



BUILD ELECTRONICS BETTER

The Current Sentiment of the Global Electronics Manufacturing Supply Chain

Monitoring the Pulse of the Global Electronics Industry

April 2022

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Executive Summary



- > **Electronics Manufacturing Supply Chain is Already Feeling the Impact of the Russia-Ukraine War.**
 - The Material Costs Index rose to its highest level, with almost the entire panel reporting material costs are up.
 - Four-fifths of manufacturers expect the war to have a negative impact on commodity prices and transportation costs, while seven in ten anticipate a negative impact on the stock of raw materials
 - Manufacturers expect the automotive, consumer, and industrial electronics markets to be most negatively impacted by conflict, while anticipating the defense market to be positively impacted
- > **Overall Demand Remains Strong:**
 - The New Orders Index declined slightly in the last month but remains well in expansionary territory. The Backlog Index also fell slightly over the last month.
- > **Inventories Remain Tight:**
 - Inventories available to customers (IAC Index) slipped into contractionary territory this month, suggesting inventory levels are low.
 - Inventories available to you from your suppliers (IAFS Index) improved marginally but remains in contractionary territory suggesting the majority of respondents are experiencing this.

Current Conditions for the Electronics Supply Chain Remain Challenging

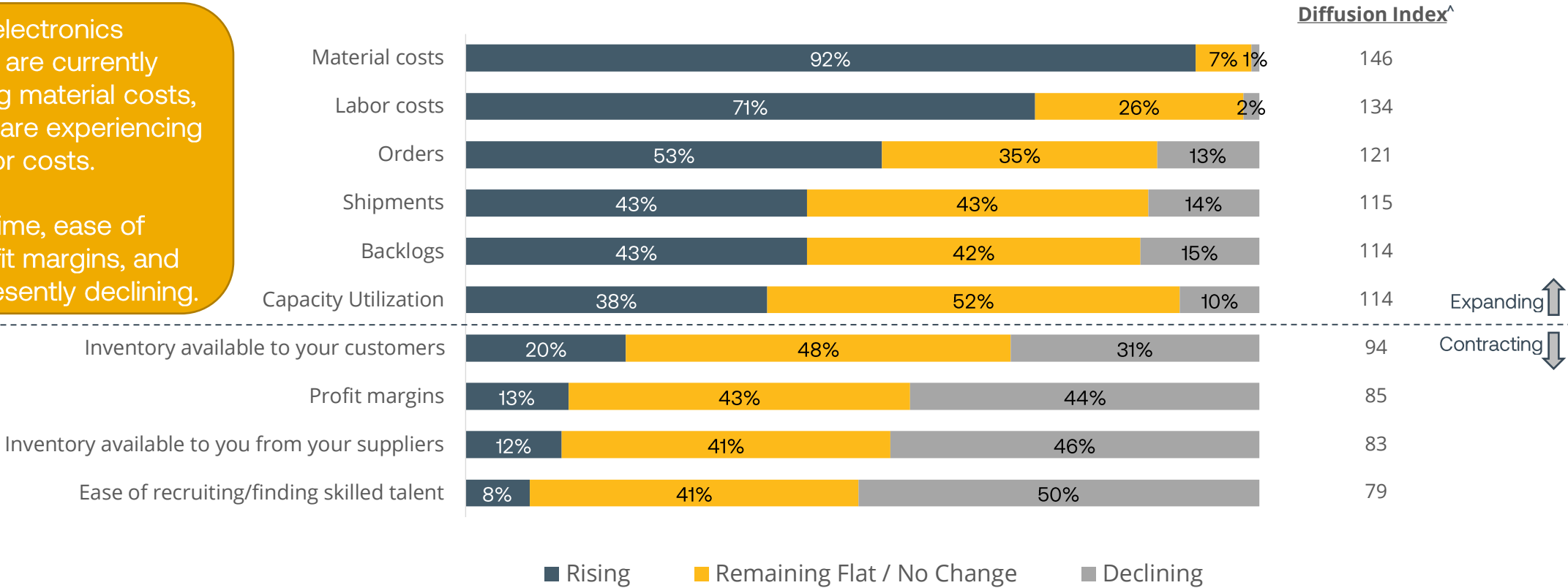


Current Direction of Key Business Indicators

-- Total --

Nine in ten electronics manufacturers are currently experiencing rising material costs, while seven in ten are experiencing rising labor costs.

At the same time, ease of recruitment, profit margins, and inventories are presently declining.



[^]A diffusion index is a statistical measure used to detect economic turning points.

Regional Differences in Current Conditions



- **Shipments are rising at a higher rate in North America vs. Europe.**
 - 52% of North American firms indicate shipments are currently rising vs. 29% of European firms.
- **Among firms operating Globally and those in North America, orders are currently rising at a faster pace when compared to European firms.**
 - 68% of Global manufacturers and 64% of North American manufacturers indicate orders are currently rising, which compares to a significantly lower 35% of manufacturers in Europe, where orders are more likely to be remaining flat.
- **Profit margins are rising more so for firms operating Globally vs. all other regions.**
 - While 35% of Global manufacturers report profit margins are currently rising, only 13% of North American manufacturers, 10% of those in APAC, and 4% in Europe indicate their profit margins are increasing.
- **Ease of recruitment is currently declining at a significantly higher rate in North America and Europe when compared to Global manufacturers.**
 - 55% of manufactures in North America and 56% of manufactures in Europe indicate ease of recruitment is declining, which compares to only 23% of Global manufacturers.

Regional Differences in Current Conditions



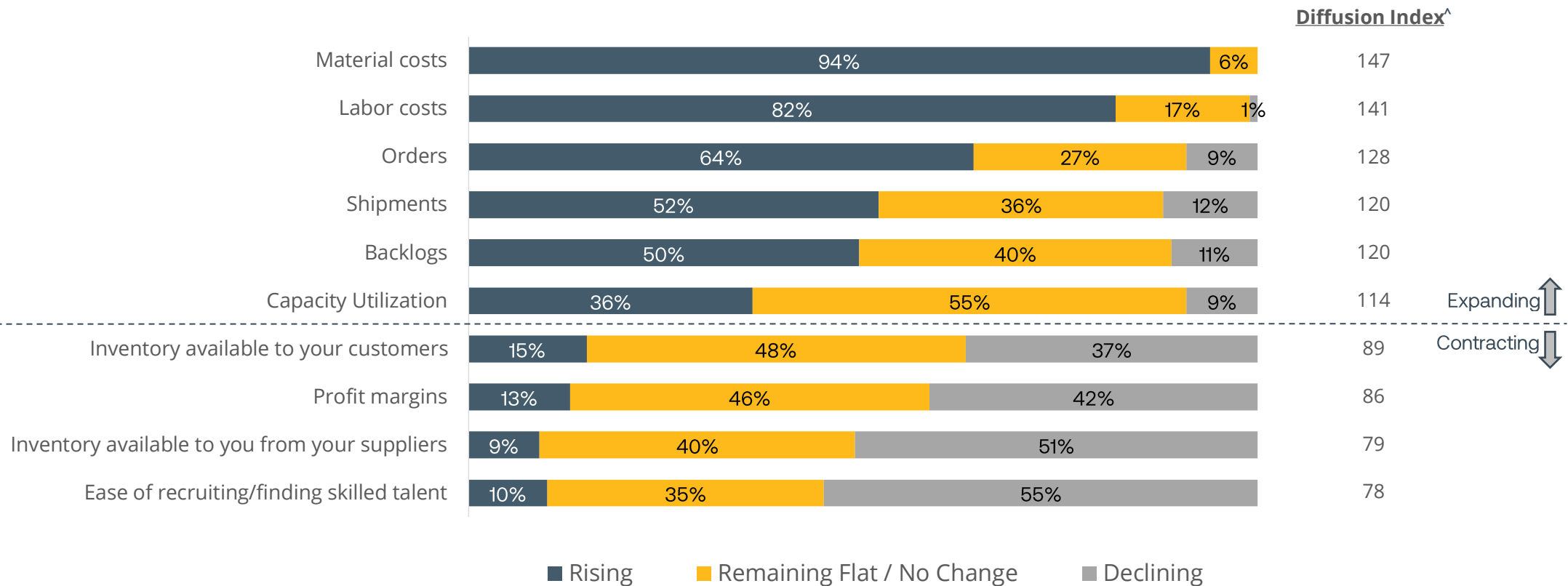
- **Labor costs are currently rising at a higher rate in North America vs. Europe and firms operating Globally.**
 - 82% of North American firms report rising labor costs, which compares to a significantly lower 56% among European firms and 59% among Global operators, where labor costs are more likely to be holding steady.
- **Among firms operating Globally, inventory available from suppliers is rising at a faster pace when compared to firms in North America and Europe.**
 - 27% of Global manufacturers indicate inventory available from suppliers is currently rising; comparatively, only 9% of manufacturers in North America and 6% of those in Europe indicate the same.

The View From Companies Primarily Operating in North America



Current Direction of Key Business Indicators

-- Primary Region: North America --

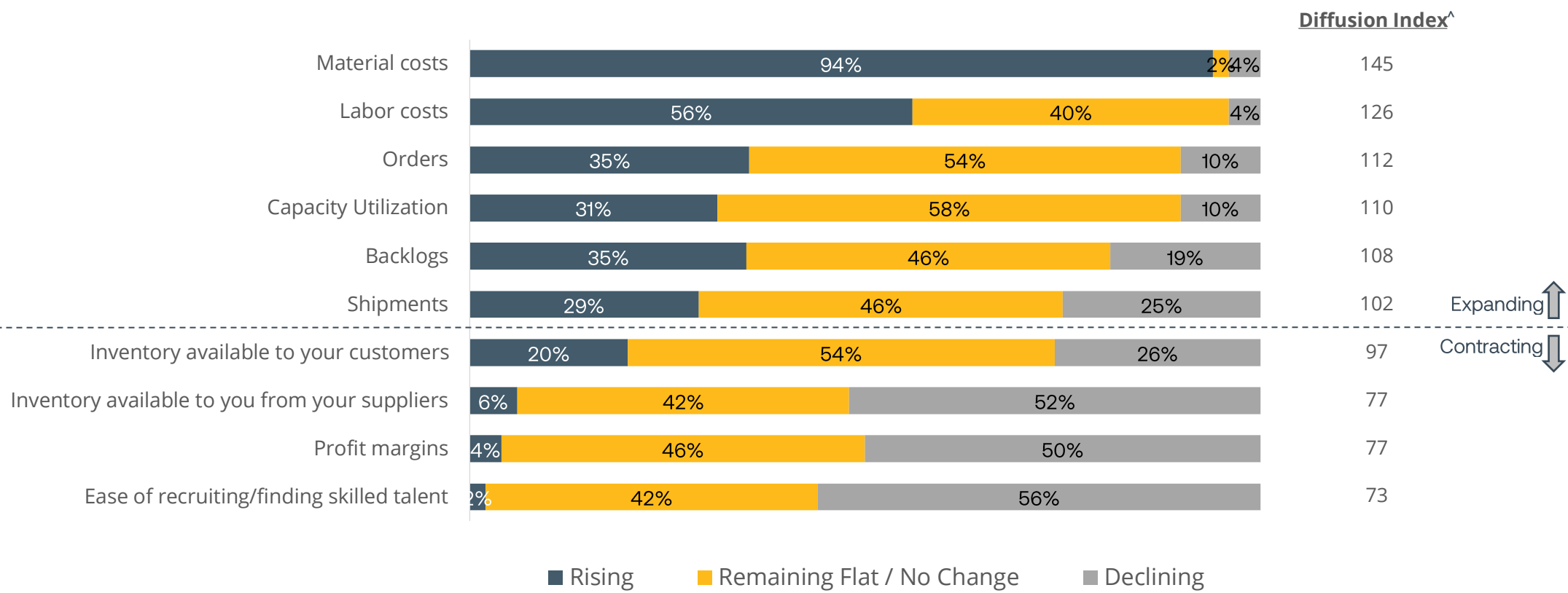


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The View From Companies Primarily Operating in Europe



Current Direction of Key Business Indicators -- Primary Region: Europe --



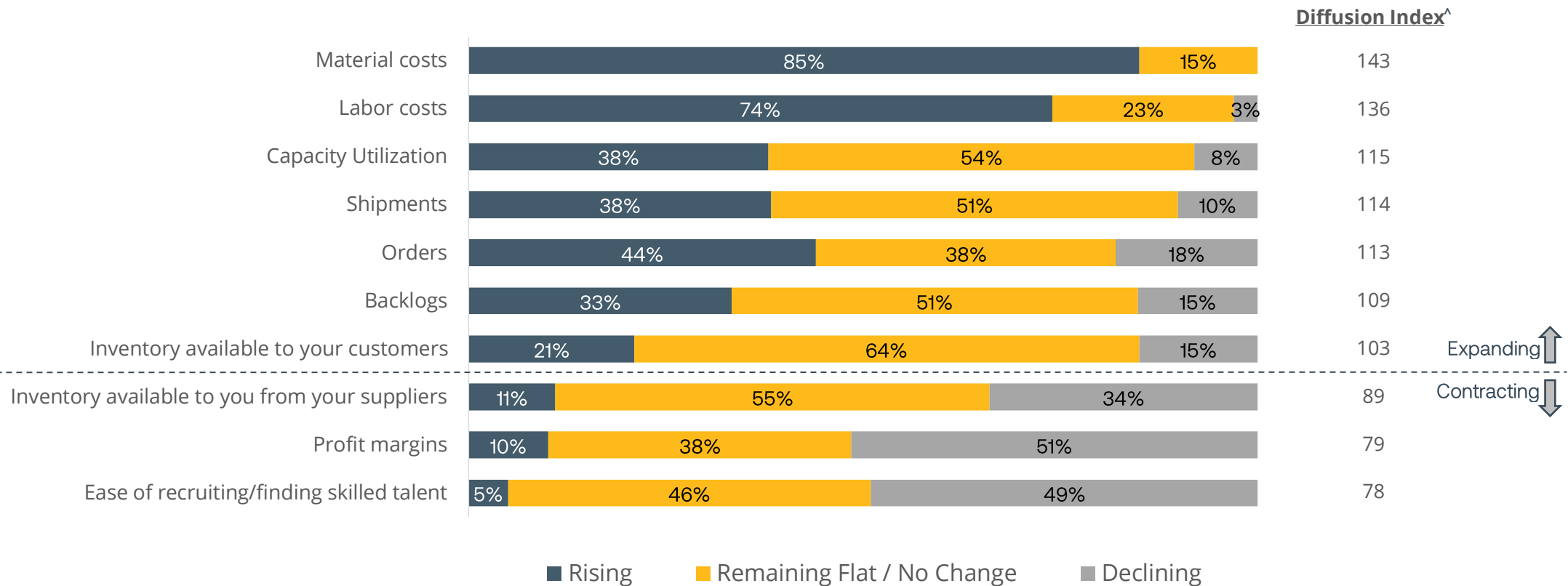
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The View From Companies Primarily Operating in APAC



Current Direction of Key Business Indicators

-- Primary Region: APAC --



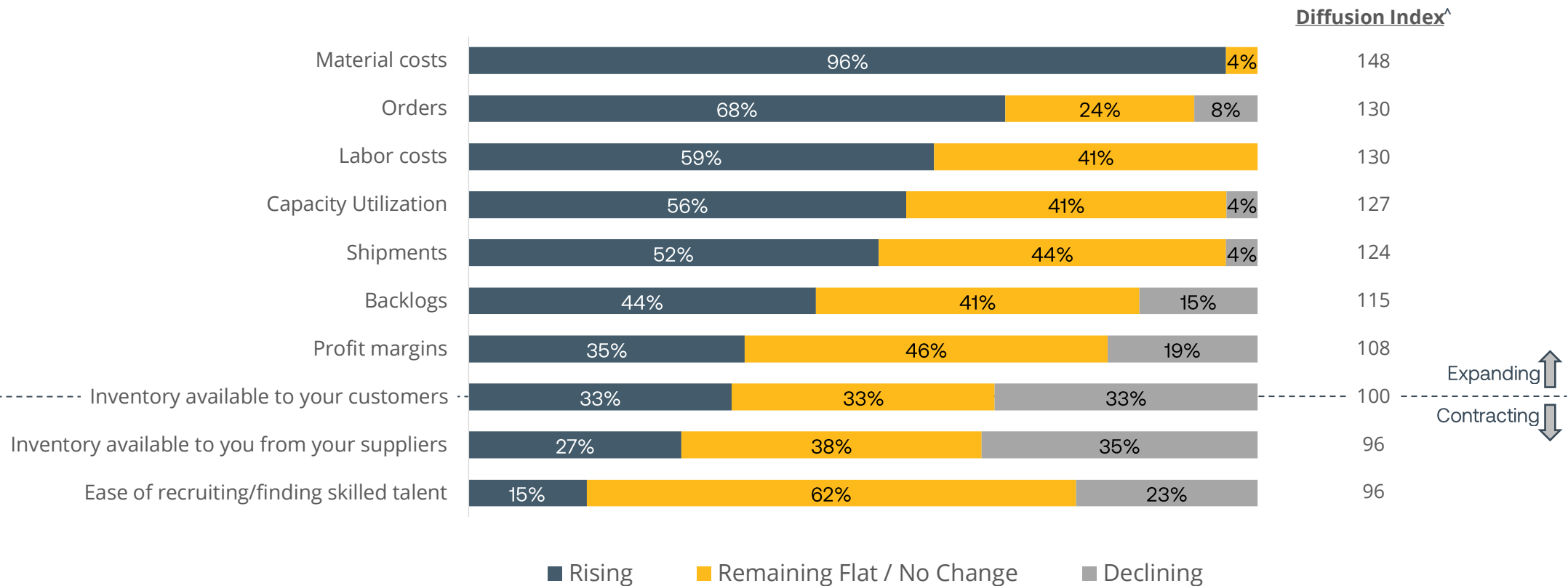
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The View From Companies Primarily Operating Globally



Current Direction of Key Business Indicators

-- Primary Region: Global --



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The Outlook for the Next 6 Months: Continued Challenging Conditions

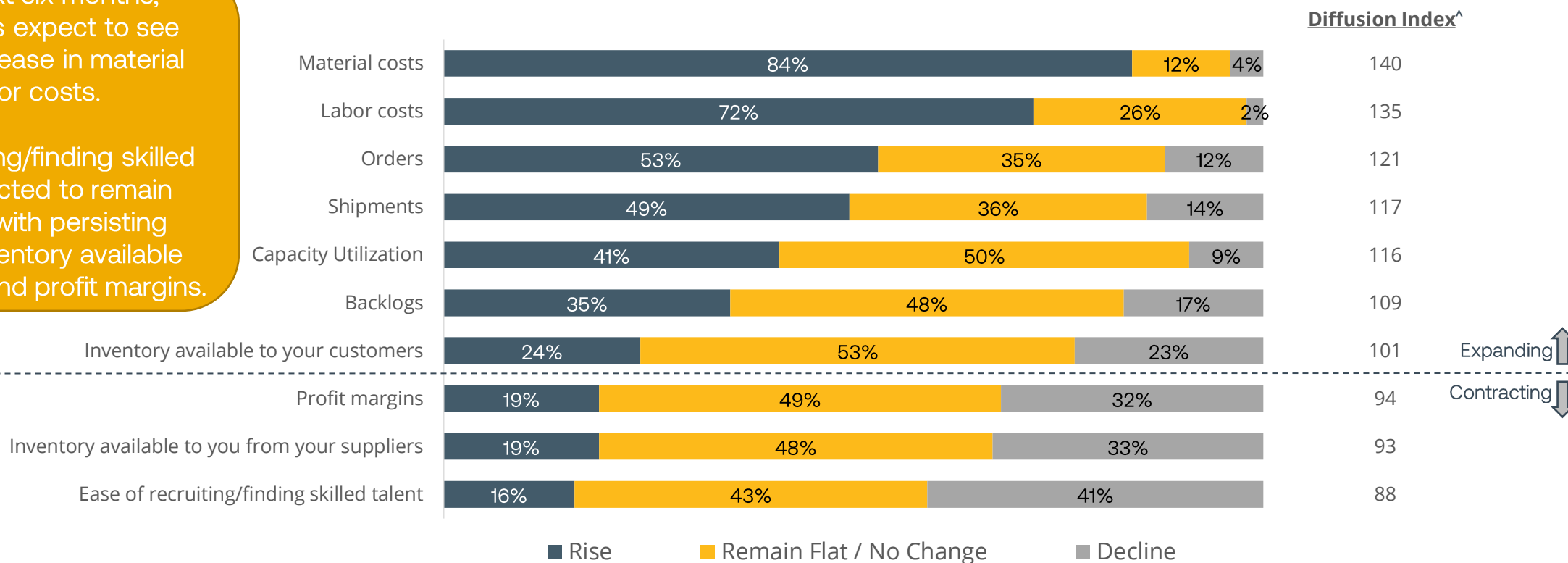


Anticipated Direction of Key Business Indicators – Next Six Months

-- Total --

Over the next six months, manufacturers expect to see continued increase in material and labor costs.

Ease of recruiting/finding skilled talent is expected to remain challenging, with persisting declines in inventory available from suppliers and profit margins.



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Regional Differences in the Outlook



- **Among firms operating Globally and those in North America, shipments are expected to rise at a higher rate vs. Europe and APAC.**
 - 77% of Global manufactures, along with 54% of North American manufacturers, expect shipments to rise in the next six months, compared to only 31% of manufactures in Europe and 45% of those in APAC, with European manufacturers being more likely to expect shipments to remain stable.
- **At the same time, orders are expected to rise more so among firms operating Globally and those in North America when compared to Europe and APAC.**
 - 80% of Global manufacturers and 60% of North American manufacturers anticipate orders to rise in the next six months, whereas only 33% of manufacturers in Europe and 47% in APAC expect to see an increase, with European manufacturers again being more likely to expect orders to remain stable.
- **The outlook for increased profit margins is notably weaker among European manufacturers.**
 - 35% of Global manufacturers, 20% of North American manufactures, and 24% of those operating in APAC expect profit margins to rise in the next six months vs. only 4% among European manufacturers.

Regional Differences in the Outlook



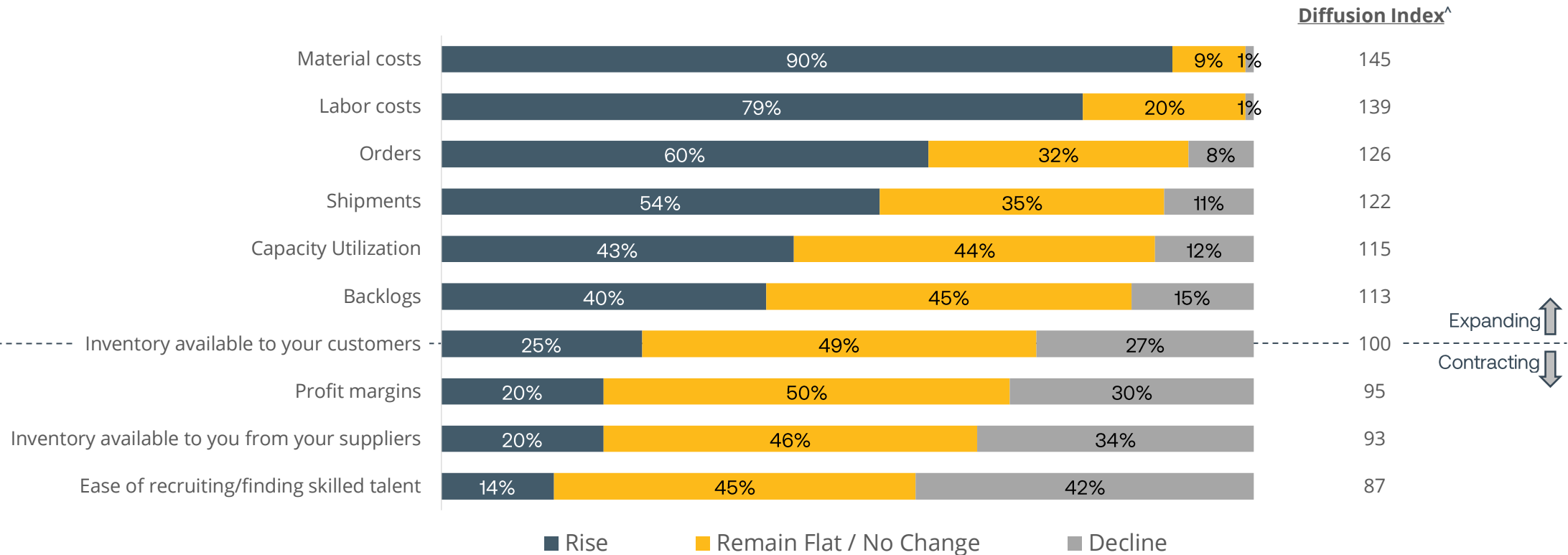
- **Ease of recruitment is expected to improve more so in the next six months among firms operating Globally when compared to North American and European manufacturers.**
 - 40% of Global manufactures expect ease of recruitment to improve, which compares to only 14% of manufacturers in North America and 4% of those in Europe.
- **Outlook concerning inventories is more positive among manufacturers operating Globally compared to European manufacturers.**
 - 40% of Global manufacturers expect inventory available from suppliers to rise in the next six months vs. a significantly lower 6% in Europe.
 - Similarly, 38% of Global manufacturers expect inventory available to customers to rise in the next six months, whereas only 10% of those in Europe indicate the same.

The View From Companies Primarily Operating in North America



Anticipated Direction of Key Business Indicators – Next Six Months

-- Primary Region: North America --



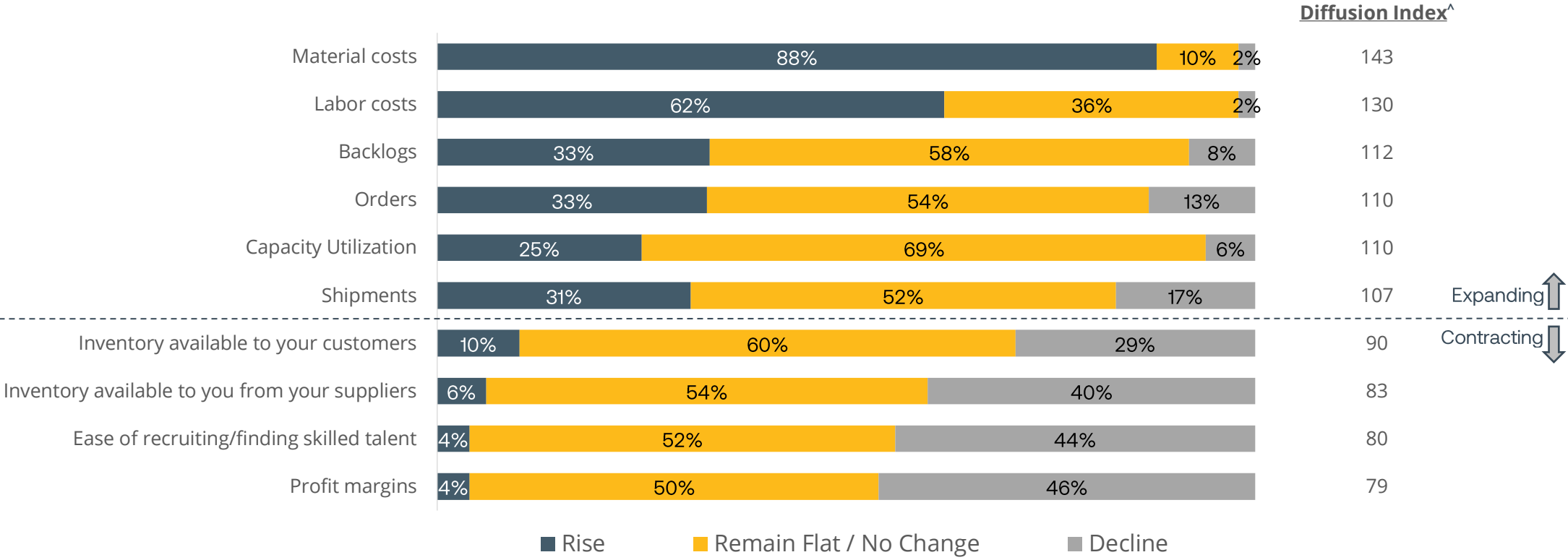
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The View From Companies Primarily Operating in Europe



Anticipated Direction of Key Business Indicators – Next Six Months

-- Primary Region: Europe --



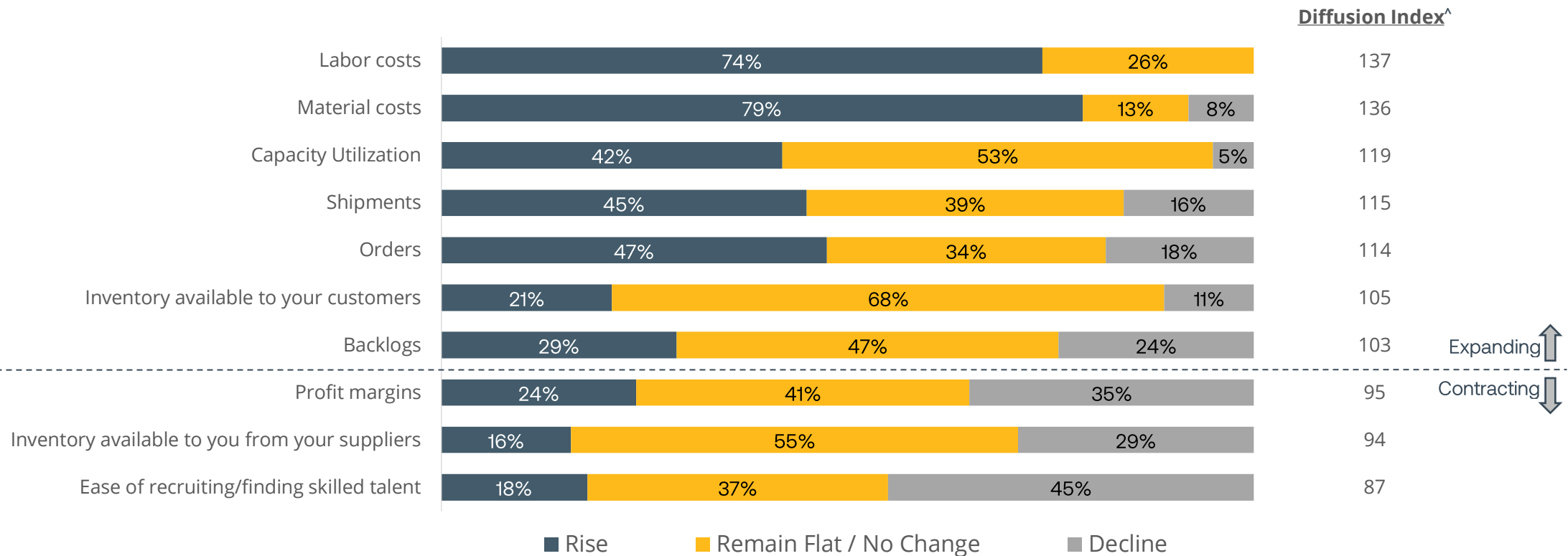
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The View From Companies Primarily Operating in APAC



Anticipated Direction of Key Business Indicators – Next Six Months

-- Primary Region: APAC --



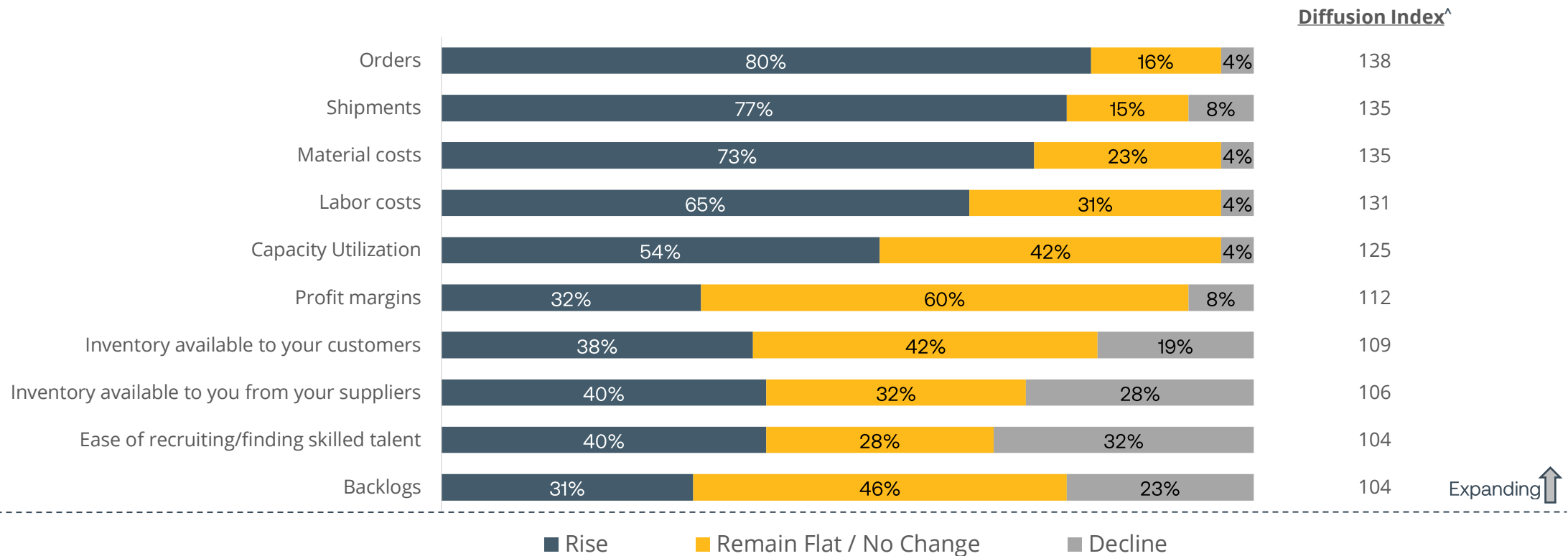
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The View From Companies Primarily Operating Globally



Anticipated Direction of Key Business Indicators – Next Six Months

-- Primary Region: Global --



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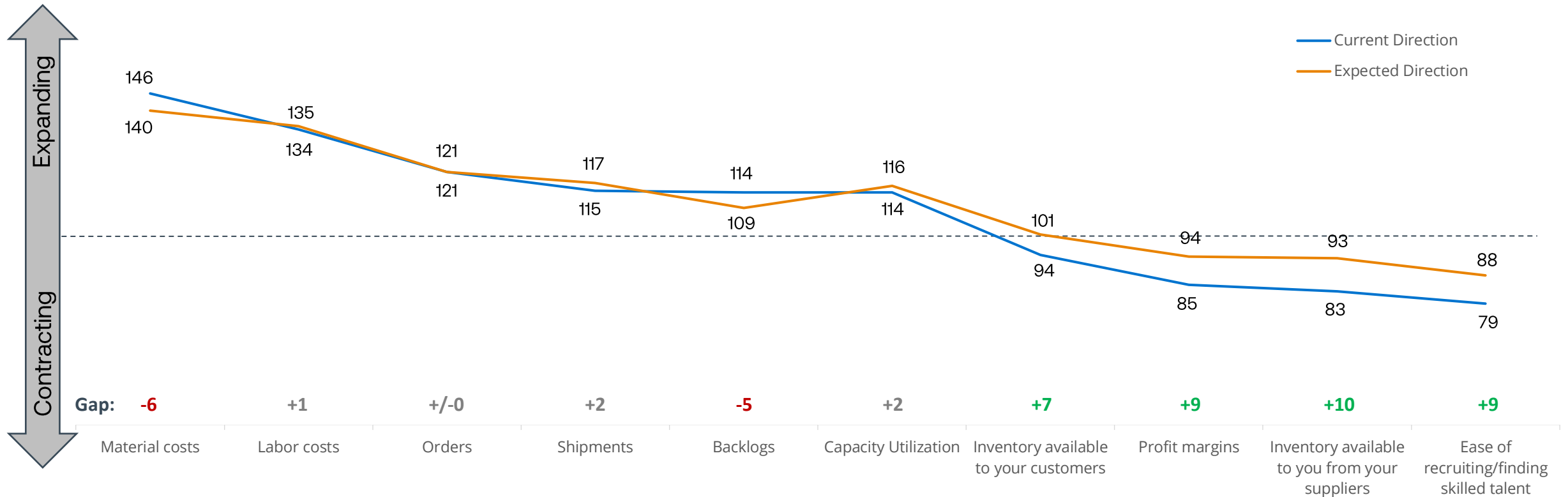
Labor Costs, Orders, Shipments, and Capacity Utilization are Expected to Remain Relatively Stable in the Next Six Months



Although manufacturers anticipate material costs and backlogs to decline, they do expect to see improvement regarding inventories, profit margins, and ease of recruitment.

Direction of Key Business Indicators – Diffusion Index[^]

-- Total --



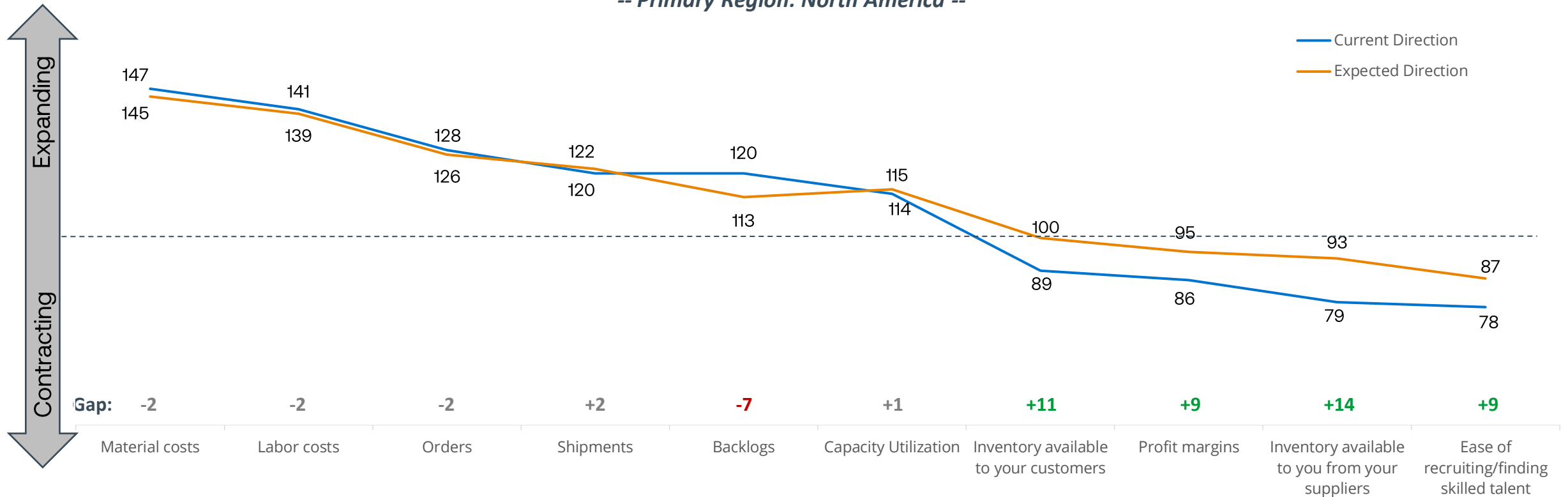
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The View From Companies Primarily Operating in North America



Direction of Key Business Indicators – Diffusion Index[^]

-- Primary Region: North America --



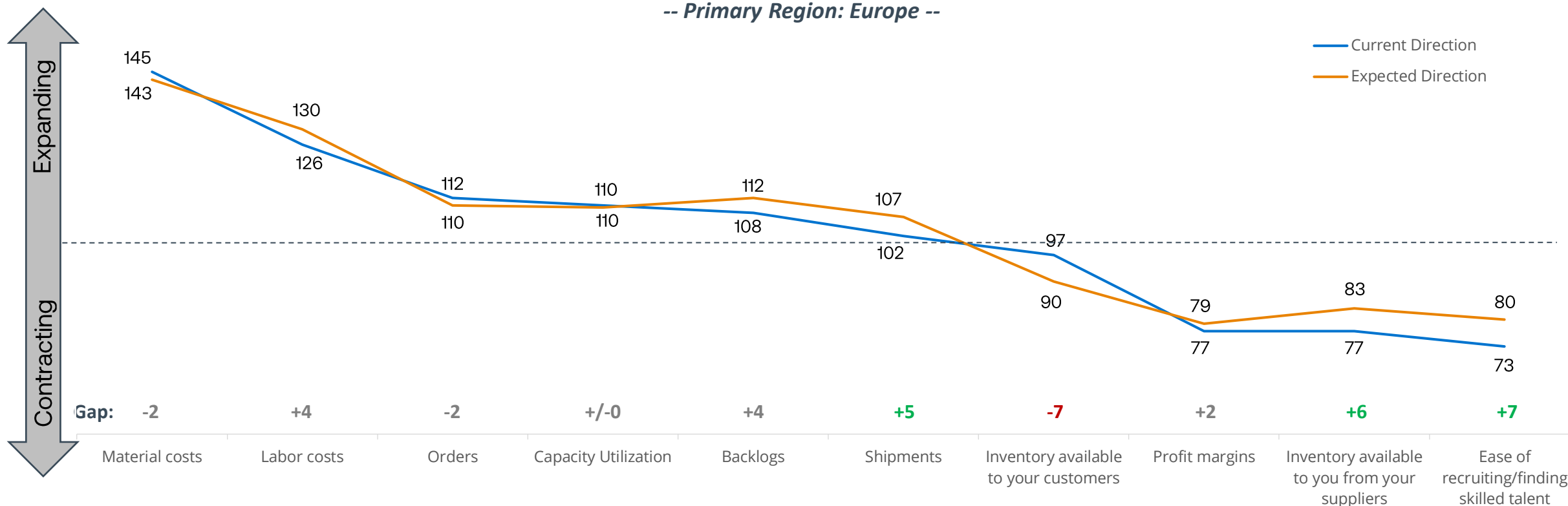
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The View From Companies Primarily Operating in Europe



Direction of Key Business Indicators – Diffusion Index[^]

-- Primary Region: Europe --



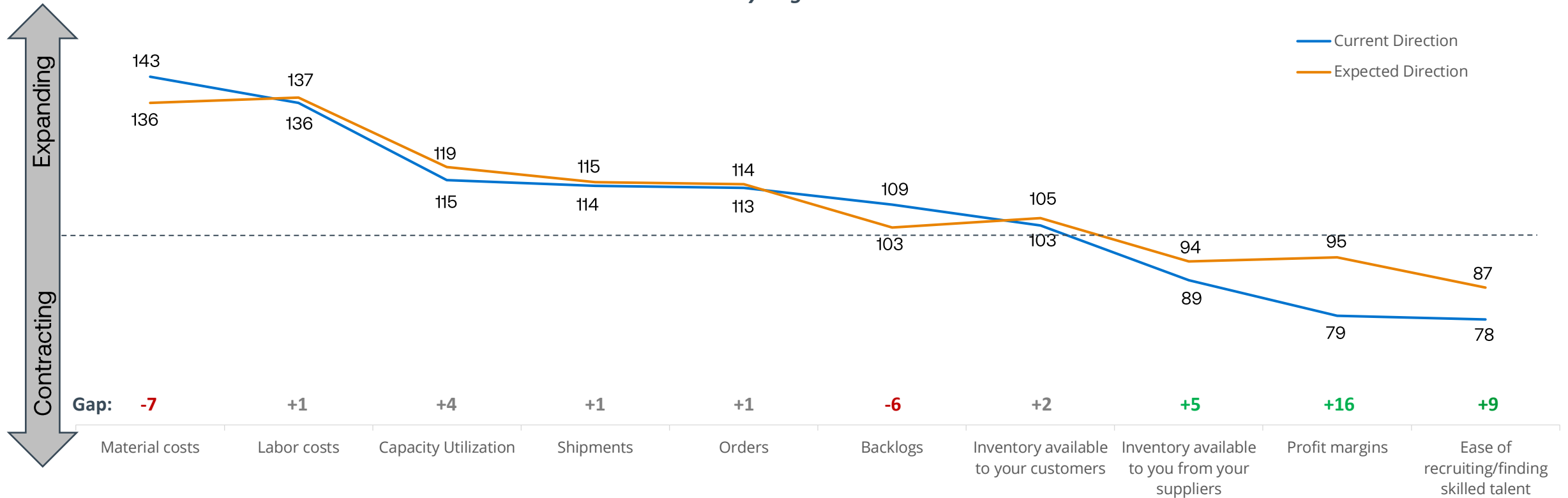
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The View From Companies Primarily Operating in APAC



Direction of Key Business Indicators – Diffusion Index[^]

-- Primary Region: APAC --



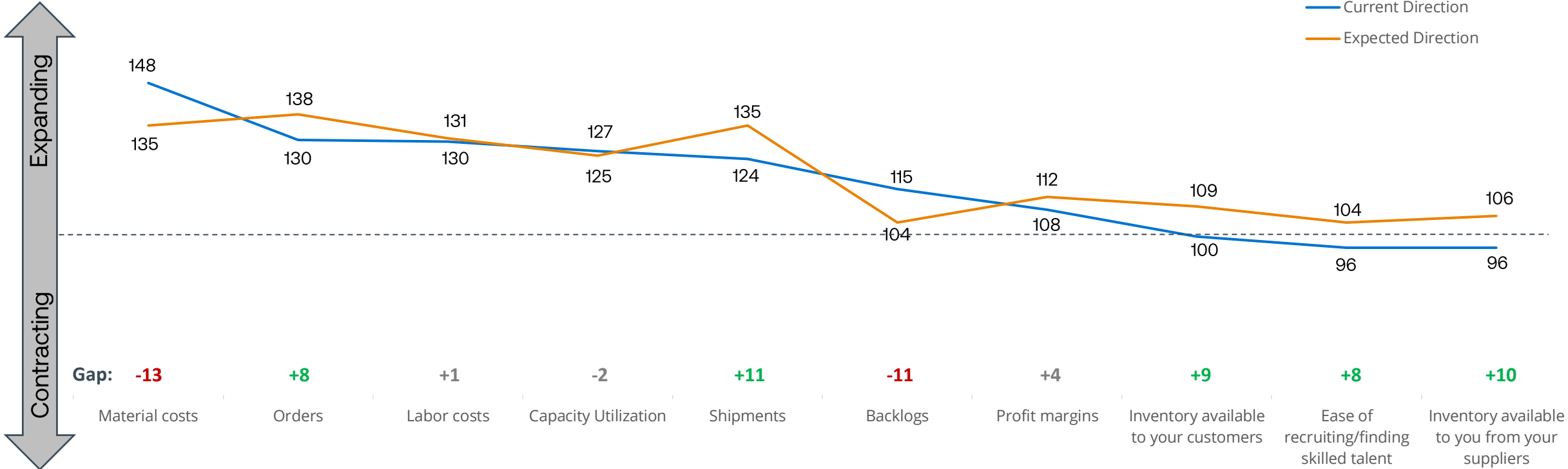
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The View From Companies Primarily Operating Globally



Direction of Key Business Indicators – Diffusion Index[^]

-- Primary Region: Global --



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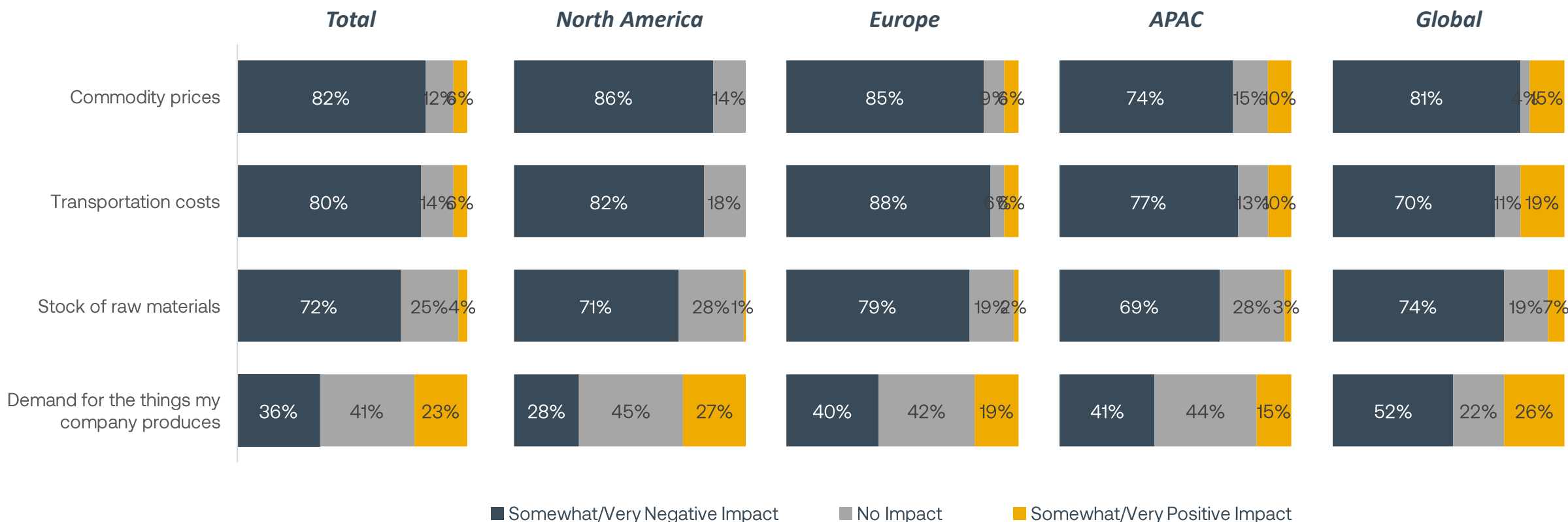
April 2022 Special Questions

Four-Fifths of Manufacturers Expect the Russia-Ukraine Conflict to Have a Negative Impact on Commodity Prices and Transportation Costs, While Seven in Ten Anticipate a Negative Impact on Stock of Raw Materials



Notably, expectations surrounding impact on commodity prices and transportation costs tend to be more positive in all regions outside of North America.

Anticipated Impact of the Russia-Ukraine Conflict on Electronics Supply Chains

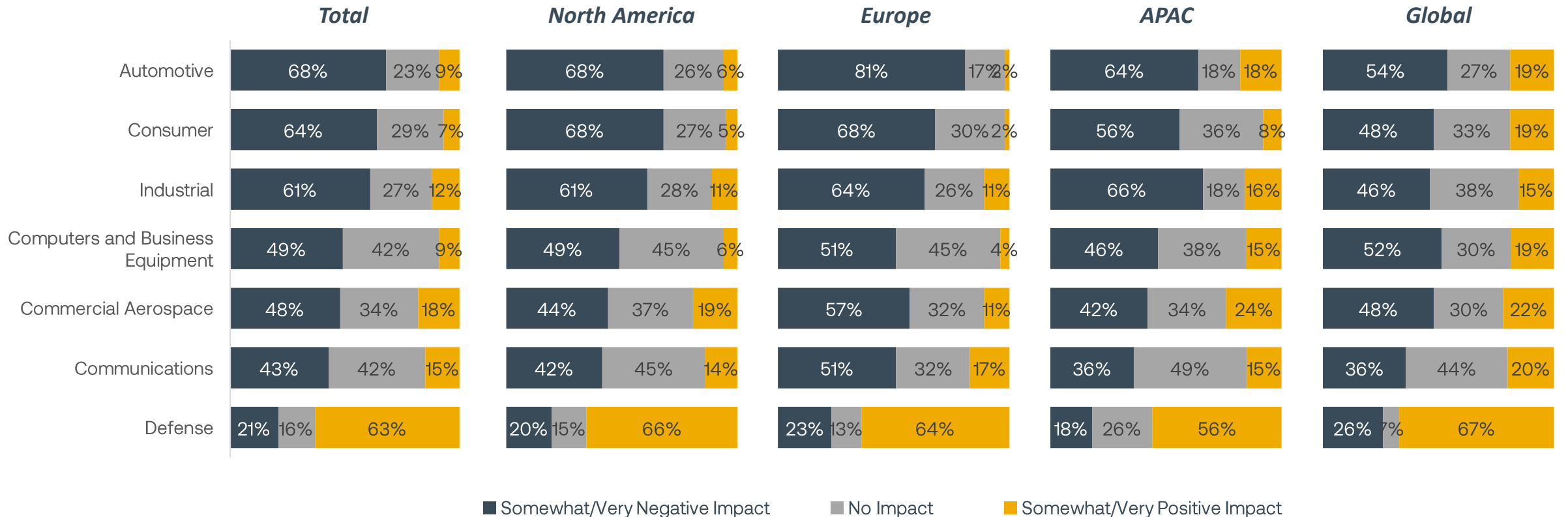


Manufacturers Expect the Automotive, Consumer, and Industrial Down-Stream Electronics Markets to be Most Negatively Impacted by the Russia-Ukraine Conflict, While Anticipating the Defense Market to be Impacted Most Positively



Expectations surrounding impact to the down-stream automotive electronics market tend to be more positive in APAC and among Global firms when compared to both North American and European firms.

Anticipated Impact of the Russia-Ukraine Conflict on Down-Stream Electronics Markets



Appendix

Current Conditions Diffusion Indices

Month-to-Month Comparisons



	October 2021	November 2021	December 2021	January 2022	February 2022	March 2022	April 2022
Material costs	144	144	145	145	143	142	146
Labor costs	133	136	135	137	138	138	134
Orders	127	124	123	123	120	124	121
Backlogs	125	122	124	124	122	119	114
Sales*	124	123	122	--	--	--	--
Shipments^	--	--	--	117	112	115	115
Capacity utilization	114	115	110	114	111	113	114
Profit margins	96	91	90	87	82	86	85
Inventory available to your customers	89	92	87	91	88	109	94
Ease of recruiting/finding skilled talent	77	80	77	78	80	78	79
Inventory available to you from your suppliers	73	78	73	77	78	78	83

Δ+5 points or more vs. previous month

Δ-5 points or more vs. previous month

*Removed January 2022

^Added January 2022

Outlook Diffusion Indices

Month-to-Month Comparisons



	October 2021	November 2021	December 2021	January 2022	February 2022	March 2022	April 2022
Material costs	136	139	138	139	142	139	140
Labor costs	131	135	133	133	137	136	135
Orders	126	128	126	125	121	123	121
Backlogs	112	116	116	120	113	110	109
Sales*	128	129	127	--	--	--	--
Shipments [^]	--	--	--	120	119	121	117
Capacity utilization	119	118	116	118	118	116	116
Profit margins	103	100	96	92	94	97	94
Inventory available to your customers	100	100	99	97	99	103	101
Ease of recruiting/finding skilled talent	91	88	86	82	87	86	88
Inventory available to you from your suppliers	95	92	88	90	93	94	93

Δ+5 points or more vs. previous month

Δ-5 points or more vs. previous month

*Removed January 2022

[^]Added January 2022

- > Each month, IPC surveys executives in the electronics manufacturing sector across the globe with the goal of assessing the current state of the industry.
- > The results contained herein are based upon the findings of IPC's The Current State of Electronics Manufacturing Survey, which was fielded between the dates of March 7 to March 24, 2022.



Questions? Please contact:

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