



BUILD ELECTRONICS BETTER

# The Current Sentiment of the Global Electronics Manufacturing Supply Chain

*Monitoring the Pulse of the Global Electronics Industry*

October 2022

ipc.org →

# Executive Summary



- > **Industry sentiment was relatively unchanged in October**
  - After declining for two consecutive months, the Materials Cost Index rose three points
  - The Orders Index improved, though the outlook weakened somewhat
  - The outlook for capacity utilization declined suggesting some manufacturers might be looking to cut production schedules in the face of a weaker outlook for demand
- > **Most industry executives believe the economy is already in recession or will enter recession by 3Q2023**
  - 27% of industry executives believe the economy is already in recession
  - 13% of industry executives believe the economy will enter a recession in 4Q22
  - 45% of industry executives believe the economy will enter a recession in 2023
  - Roughly 12% of industry executives report they are not expecting a recession
- > **Industry executives expecting a recession are bracing for a longer one**
  - Among electronics manufacturers who believe we are currently in recession or will enter one, roughly a third of executives think it will last 10-12 months. Another one-third of respondents believe it will last more than a year.
- > **When asked about how they are dealing with higher prices, electronics manufacturers report they are focused on efforts to improve efficiency, manage/lower expenses, optimize inventory, and leverage their supply chains**
  - Manufacturers also report they are passing on higher costs to their customers

# Current Conditions for the Electronics Supply Chain

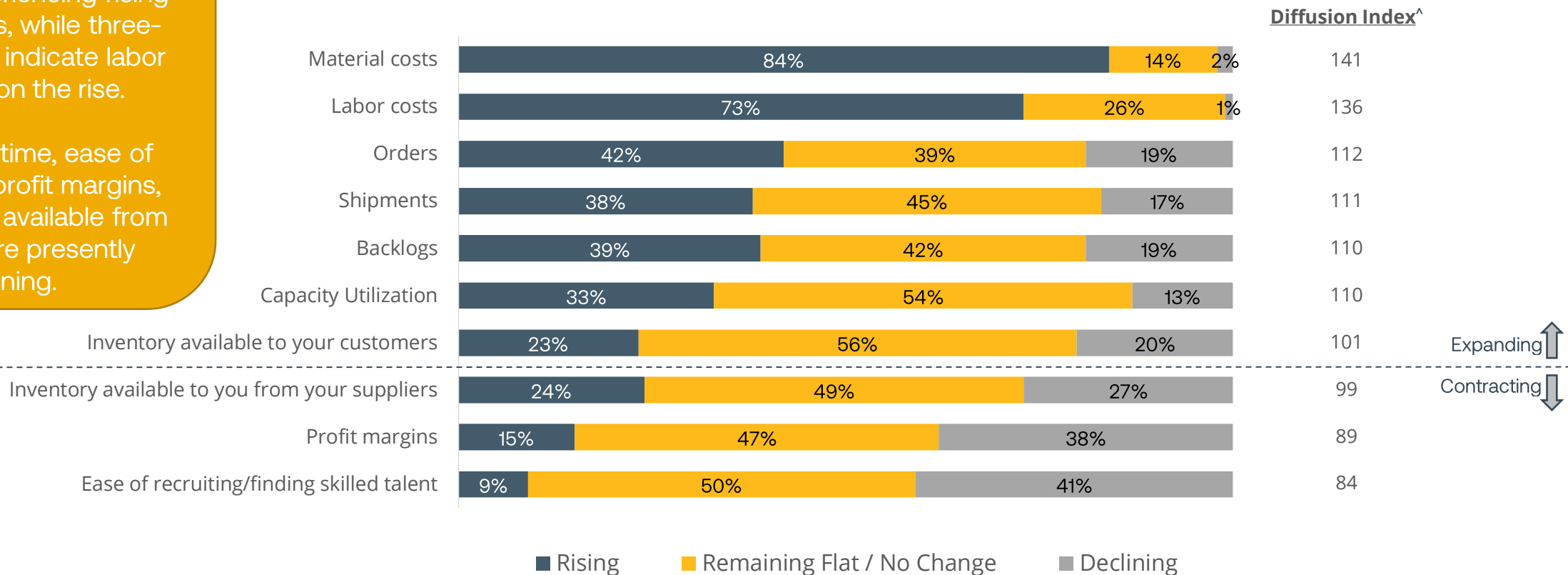


More than four-fifths (84%) of electronics manufacturers are currently experiencing rising material costs, while three-fourths (73%) indicate labor costs are on the rise.

At the same time, ease of recruitment, profit margins, and inventory available from suppliers are presently declining.

## Current Direction of Key Business Indicators

-- Total --



<sup>^</sup>A diffusion index is a statistical measure used to detect economic turning points.

# Regional Differences in Current Conditions

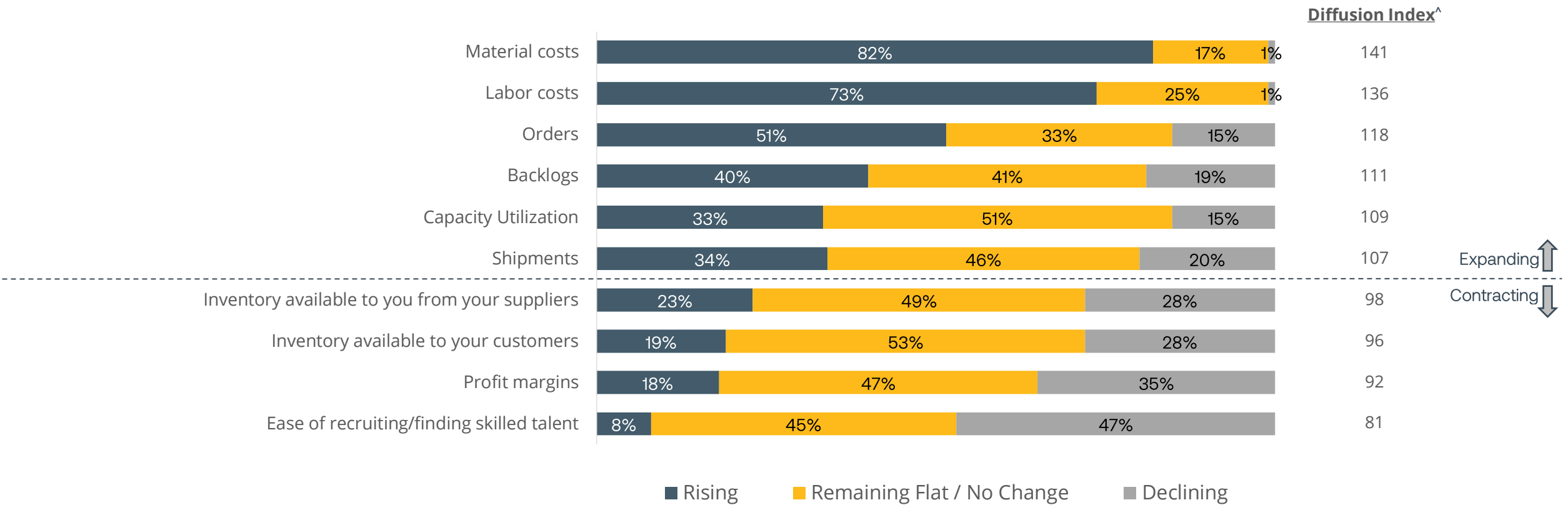


- While there are some slight variances in perceived current direction of key business indicators across regions, there are no significant differences to report upon this month.

# The View From Companies Primarily Operating in North America



Current Direction of Key Business Indicators  
-- Primary Region: North America --

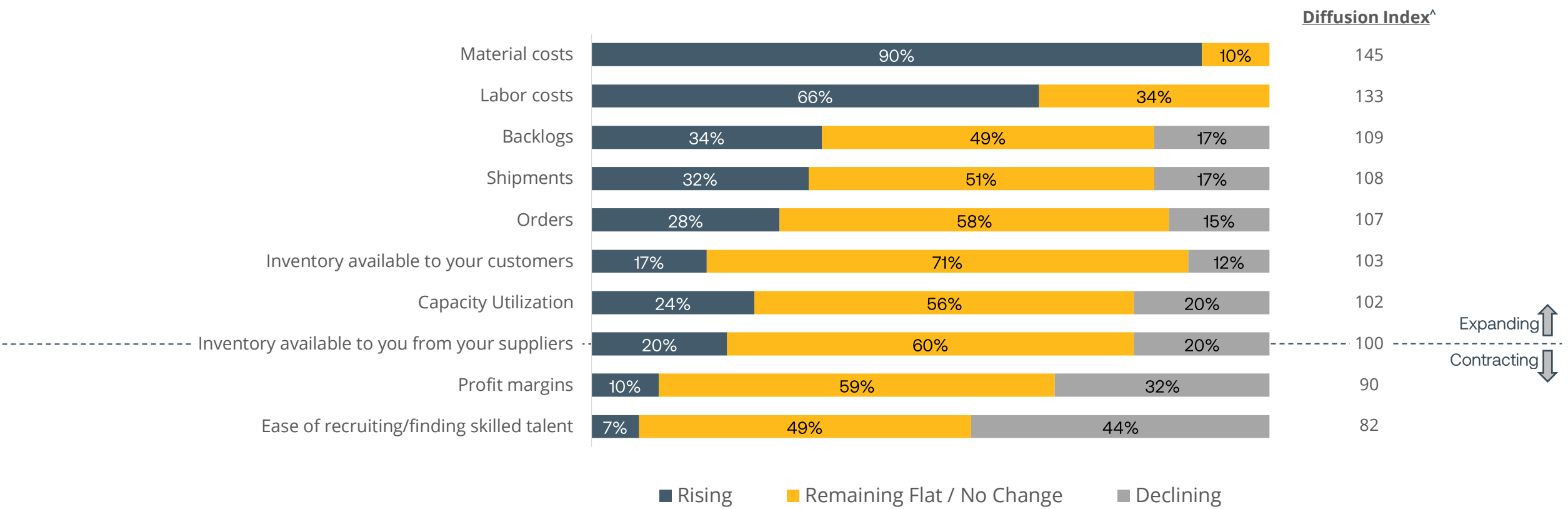


^A diffusion index is a statistical measure used to detect economic turning points.

# The View From Companies Primarily Operating in Europe



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



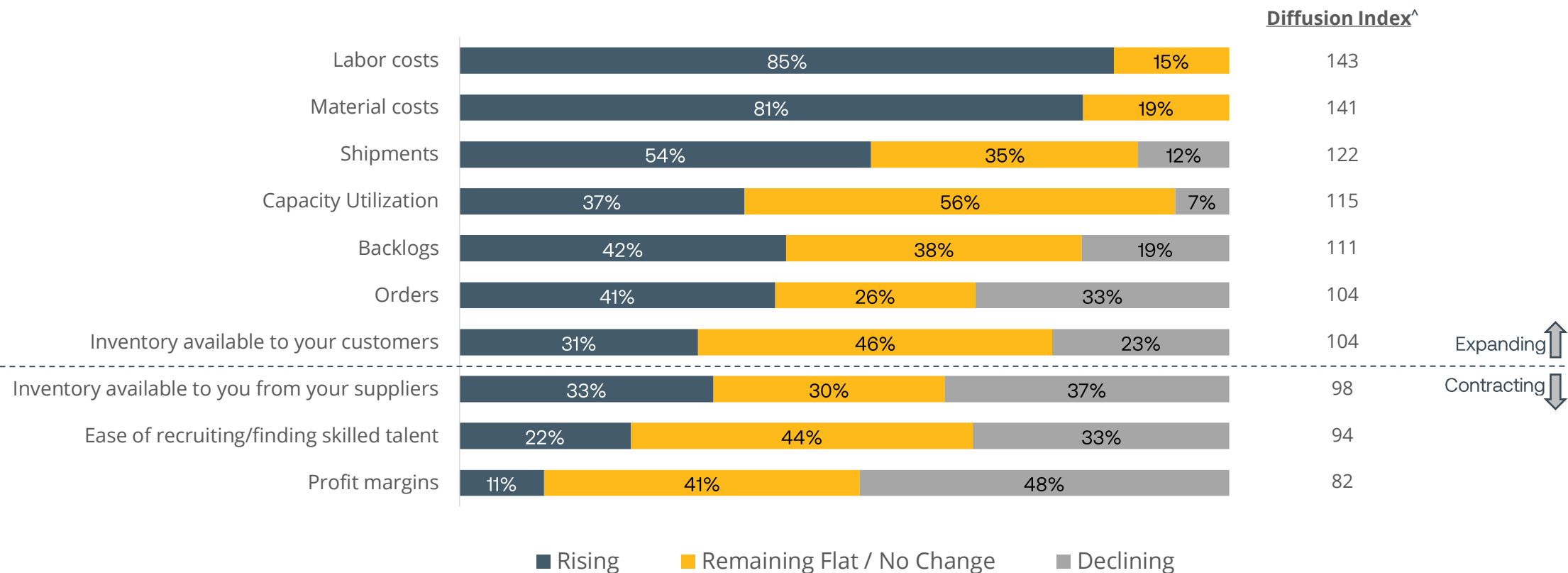
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# The View From Companies Primarily Operating in APAC



## Current Direction of Key Business Indicators

-- Primary Region: APAC --



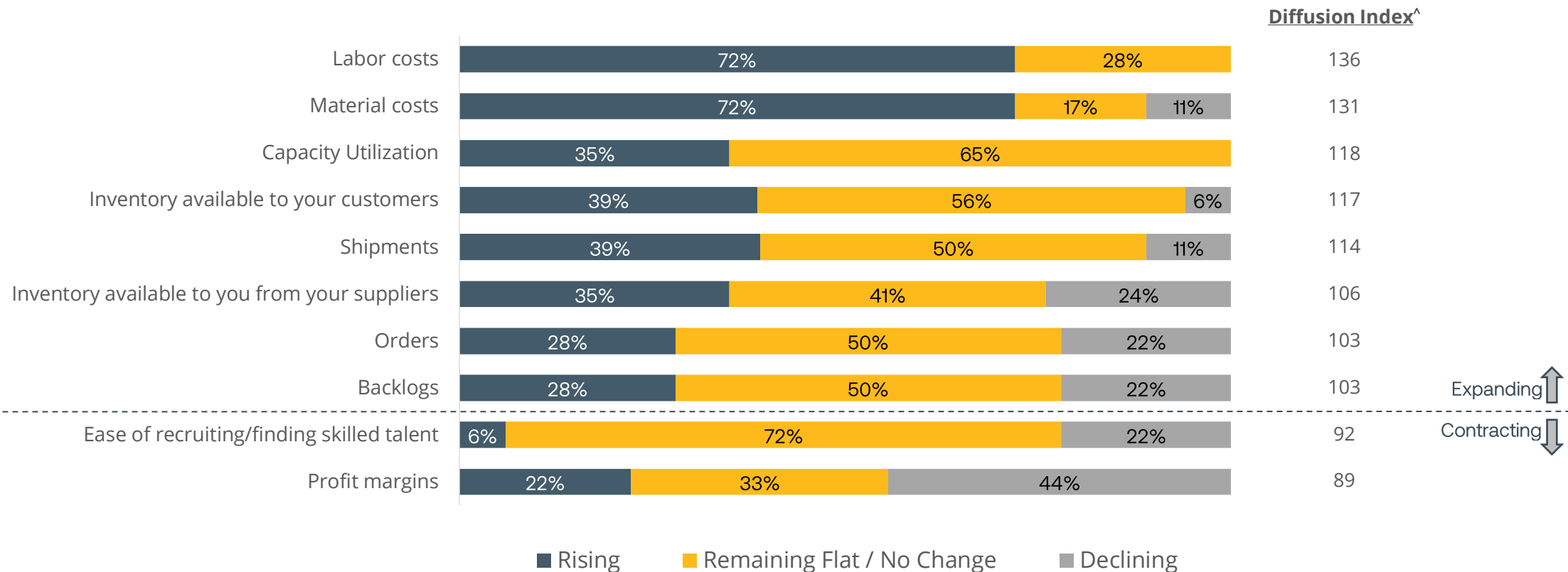
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# The View From Companies Primarily Operating Globally



## Current Direction of Key Business Indicators

-- Primary Region: Global --



<sup>^</sup>A diffusion index is a statistical measure used to detect economic turning points.



# The Outlook for the Next 6 Months: Continued Challenging Conditions



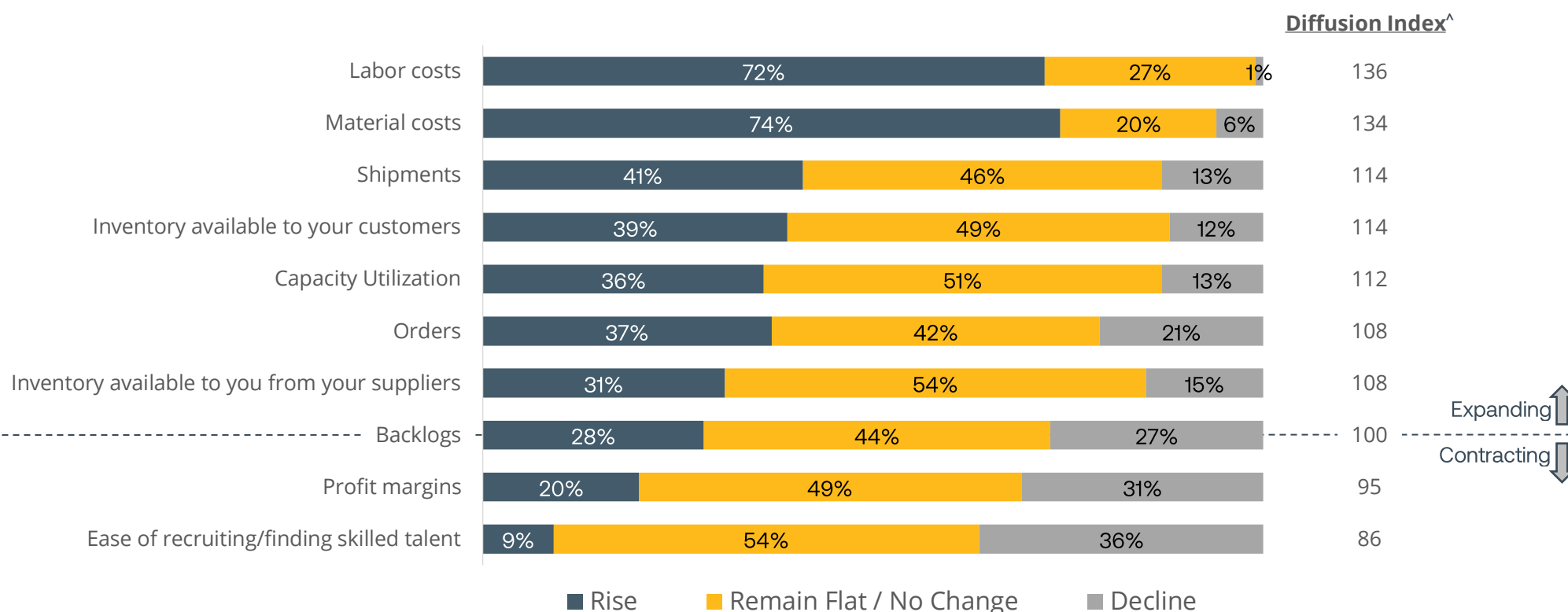
Over the next six months, manufacturers expect to see continued increase in both labor and material costs.

While inventory available from suppliers is expected to improve, ease of recruiting/finding skilled talent and profit margins are likely to remain challenging.

Positively, manufacturers expect to see a decline in backlogs over the next six months.

## Anticipated Direction of Key Business Indicators – Next Six Months

-- Total --



<sup>^</sup>A diffusion index is a statistical measure used to detect economic turning points.

# Regional Differences in the Outlook



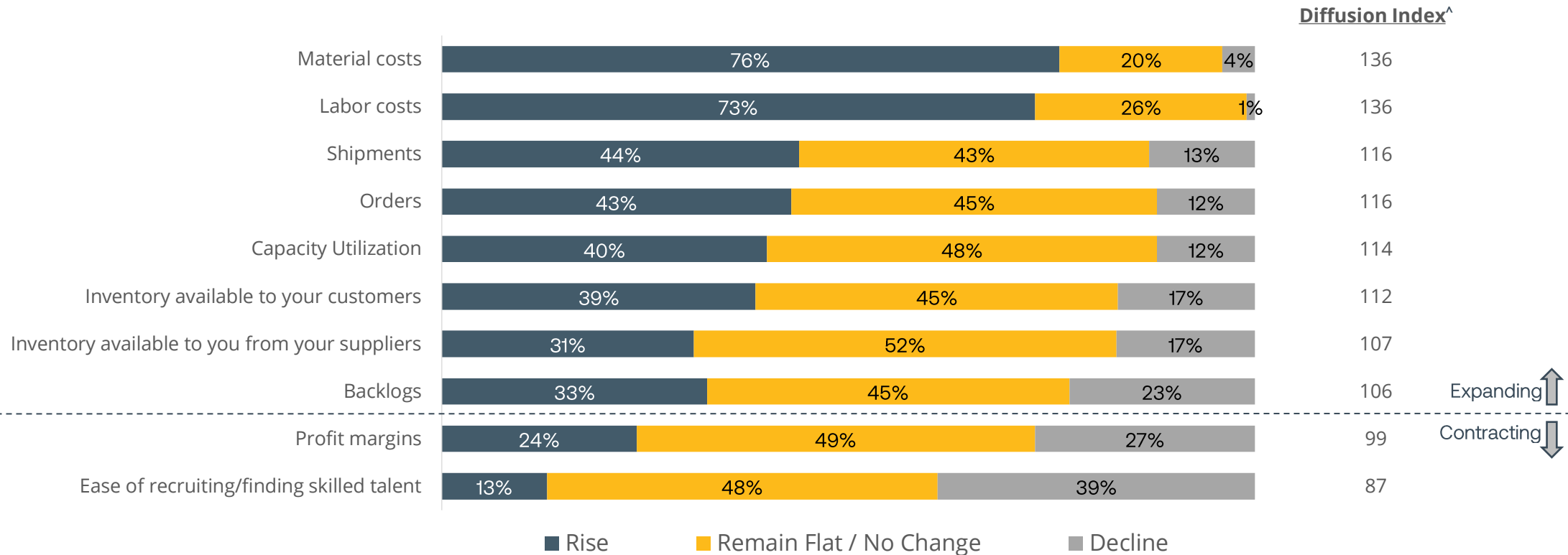
- **Orders are expected to decline more among firms operating in APAC than those in North America.**
  - While 36% of APAC manufacturers anticipate orders will decline in the next six months, a significantly lower 12% expect to see the same in North America, where, along with all other regions, orders are expected to remain flat.

# The View From Companies Primarily Operating in North America



## Anticipated Direction of Key Business Indicators – Next Six Months

-- Primary Region: North America --



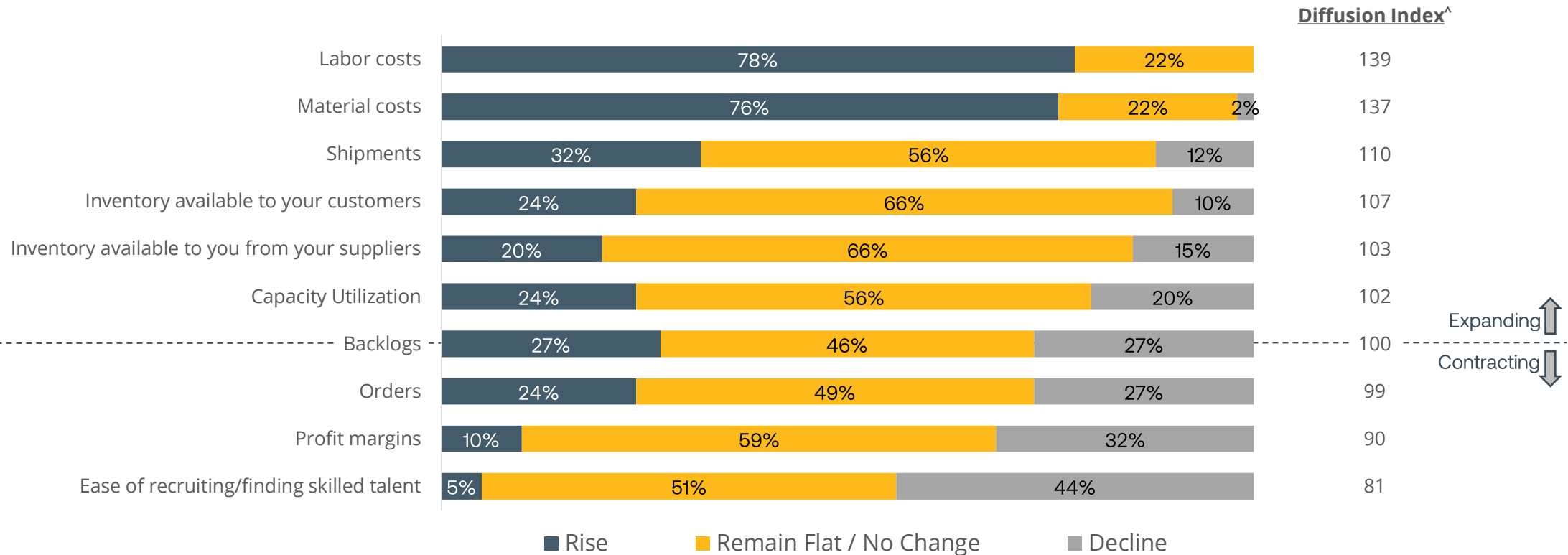
<sup>^</sup>A diffusion index is a statistical measure used to detect economic turning points.

# The View From Companies Primarily Operating in Europe



## Anticipated Direction of Key Business Indicators – Next Six Months

-- Primary Region: Europe --



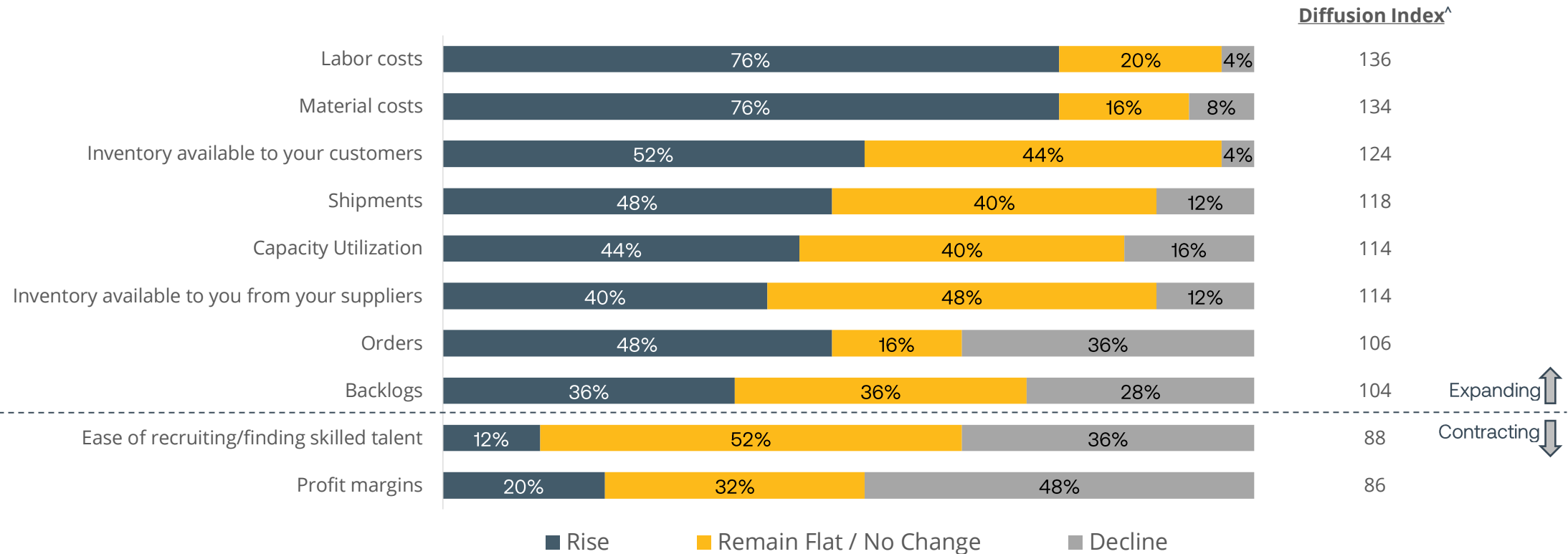
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# The View From Companies Primarily Operating in APAC



## Anticipated Direction of Key Business Indicators – Next Six Months

-- Primary Region: APAC --



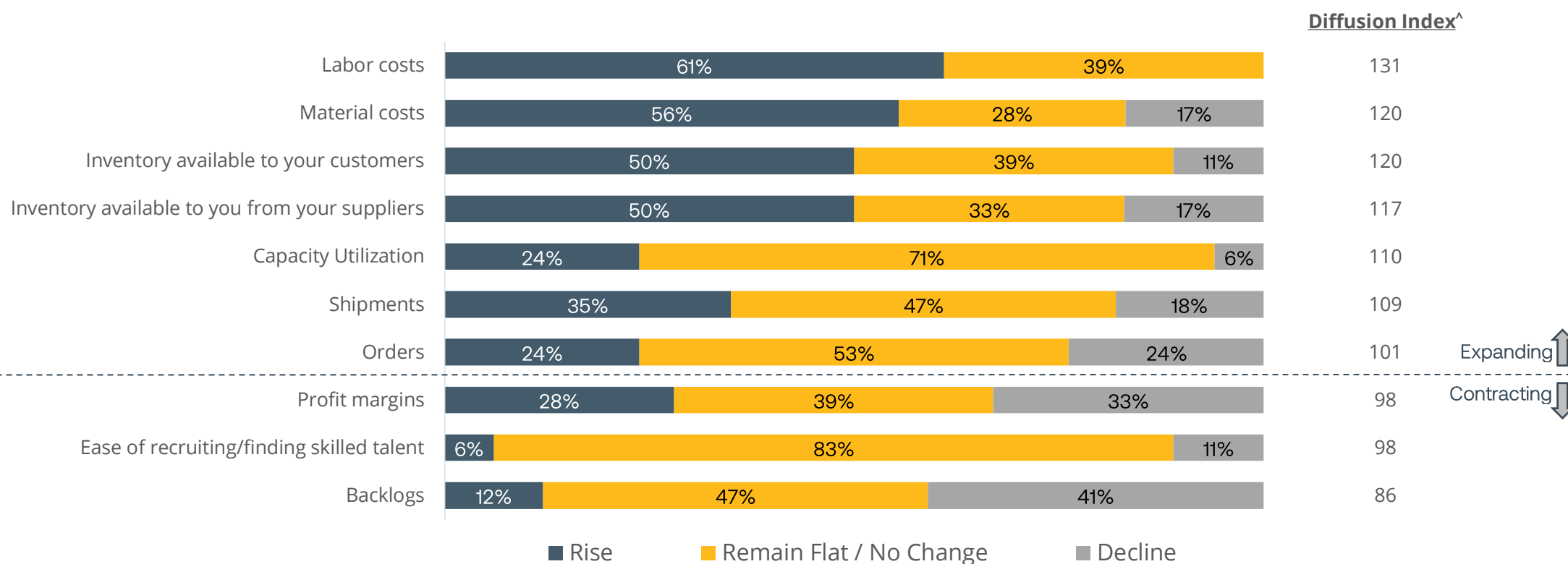
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# The View From Companies Primarily Operating Globally



## Anticipated Direction of Key Business Indicators – Next Six Months

-- Primary Region: Global --

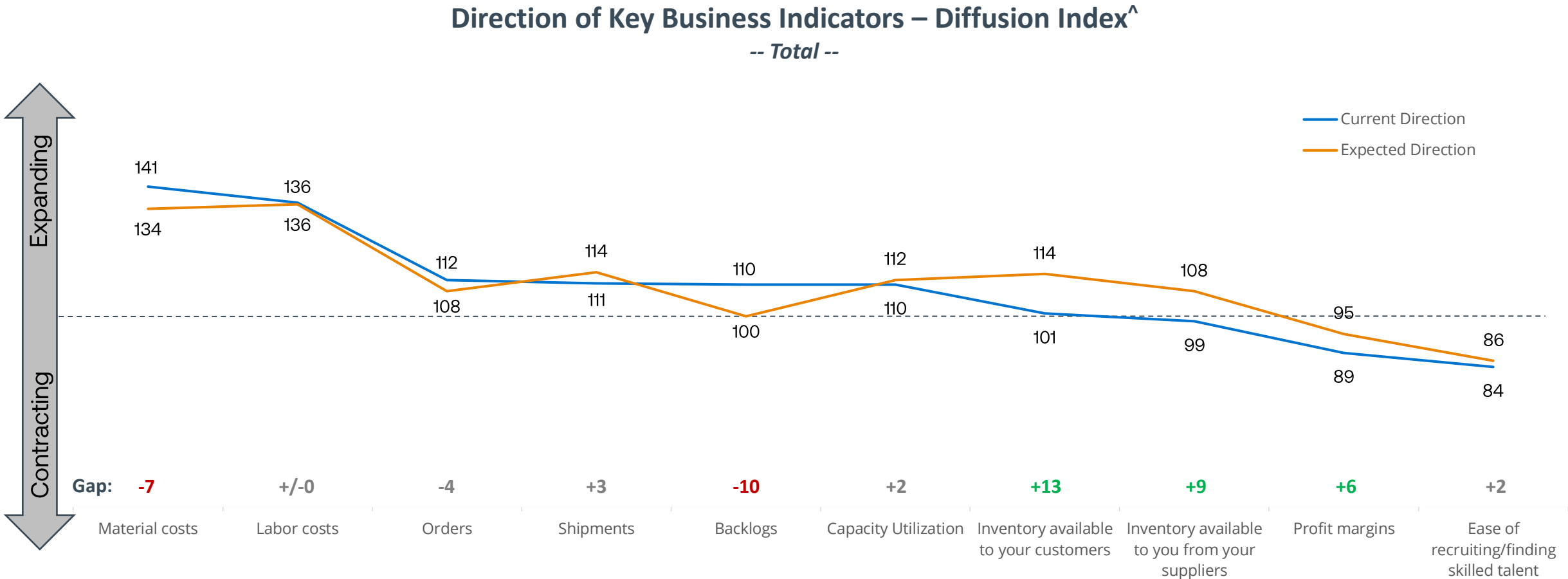


<sup>^</sup>A diffusion index is a statistical measure used to detect economic turning points.

# Labor Costs, Orders, Shipments, Capacity Utilization, and Ease of Recruiting are Expected to Remain Relatively Stable Over the Next Six Months



Manufacturers anticipate material costs and backlogs will decline, while also expecting to see improvement as it relates to inventories and profit margins.



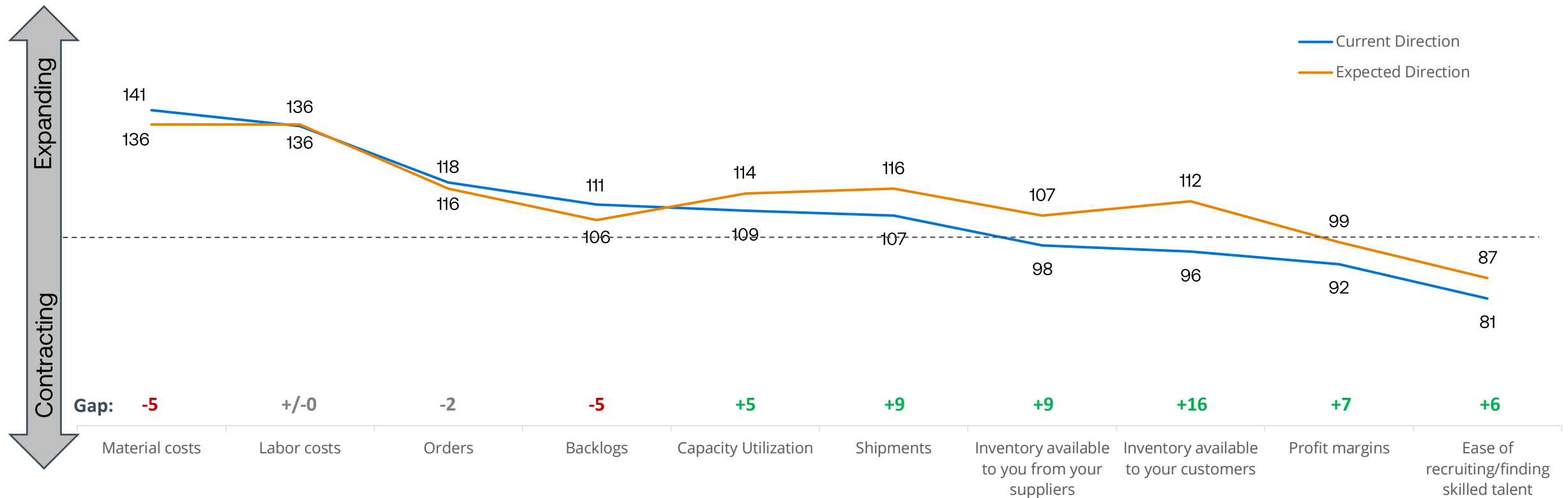
<sup>^</sup>A diffusion index is a statistical measure used to detect economic turning points.

# The View From Companies Primarily Operating in North America



## Direction of Key Business Indicators – Diffusion Index<sup>^</sup>

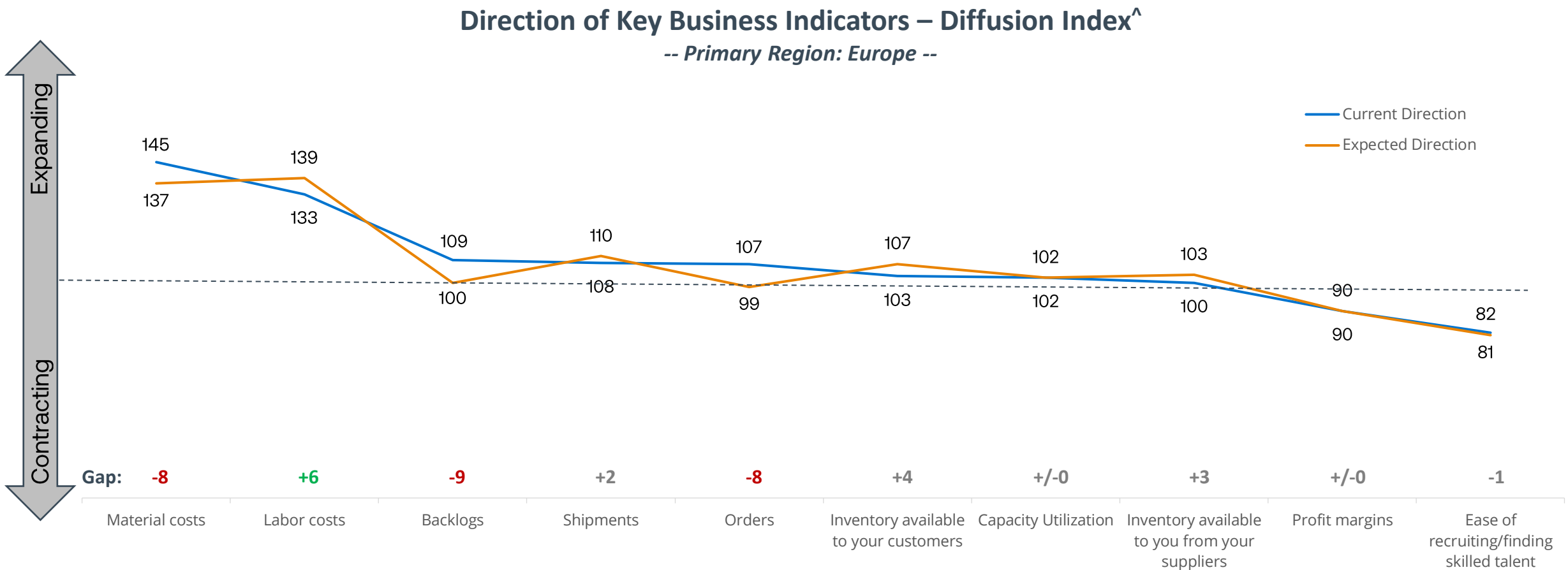
-- Primary Region: North America --



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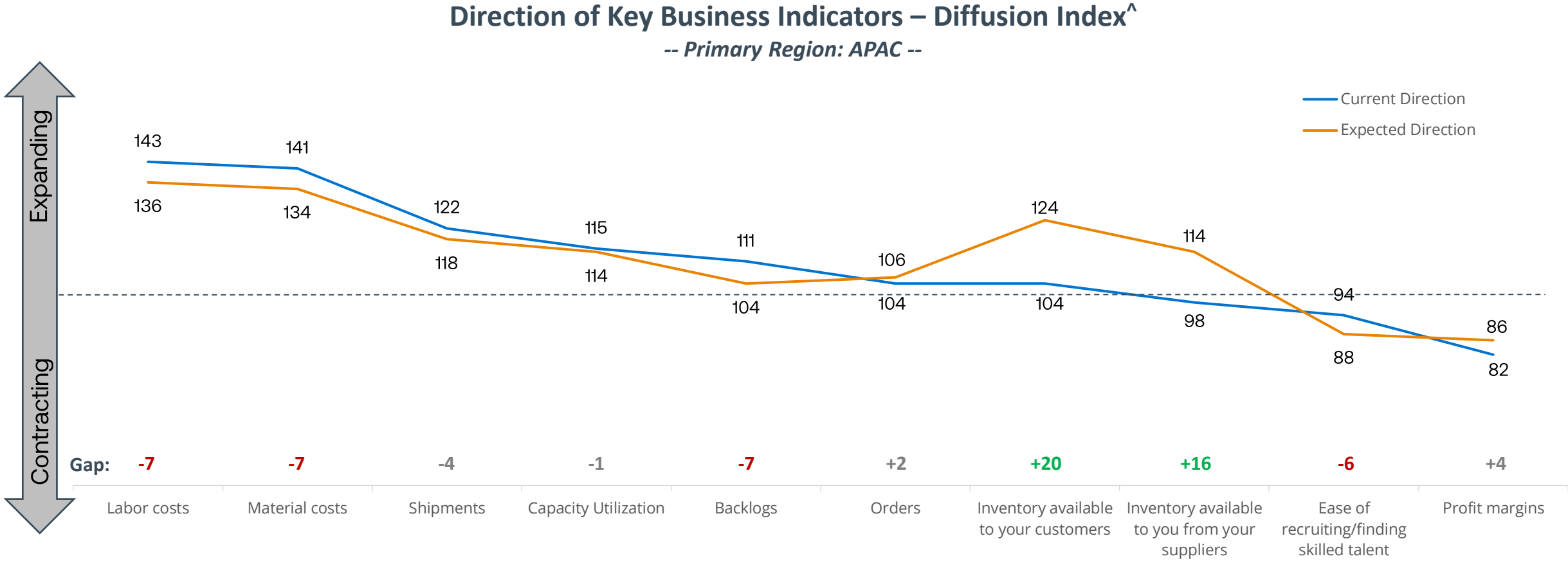


# The View From Companies Primarily Operating in Europe



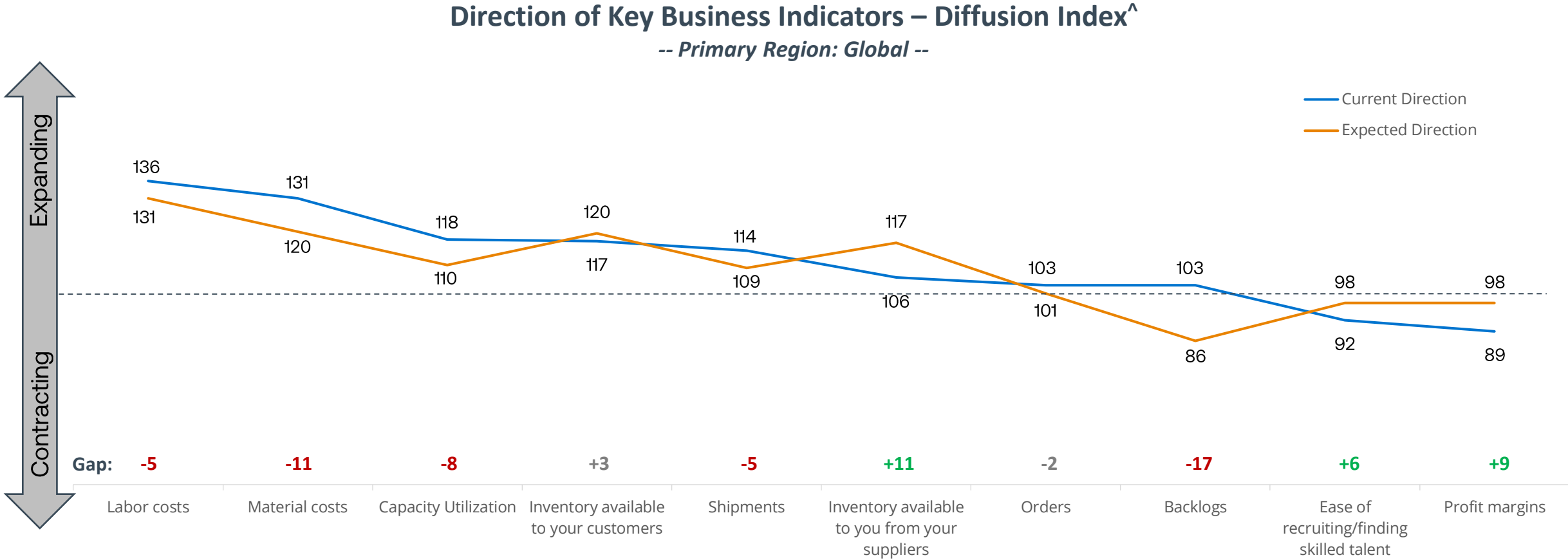
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# The View From Companies Primarily Operating in APAC



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# The View From Companies Primarily Operating Globally



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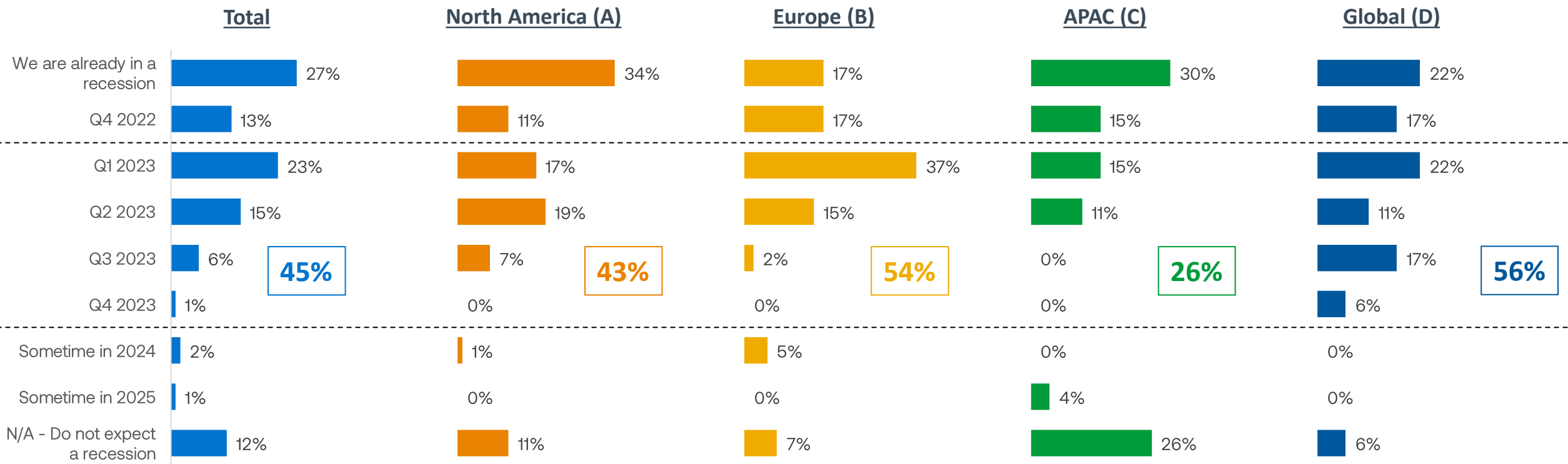
# October 2022 Special Questions

# While One-Fourth of Manufacturers Believe We are Currently in a Recession, the Majority Expect One to Begin in 2023, With Just Over One-Tenth Who Do Not Expect a Recession to Occur at All



Notably, there are no significant differences in opinion regarding the start of a recession across all regions.

## Expectations Surrounding the Beginning of a Recession



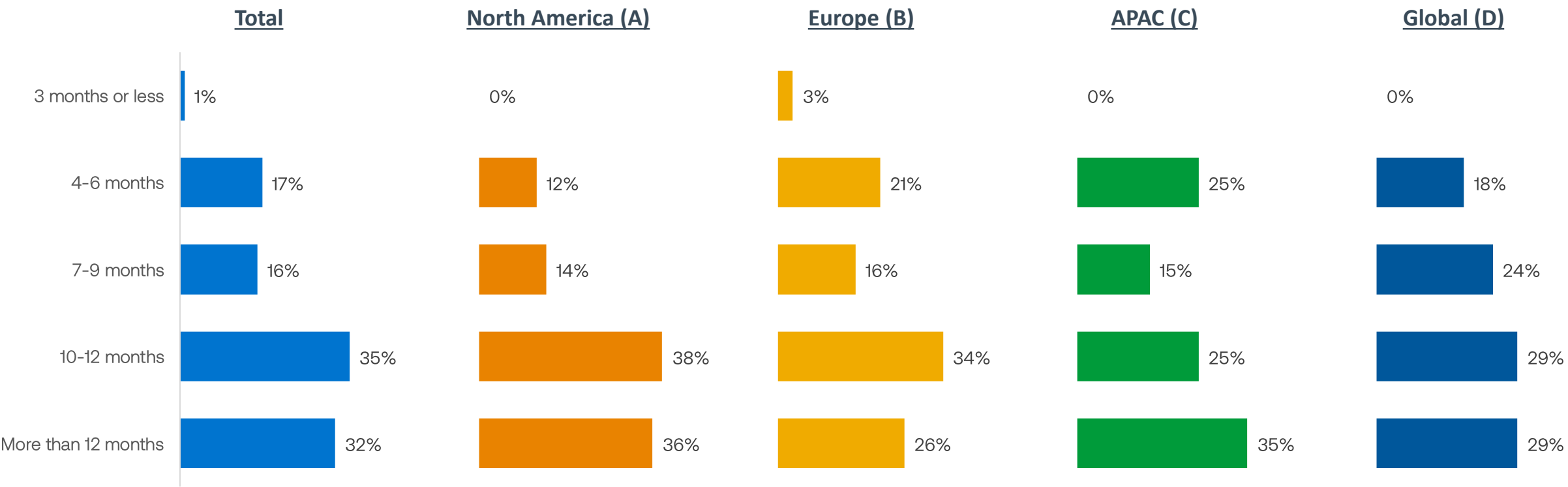
A/B/C/D Statistically significant at 90% confidence interval

# Among Manufacturers Who Believe We are Currently in or Will Experience a Recession, One-Third Think it Will Last 10-12 Months, With Another One-Third Who Think it Will Last More Than a Year



Again, there are no significant differences across regions in terms of expected length of the recession.

Anticipated Length of a Recession  
-- Among Those Who Think a Recession is Occurring/Will Occur --



A/B/C/D Statistically significant at 90% confidence interval

# Manufacturers are Heavily Focused on Efforts to Improve Efficiency, Manage/Lower Expenses, Optimize Inventory, and Extend the Supply Chain as Means to Address Higher Costs



In addition, higher costs are often being passed on to customers in the form of increased prices.

## Actions Being Taken to Address Higher Costs

“Taking actions to improve factory efficiency.” EMS

“More critical scrutiny of process efficiencies: OEE, inventory turn-around, admin burden, etc.” EMS

“Try to reduce energy spending as much as possible.” Materials Supplier

“Minimize other cost/waste - lean manufacturing.” Wire Harness and Cable Assembly Manufacturer

“Containing costs (reduction targets set for all departments). Travel restrictions and limited hiring (only replacing key positions). Raising prices where able.” Materials Supplier

“Work as efficiently as possible, automate as much as we can.” OEM

“Investing heavily in automation including SMT towers, X-Ray counters, soldering robots, etc.” EMS

“Negotiating component prices, as well as alternate components to leverage higher volume. Passing on cost increases (material and labor) in incremental stages to our customers. Investigating alternate logistic solutions to counter rising shipping cost.” Wire Harness and Cable Assembly Manufacturer

“Increasing inventory and “blanket orders” from suppliers and increasing prices.” Equipment Supplier

“Maintaining optimum Inventory. Trying to the best ability to source the raw material at a better pricing. Also trying to block the raw material with the suppliers at a better rates in anticipation of future orders.” EMS

“We have had to raise prices twice this year. We have also purchased larger inventory lots to reduce per-unit costs. We have also redesigned several products to utilize available inventory, or to use less expensive properties.” OEM

“Passing them on to our customers. For wire, since copper has fallen dramatically in the last few months, we are asking our suppliers for better prices.” Wire Harness and Cable Assembly Manufacturer

“Passing increased costs along to the customer, finding alternative equivalent product at lower cost, and negotiating with vendors.” Wire Harness and Cable Assembly Manufacturer

“Working with our suppliers, and in some cases, passing the additional cost to our customers.” EMS

“Negotiating with suppliers, seeking alternatives, forwarding some cost differences to the end customer.” OEM

“Passing it on where we can. Most of our customers do not accept increases beyond (our) material cost. Also, investing in automation to reduce labor and process steps.” EMS

# Appendix



# Current Conditions Diffusion Indices

## Month-to-Month Comparisons



	October 2021	November 2021	December 2021	January 2022	February 2022	March 2022	April 2022	May 2022	June 2022	July 2022	August 2022	September 2022	October 2022
Material costs	144	144	145	145	143	142	146	145	146	144	142	139	141
Labor costs	133	136	135	137	138	138	134	138	137	139	138	136	136
Orders	127	124	123	123	120	124	121	119	118	115	112	109	112
Backlogs	125	122	124	124	122	119	114	120	119	114	111	107	110
Sales*	124	123	122	--	--	--	--	--	--	--	--	--	--
Shipments^	--	--	--	117	112	115	115	114	114	111	110	112	111
Capacity utilization	114	115	110	114	111	113	114	110	104	107	110	109	110
Profit margins	96	91	90	87	82	86	85	89	85	84	86	86	89
Inventory available to your customers	89	92	87	91	88	109	94	94	91	96	102	106	101
Ease of recruiting/finding skilled talent	77	80	77	78	80	78	79	81	79	80	85	85	84
Inventory available to you from your suppliers	73	78	73	77	78	78	83	79	82	86	94	96	99

\*Removed January 2022

^Added January 2022

Δ+5 points or more vs. previous month

Δ-5 points or more vs. previous month

# Outlook Diffusion Indices

## Month-to-Month Comparisons



	October 2021	November 2021	December 2021	January 2022	February 2022	March 2022	April 2022	May 2022	June 2022	July 2022	August 2022	September 2022	October 2022
Material costs	136	139	138	139	142	139	140	138	140	138	136	131	134
Labor costs	131	135	133	133	137	136	135	134	135	139	136	134	136
Orders	126	128	126	125	121	123	121	122	119	120	117	113	108
Backlogs	112	116	116	120	113	110	109	114	112	103	104	99	100
Sales*	128	129	127	--	--	--	--	--	--	--	--	--	--
Shipments^	--	--	--	120	119	121	117	119	115	120	117	116	114
Capacity utilization	119	118	116	118	118	116	116	116	112	115	114	117	112
Profit margins	103	100	96	92	94	97	94	97	90	92	95	93	95
Inventory available to your customers	100	100	99	97	99	103	101	100	102	105	107	111	114
Ease of recruiting/finding skilled talent	91	88	86	82	87	86	88	86	90	88	88	92	86
Inventory available to you from your suppliers	95	92	88	90	93	94	93	92	92	102	104	107	108

\*Removed January 2022

^Added January 2022

Δ+5 points or more vs. previous month

Δ-5 points or more vs. previous month

- > 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 September 12 to September 30, 2022.



Questions? Please contact:

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