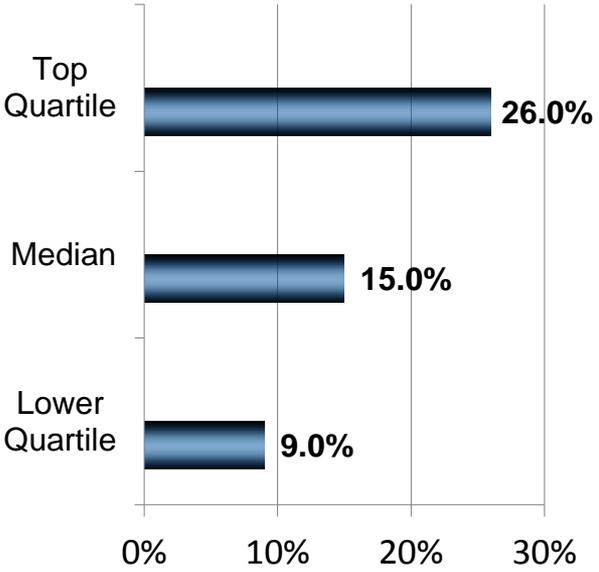
Regional purchase value outside of the United States

	Lower Quartile	Median	Upper Quartile	Number of respondent companies purchasing from each region
Canada	10%	18%	31%	24
Mexico	13%	27%	55%	26
Europe	11%	22%	60%	43
Japan/ Korea	11%	29%	67%	35
China	16%	30%	55%	51
S. America	5%	10%	20%	9
Mid-East/ Africa	8%	10%	10%	5
S. Asia	10%	25%	43%	20



North American production that is exported outside of the United States

Estimate the percent of your current North American production that is exported outside of the United States (percent of dollar value).



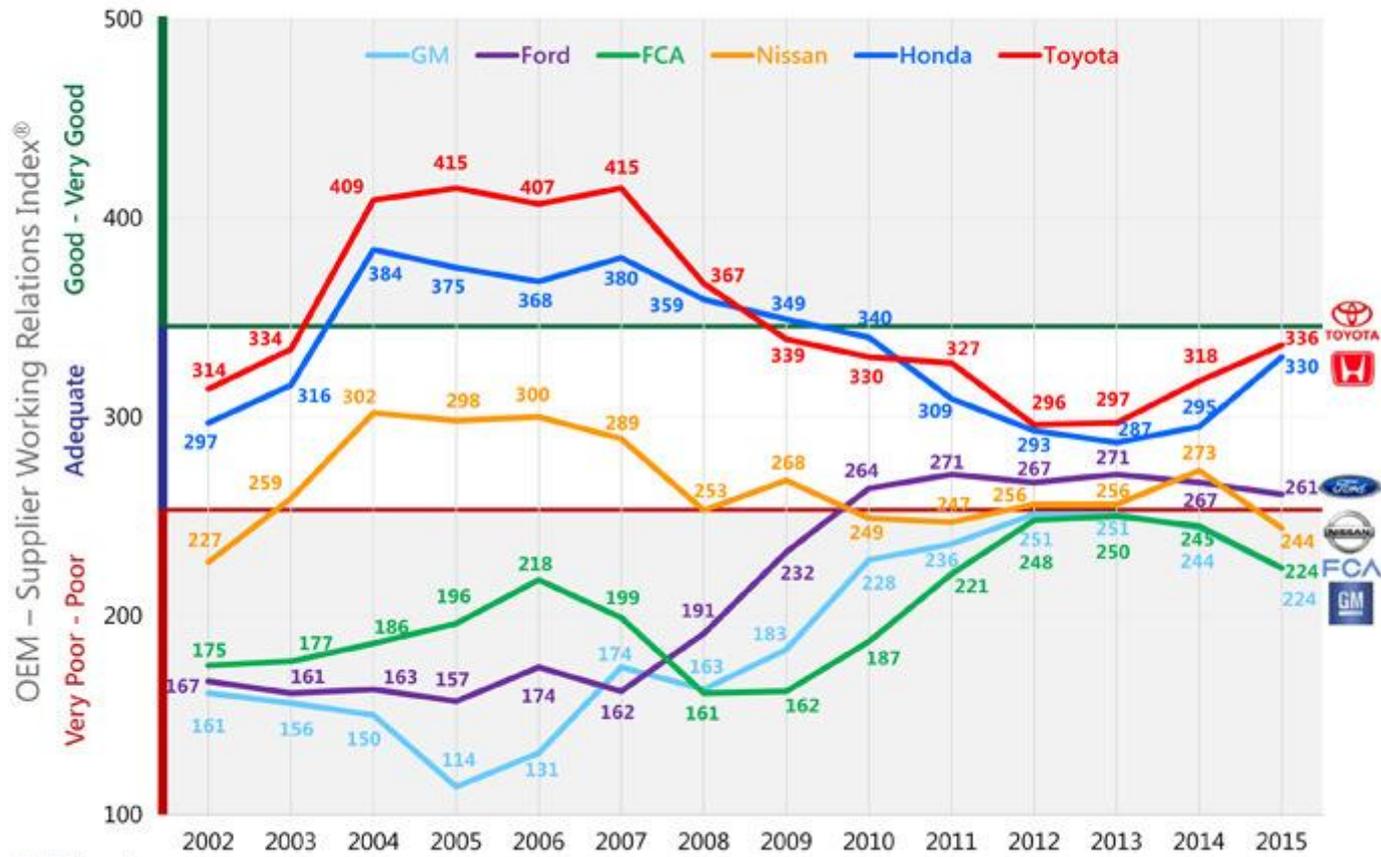
Regional export value from the United States

	Lower Quartile	Median	Upper Quartile	Number of respondent companies exporting to each region
Canada	15%	25%	39%	43
Mexico	20%	40%	67%	55
Europe	10%	20%	34%	54
Japan/ Korea	6%	11%	24%	28
China	7%	10%	25%	43
S. America	5%	10%	21%	28
Mid-East/ Africa	2%	2%	3%	4
S. Asia	5%	6%	17%	15



Topics Suppliers Are Watching: Is the Great Customer-Supplier WRI Convergence Over?

OEM - Supplier Working Relations Index®



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Topics Suppliers are Watching: How Will Safety Regulation Enable Technology Commercialization?

TIMELINE VEHICLE SAFETY

5 Years – Highlighting Various Anticipated Rulemakings, Guidelines and Agency Decisions

KEY:
 (Mo Yr) = Actual
 ~ = targets
 * = All Vehicles

2015

- FMVSS 114, Keyless Ignition System Final Rule ~ Feb 2015
- Rear Seat Belt Reminder System NPRM ~ Oct 2015
- Upgrade of LATCH Usability Requirements ~ Oct 2015
- **Min. Sound Req's for HEVs, EVs Final Rule** ~ Nov 2015*
- **Driver Distraction Ph. 2 PADs, Final Guides** ~ Q4 2015 / Q1 2016
- **PCAM for LVs Agency Decision** ~ 2015
- Collision Warning & Avoidance Research (ongoing)*
- Autonomous Vehicles Research (ongoing)*

2014

2015

2016

2017

2018

2017

- **Driver Distraction Ph. 3 Auditory-Vocal HMI, Final Guides** ~ 2017
- Various crash avoidance and crashworthiness rules may be proposed / implemented*

2018

- Truck Tractor (4-axle, severe svc, etc.) ESC Compliance ~ 2018

Q.3/4 of 2014

- **New FMVSS V2V Communication ANPRM** (Aug 2014)
 V2V Heavy Vehicles Agency Decision ~ Q4 2014 / Q1 2015
- RFS Volume Standards for 2014 ~ Sept 2014
- Rear Seat Belt Reminder System NPRM ~ Oct 2014
- FMVSS 116, Brake Fluids, EPDM Rubber Final Rule ~ Nov 2014
- Upgrade of LATCH Usability Requirements ~ Dec 2014
- **FCAM for LVs Agency Decision** ~ Q4 2014 / Q1 2015
- **NCAP Enhancements Agency Decision** ~ Q4 2014 / Q1 2015
- Oblique/Small Overlap, Agency Decision ~ Q4 2014 / Q1 2015
- **Driver Distraction Ph. 2 PADs, Prop. Guides** ~ Q4 2014 / Q1 2015
- FCC 5.9GHz Final Rule ~ Q4 2014 / Q1 2015*
- Collision Warning & Avoidance Research (ongoing)*
- Autonomous Vehicles Research (ongoing)*

2016

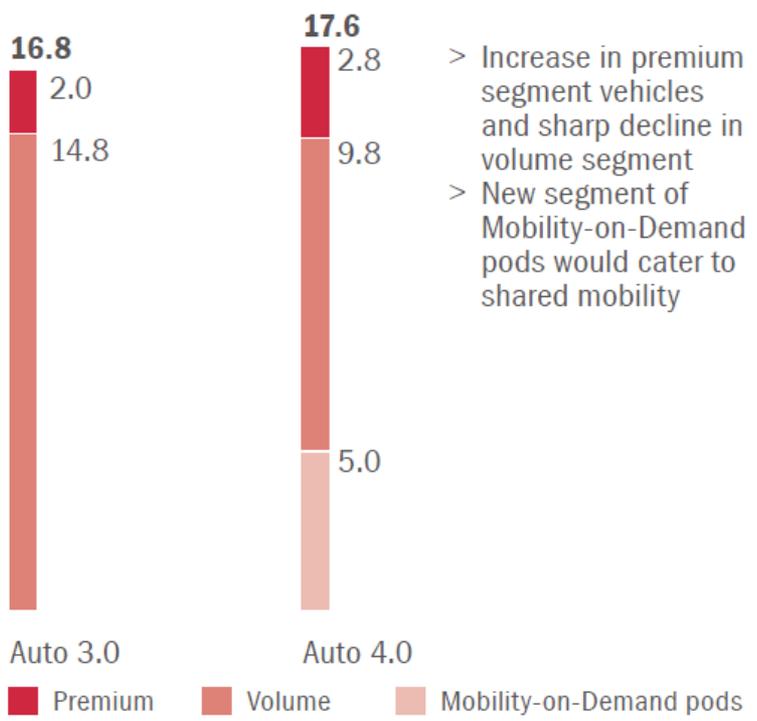
- **New FMVSS V2V Communication NPRM** ~ 2016
- Rear Seat Belt Reminder System Final Rule ~ 2016
- **Driver Distraction Ph. 3 Auditory-Vocal HMI, Proposed Guides** ~ 2016
- Various crash avoidance and crashworthiness rules may be proposed / implemented*

Near-Term Factors Influencing Future Work:

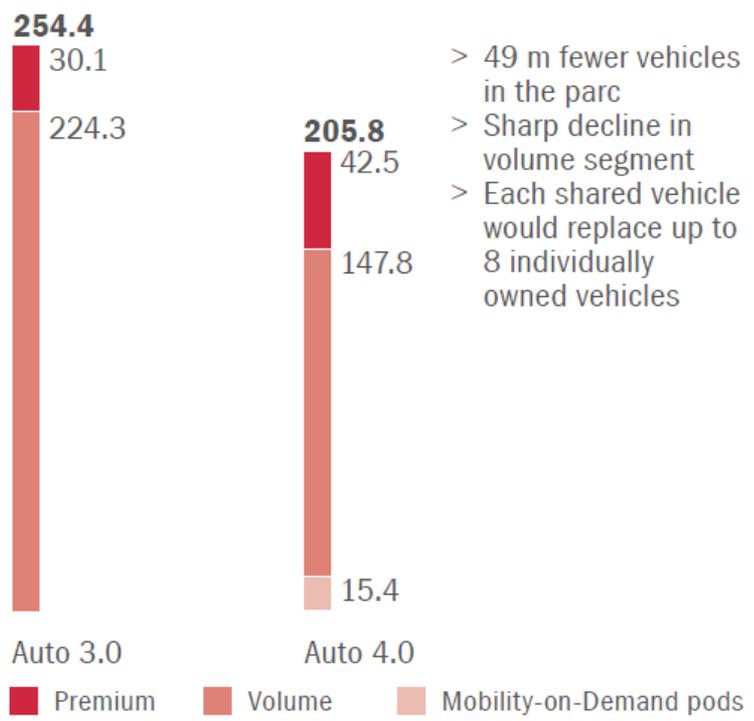
- New NHTSA Administrator & New Associate Administrator for Rulemaking in place, but still some key leadership vacancies
- Still Waiting (!!!) NHTSA Rulemaking & Research Priorities Plan
- Some Final Rules are in limbo
 Potential for outside, top-down factors could shuffle current agency priorities
- Crashworthiness Research and Possible Agency Decisions on Crashworthiness rules are to be expected to be issued in the near future (e.g. Small Overlap Crashes)

Topics Suppliers are Watching: Alternative Vehicle Ownership Models: Good for Sales, Bad for Vehicles in Operation?

ANNUAL SALES VOLUME IN THE US [M UNITS]



VEHICLE PARC IN THE US [M UNITS]



Source: Press articles, annual reports, US Census, NHTSA, FHWA, IHS, Automotive Fleet, Roland Berger

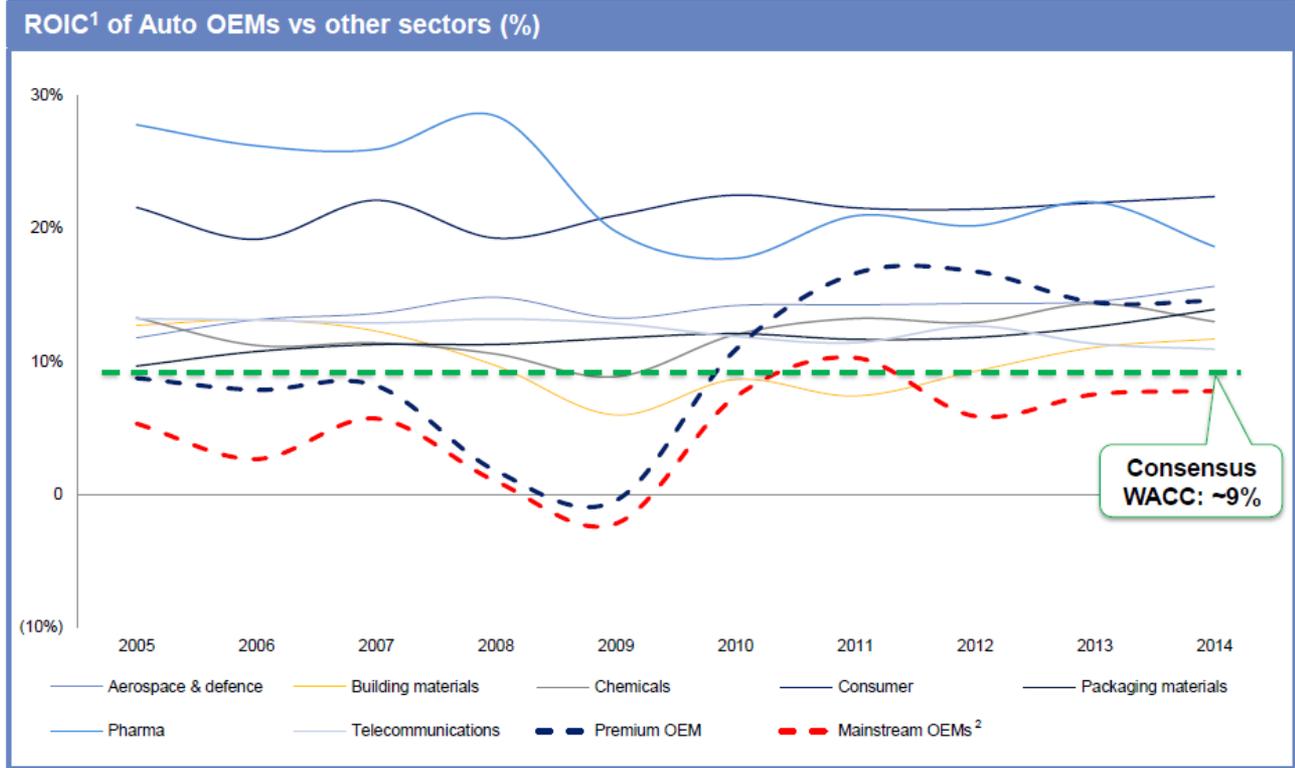


Topics Suppliers are Watching: How Will NHTSA Respond to Recall Incidents?

- GM/Takata brought these Issues to Forefront
- New Administrator Must Address These Issues
- Probably addressed during NHTSA Reauthorization in 2015
- Legislative “Suggestions”
 - Whistleblower incentive – has reappeared in 2015
 - Judicial review of NHTSA’s discretionary decisions
 - Require suppliers to pre-certify compliance with regulations/standards
 - Require OEMs to provide more information on fatalities to NHTSA
 - Public notice of NHTSA data and investigations
 - Individual appeals when defect petition is denied by NHTSA
 - Vehicle Safety User fee (\$9 per vehicle sold in 3 years)
 - Civil penalty increase to \$ 200 million
 - 2 year ban on NHTSA officials working for OEM’s
 - Dealer prohibition of used car sale under recall
 - End regional recalls
 - Replacement vehicle requirement during recall

Topics Suppliers are Watching: Will Industry Consolidation Help ROIC?

... resulting in structurally low and volatile returns



1 ROIC calculated as [Industrial reported EBIT x (1-taxes) + income from equity accounted investments] / Industrial Net Invested capital. Assumed a normalized tax rate equal to 30%. EBIT excludes goodwill impairment. Industrial Net Invested capital is defined as industrial Trade Working Capital + Industrial PP&E + Industrial Intangibles (excl. Goodwill) + Book Value of equity accounted investments + operating cash for OEMs (assumed at 12.5% of industrial sales). EBIT as per accounting principles adopted by each company

2 Mainstream OEMs include: FCA, Ford, General Motors, Honda, Hyundai, Kia, Nissan, PSA, Renault, Toyota, Volkswagen



Topics Suppliers are Watching: How Fast Will Europe Recover?

(in millions)	2015					2016 Forecast	2017 Forecast
	1Q Actual	2Q Forecast	3Q Forecast	4Q Forecast	2015 Forecast		
	5.31	5.37 ↓0.02	4.38 ↓0.02	5.38 ↓0.10	20.44 ↓0.14	20.54 ↓0.47	22.04 ↓0.38
	5.26	5.16 ↑0.10	4.55 ↓0.08	4.79 ↓0.08	19.76 ↑0.06	20.21 ↑0.03	20.83 ↓0.14
	5.27	5.10 ↑0.05	4.57 ↓0.01	4.96 ↓0.12	19.90 ↑0.23	20.24 ↓0.07	21.69 ↑0.15
	5.20	5.30 ↑0.11	4.80 ↓0.05	5.00 ↓0.08	20.40 ↑0.11	20.70 Δ0	21.20 na
	5.16	5.32 ↓0.03	4.56 ↓0.02	5.02 ↓0.08	20.06 ↓0.19	20.73 ↓0.04	21.25 ↓0.04
Forecast Average	5.26	5.23	4.58	5.03	20.13	20.42	21.44
Forecast Spread	0.11	0.27	0.42	0.59	0.68	0.49	1.21
2014 Average	5.12	5.22	4.46	4.95	19.74		

Countries included in the EU forecast: Austria, Belgium, Czech Republic, Finland, France, Germany, Hungary, Italy, Netherlands, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Turkey, United Kingdom.

Thank You

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