



**invested** in insights

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# **New anchors reshaping supply chains: Opportunities for investors**

**eastspring**   
investments

A Prudential plc company 

## Foreword

Global supply chain shifts are being driven by key structural factors such as geopolitics, trade disruptions, climate events, and rising costs. A series of disruptive events since 2020 has accelerated these shifts and forced businesses to reevaluate their strategic priorities to stay resilient and competitive.

To understand the drivers that are steering these shifts, we commissioned PwC Singapore to develop a survey-based whitepaper to highlight how global business leaders are rebalancing their priorities between driving growth and navigating supply chain issues. The survey also captured the major actions business leaders are undertaking (or planning) to achieve their priorities.

The whitepaper surveyed business leaders in the automotives, electronics manufacturing, as well as the pharmaceuticals and medical equipment sectors across North America, Europe, and Asia. These sectors were picked to highlight the varying pressures the businesses face in their bid to enhance resilience. The results feature both global trends and regional-specific insights and nuances.

The rebalancing of global supply chains is a long-term theme. This whitepaper provides useful information for global investors looking to learn more about the evolving supply chain landscape and the new investment opportunities arising from these shifts.

Being based in Asia and having extensive experience of investing in the Emerging Markets, our investment teams are well positioned to navigate and take advantage of these shifts. We look forward to engaging with you on ways to participate in the diverse opportunities arising from the reshaping of supply chains globally.



### Bill Maldonado

Chief Executive Officer &  
Interim Chief Investment Officer  
Eastspring Investments



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# Executive summary



This whitepaper examines the global push for supply chain rebalancing and the opportunities that are emerging for investors. Section 1 discusses the rebalancing agenda, including key regions that will benefit, and the cost of rebalancing versus inaction. Section 2 takes a sector-specific perspective on the rebalancing priorities and roadblocks across the value chain stages. Section 3 discusses the opportunities that will arise and what this means for investors.

As part of this whitepaper, we conducted a pulse survey among 150 senior executives across North America, Europe and Asia in the automotives, electronics manufacturing, and pharmaceuticals and medical equipment sectors. These three sectors face significant pressures to rebalance due to varying forces, ranging from geopolitical considerations and growing protectionism to technological innovation.

As businesses rebalance, significant investments are being made to build new connections, generating new opportunities for investors.

## Rebalancing is among the top priorities; as global supply chains evolve, selected markets gain prominence

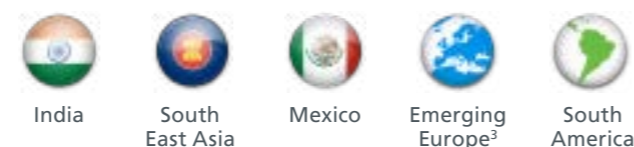
### Top 3 business priorities<sup>1</sup>

**53%**  
Optimise operating cost efficiency

**47%**  
Rebalance and boost supply chain resilience

**32%**  
Gain market share

### Top 5 markets/regions gaining prominence due to rebalancing<sup>2</sup>



Based on the survey, business leaders expect India to grow in importance for future supply chains, alongside Mexico and markets in South East Asia, Emerging Europe and South America.

## High costs and a lack of capabilities are the biggest roadblocks to rebalancing

### Top 6 rebalancing roadblocks<sup>1</sup>

	Automotives	Electronics manufacturing	Pharmaceuticals and medical equipment
Cost	1	1	1
Capabilities	2	2	
Bureaucracy			2
Technology	3	3	
Supply			3
Trade rules		3	

Rebalancing is not a choice but a necessity. According to business leaders, failing to successfully rebalance supply chains could potentially put 19% – 24% of profit at risk over the next 10 years<sup>2</sup>, depending on the sector.

Across the three sectors, the most significant roadblocks to rebalancing are high costs and a lack of capabilities. Additionally, bureaucratic hurdles, technological deficiencies, trade complexities and supply scarcities also hinder the process.

To overcome these roadblocks, businesses are strengthening internal controls and utilising technology to lower costs. They are also adopting a partnership-first approach to leverage various capabilities across the value chain.

## Investment implications

Our survey shows that India, Mexico, and markets in South East Asia, Emerging Europe and South America are expected to grow in importance for future supply chains. However, these markets only have small weightings in the global and regional equity market indices.

Emerging Markets (EMs) have a 10% weight in the MSCI AC World Index, while ASEAN accounts for only 1%. Meanwhile, India and ASEAN make up 13% and 6% respectively of the MSCI EM Index<sup>3</sup>.

As such, these market capitalisation-weighted indices only provide modest exposure to the countries that are expected to benefit most from the global supply chain rebalancing. These indices also tend to be biased towards the widely held, larger capitalisation stocks, which potentially reduces diversification and alpha benefits in a portfolio. Therefore, investors may want to consider a more focused approach to exploit the alpha potential from the global rebalancing theme.

<sup>1</sup> Percentages indicate the share of business leaders who ranked the given priority among the first or second priorities. <sup>2</sup> Displaying the top 5 markets/regions with a positive change between current and future rank in importance to supply chains, which is determined based on the share of business leaders who ranked the market among the first or second most important locations for their supply chains, for now and in 5 – 10 years. <sup>3</sup> Emerging Europe includes all countries under the MSCI Emerging Markets Europe Index as well as Romania.

<sup>1</sup> The circles mark the 3 biggest roadblocks faced by the respective sector in rebalancing. The numbers indicate the ranking, where '1' is the biggest roadblock. <sup>2</sup> The percentage range indicates the average profit at risk across the 3 sectors, estimated by sector business leaders. Electronics manufacturing: 19%, Pharmaceuticals & medical equipment, 21%, Automotives: 24%. <sup>3</sup> MSCI Indices as of 26 April 2024.

# The rebalancing agenda



Globalisation is undergoing a profound transformation and fundamentally altering the architecture of global supply chains. This change presents challenges and opportunities for businesses and countries globally.

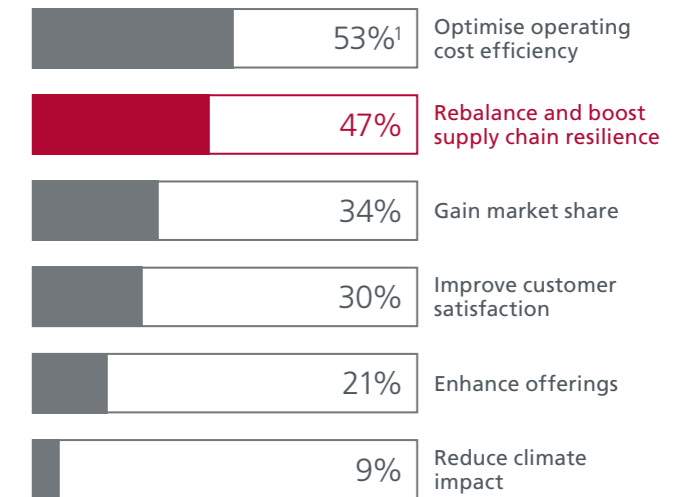
In the age of geopolitics – tariffs, sanctions and trade wars could suddenly impact long established supply routes. Other disruptions such as pandemics and climate events are also increasing, introducing additional layers of complexity.

As a result, enhancing supply chain resilience is top-of-mind for businesses and countries. Businesses are reevaluating their dependencies on single-supplier or single-market sourcing strategies, which, historically, were cost-effective but have become increasingly fragile.

As businesses make substantial investments to diversify, reshore and nearshore their supply chains, costs will increase in the near term but rebalancing will enhance long-term resilience. The key beneficiaries of this shift, most notably India, Mexico, and markets in South East Asia, Emerging Europe and South America are likely to increasingly occupy prominent roles in the supply chains of the future.

## Boosting supply chain resilience is among the top priorities for global business leaders

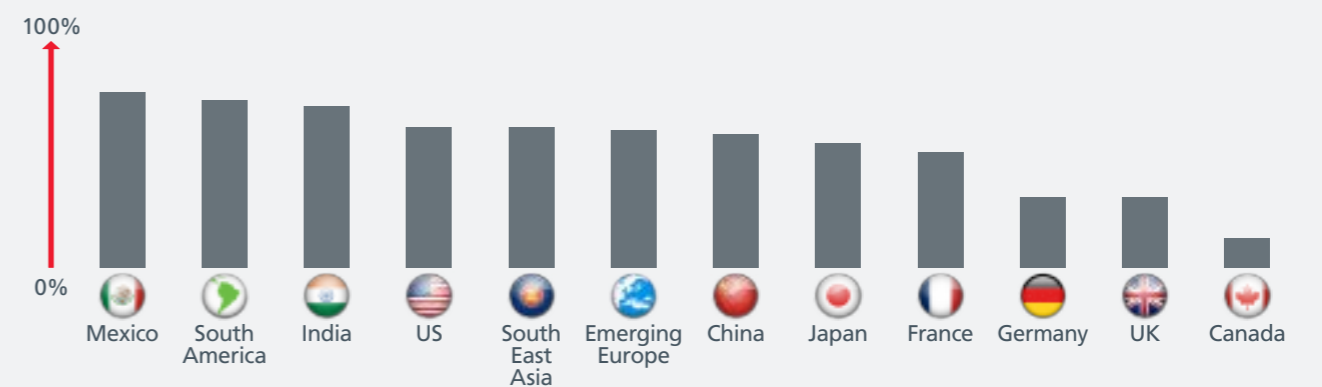
**Q** Please rank the following business priorities from the highest to the lowest.



## Supply chains have expanded into Mexico, South America, India, South East Asia and Emerging Europe<sup>2</sup>

**Q** Indicate how your company's supply chain presence in these locations has changed over the past 5-10 years.

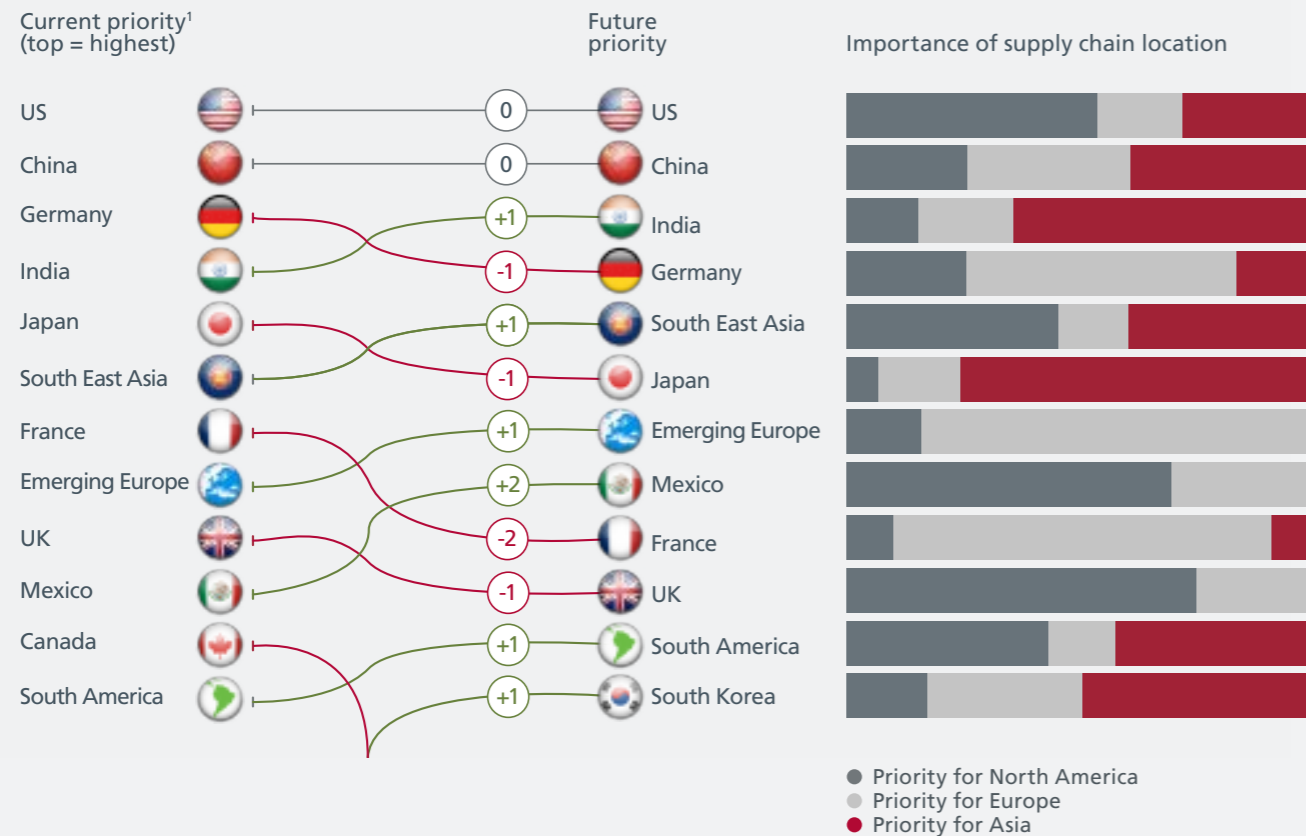
Net increases<sup>3</sup> in supply chain presence, over the past 5-10 years



<sup>1</sup> Percentages indicate the share of business leaders who ranked the given priority among the first or second priorities. <sup>2</sup> Emerging Europe includes all countries under the MSCI Emerging Markets Europe Index as well as Romania. <sup>3</sup> Net increase is the share of business leaders who indicated increases in supply chain presence in the respective location, minus those who indicated a decrease in presence. Only the current top 12 most important markets to supply chains are displayed.

## As the global supply chain landscape evolves, selected markets gain prominence

Please select up to 5 locations where your company's supply chain is predominantly located in currently (left), and the next 5-10 years (right), please rank in order of importance.



The trade and industrial relationship between the US and China has traditionally anchored global supply chains.

The cooling of relations between the two nations has been one of the driving forces of rebalancing. Nevertheless, our global survey of business leaders show that China is likely to retain an important role in global supply chains.

In fact, business leaders indicated an increase in presence in China over the past decade, and expect the country to maintain its position as the second most important location in global supply chains.

Although the US and China are expected to occupy the top two spots in the foreseeable future, other markets

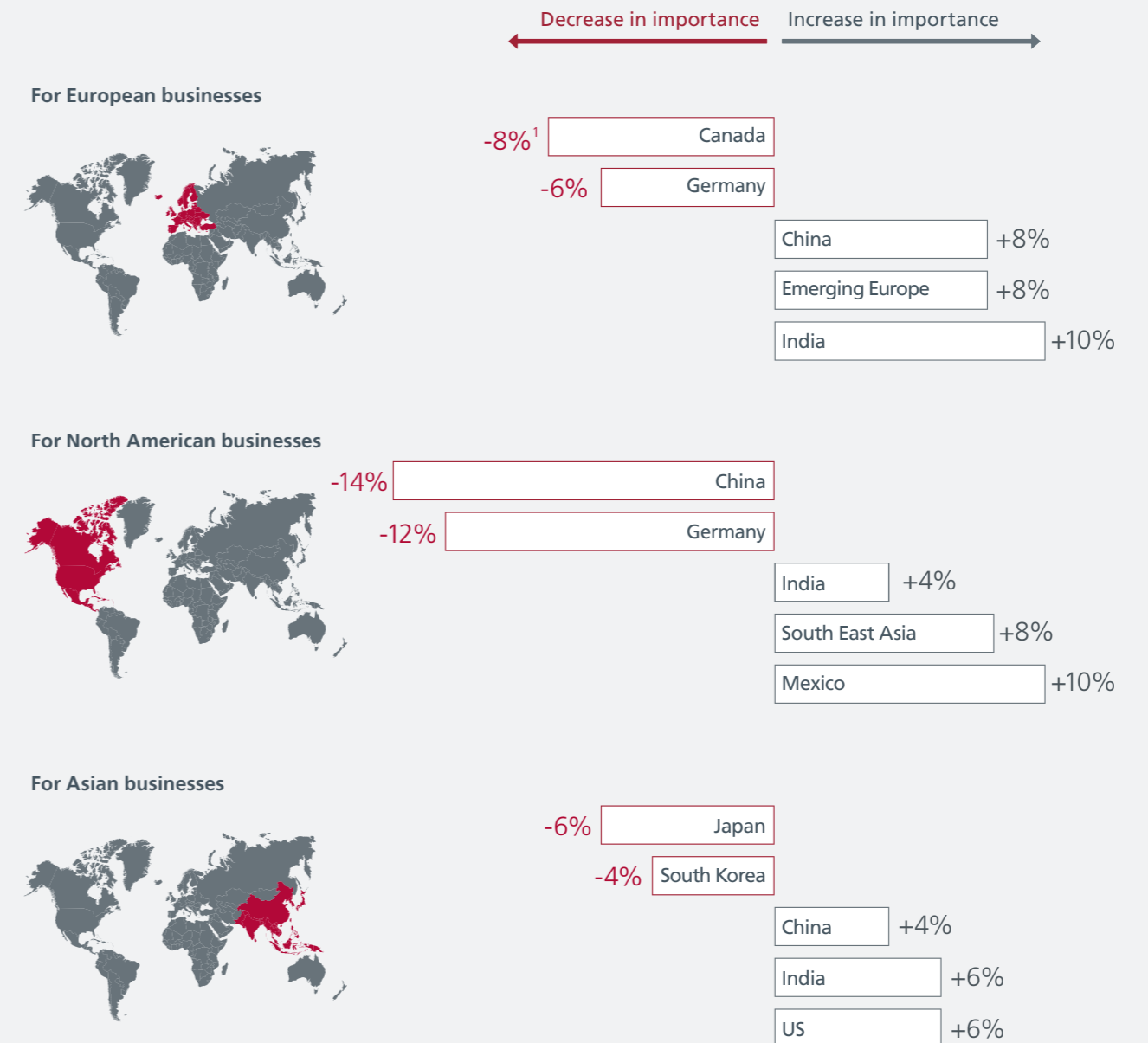
will benefit from this push towards greater supply chain resilience.

According to our survey, Mexico, and markets in South America and Emerging Europe will become increasingly important supply chain locations for the automotives sector. Meanwhile, South East Asia will benefit most from the rebalancing in the electronics manufacturing sector, while India stands to gain in the electronics manufacturing, and pharmaceuticals and medical equipment sectors. Japan remains an important supply chain location for automotives OEM assembly as well as for the electronics manufacturing sector.

<sup>1</sup> The Rankings indicate the share of business leaders who ranked the market among the first or second most important locations for their current supply chains and in 5-10 years.

## Supply chain networks are shifting – European businesses are bullish on Asia while North America deprioritises China

Supply chain locations showing the largest changes in importance for businesses in respective regions (currently and in 5 to 10 years)



Although the markets that currently dominate global supply chains are expected to remain significant, their relative importance to different regions will change, mirroring the shift in geopolitical considerations.

In the following pages, we investigate how businesses are navigating the risks and opportunities of rebalancing.

<sup>1</sup> Percentages indicate the changes between now and the future, in the share of business leaders within their respective geography who ranked these markets as either the first or second most important locations for their supply chains.

# Rebalancing risks and opportunities

According to our survey, mitigating supply and sourcing risks, as well as hedging geopolitical and regulatory risks emerge as the top two drivers of rebalancing.

Despite being primarily driven by risk considerations, business leaders are also rebalancing to position their organisations for future growth.

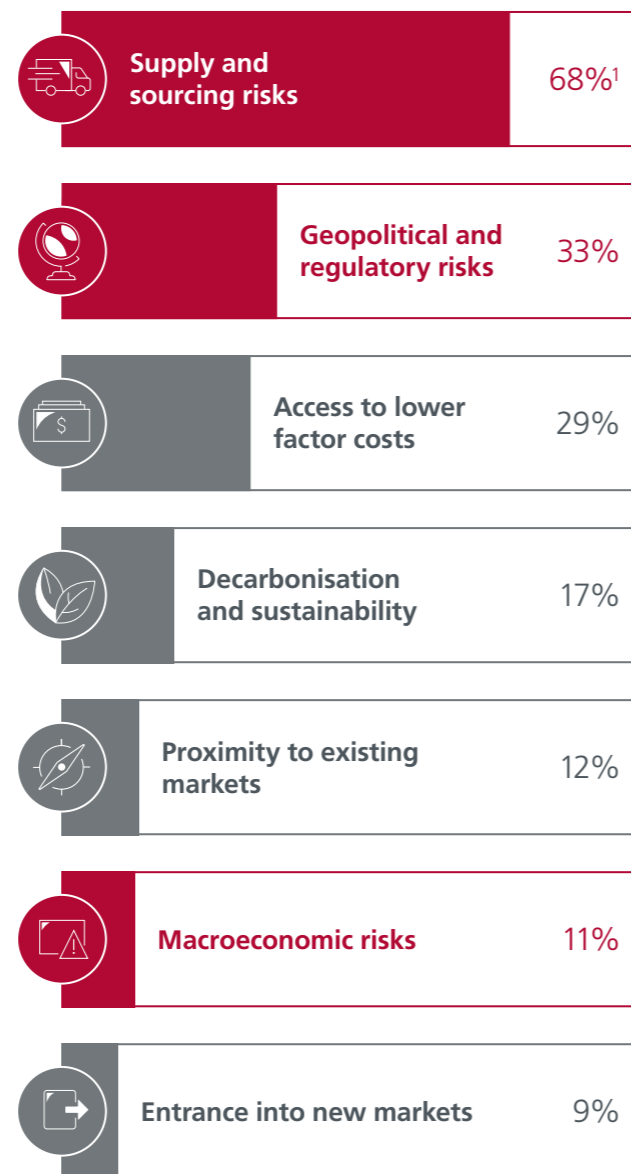
More than a quarter of businesses are rebalancing towards locations that would allow them to access lower factor costs. As manufacturing in China becomes less cost competitive, businesses have begun shifting lower value-adding activities to markets with more competitive costs.

Close to one fifth of businesses are also viewing rebalancing as an opportunity to build supply chains that are less carbon intensive and more sustainable.



## While risk mitigation drives rebalancing, businesses are also positioning themselves to capture opportunities

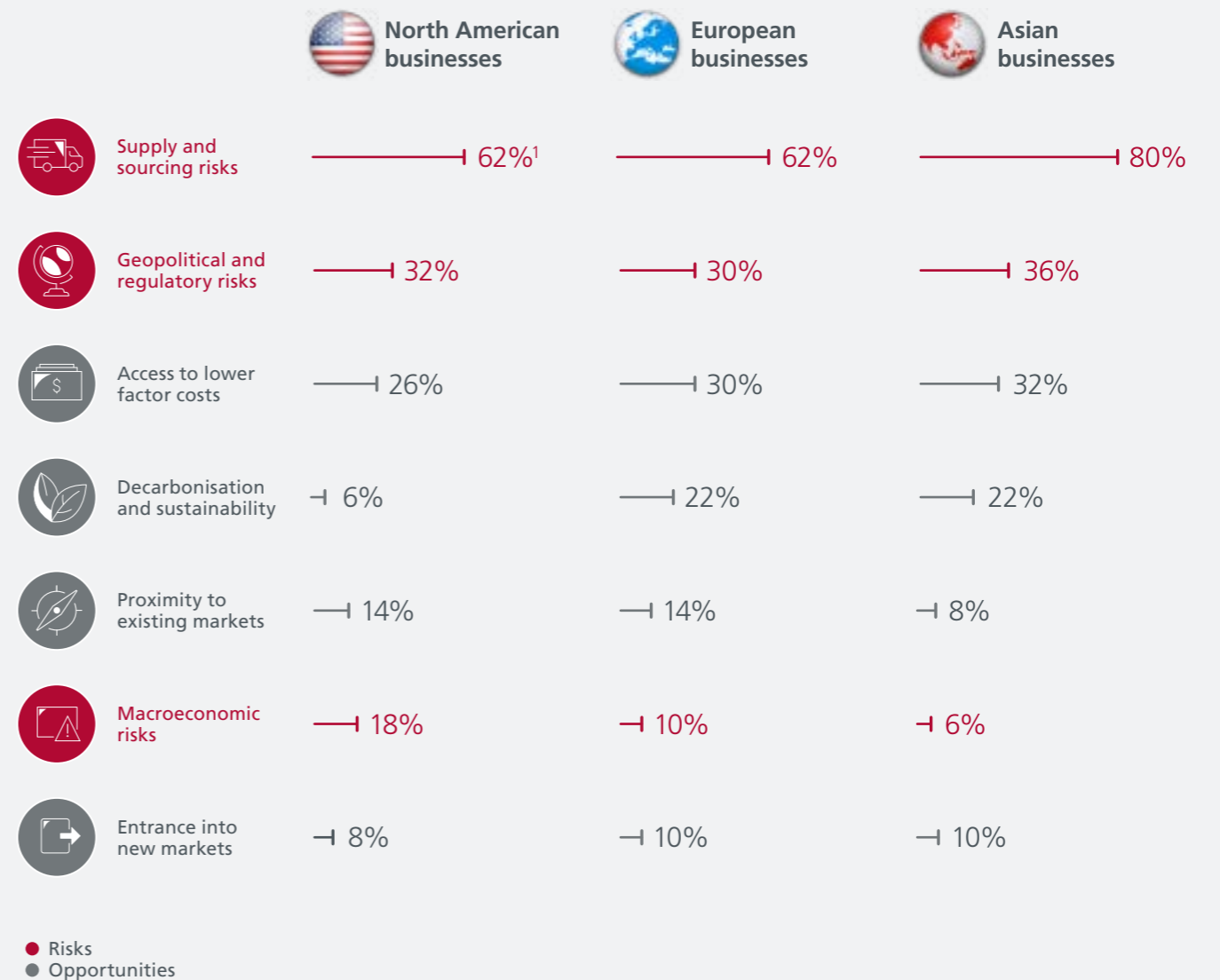
Please select the risks/opportunities your company tries to manage/capture through supply chain rebalancing.



● Risks  
● Opportunities

## Drivers of rebalancing differ across the regions

Please select the risks/opportunities your company tries to manage/capture through supply chain rebalancing.



Supply and sourcing risk is the top rebalancing driver for businesses globally with Asian businesses being especially concerned.

In terms of sustainability, more business leaders in Europe and Asia are hoping to enhance supply chain sustainability through rebalancing, compared to their North American counterparts.

On the other hand, more North American business leaders are hoping to mitigate macroeconomic risks such as inflation and currency fluctuations through rebalancing.

<sup>1</sup> Percentages indicate the share of business leaders who selected the given answer as either the primary or secondary driver of rebalancing.

<sup>1</sup> Percentages indicate the share of business leaders from the respective region who selected the given answer as either the primary driver, or the secondary driver of rebalancing.

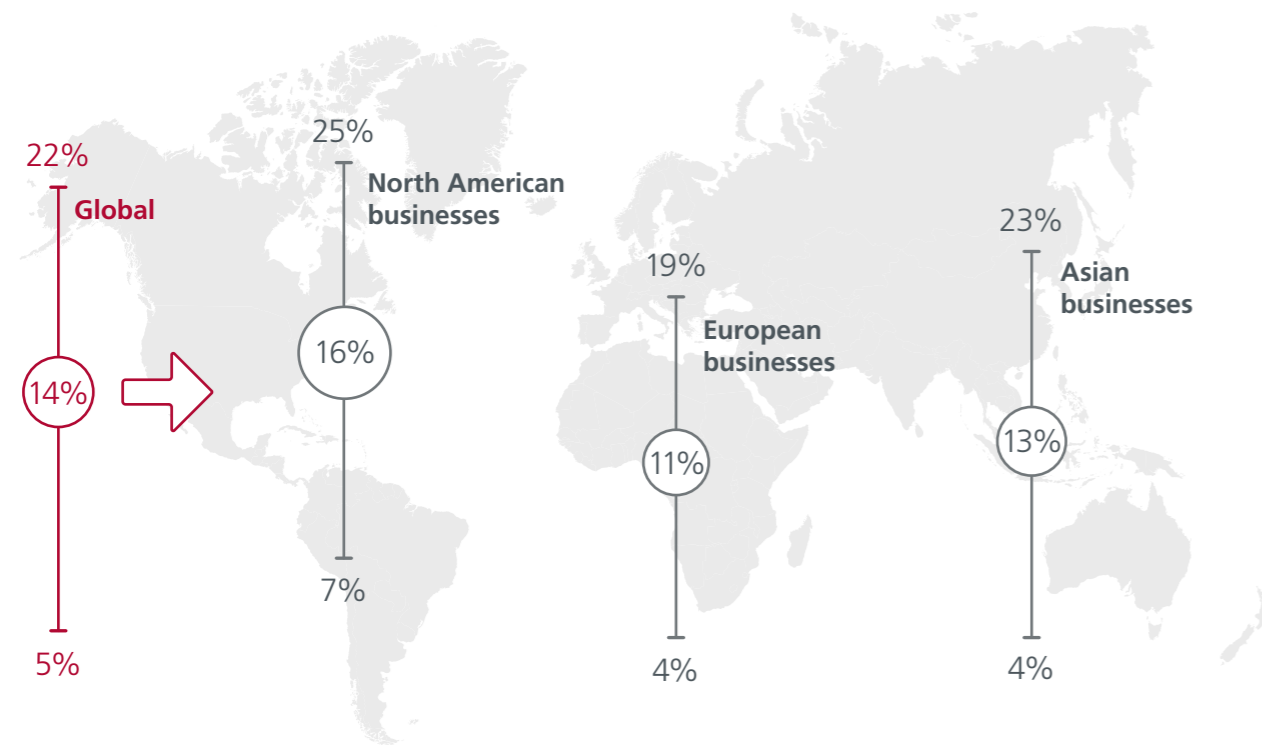
# Rebalancing is expensive but inaction comes at a greater cost

From investing in new plants to nurturing strategic partnerships with new suppliers, businesses globally are putting in significant efforts to rebalance their supply chains and boost resilience. This structural rewiring of global supply chains is, however, an expensive endeavour.

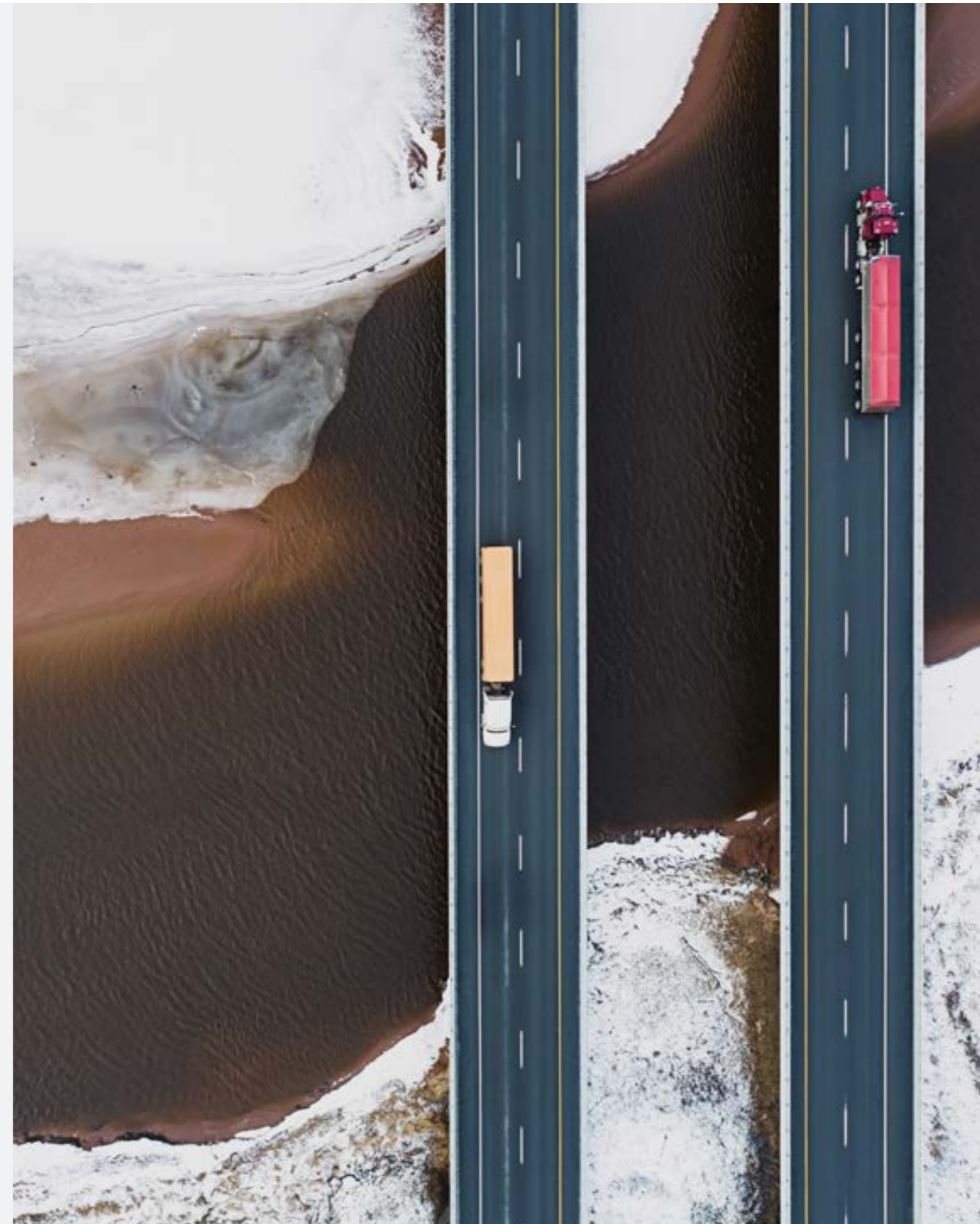
Across the three regions surveyed, rebalancing will be the most expensive for North American businesses.

## Business leaders believe 14% of revenues will need to be invested over the medium term to rebalance supply chains

**Q** Relative to your company's average annual revenue over the past 3 years, what percentage must be invested over the medium term (3-5 years) to diversify/rebalance?

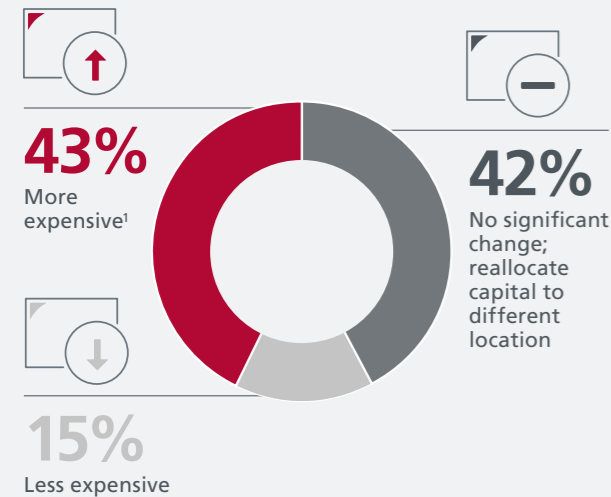


| One standard deviation up of all answers (global) or of answers from a specific region. One standard deviation up and down contains ~68% of results, assuming normal distribution.  
 ○ Average of all answers (global) or an average among answers from a specific region.  
 | One standard deviation down of all answers (global) or of answers from a specific region.



## Rebalancing is as much about increasing investments as it is about reallocating capital

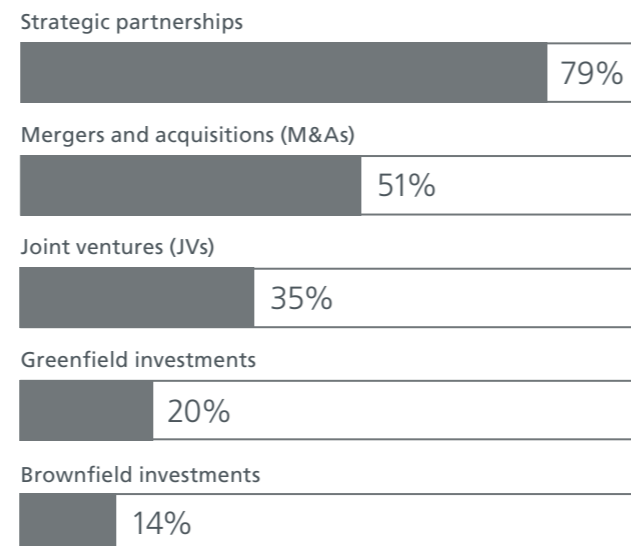
**Q** How does the rebalancing capital expenditure (CAPEX) plan compare to your company's normal CAPEX plan?



Rebalancing will require more capital investments. Based on our survey, 43% of business leaders believe that rebalancing CAPEX plans will cost more than normal CAPEX plans. That said, almost an equal share of business leaders believes that investments in rebalancing is not necessarily about increasing capital but about reallocating capital.

## Strategic partnerships and M&As emerge as the preferred modes of investing

**Q** Please rank the following ways of investing in rebalancing, from most preferred to least preferred.



There is an urgent need to boost supply chain resilience. It is therefore not surprising that business leaders' preferred modes of investing in rebalancing favour speedy execution and risk mitigation.

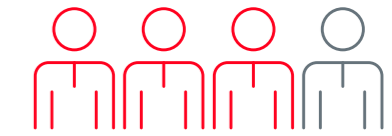
According to our survey, more than three quarters of business leaders prefer to engage in strategic partnerships, and more than half prefer to rebalance through M&As.

Horizontal partnerships enable businesses to pool resources and networks to boost resilience and increase their competitive advantage. Vertical partnerships, on the other hand, can help alleviate sourcing and distribution risks. Through M&As, businesses can acquire companies with established networks and connections, rather than build them from the ground up.

At the other end of the spectrum, greenfield and brownfield projects require significant investments and take years to materialise, posing significant risks. As a result, these two investment modes are the least favoured.

## Business leaders overwhelmingly agree that the cost of inaction outweighs the cost of rebalancing

**Q** Do you think the potential profit at risk as a result of not rebalancing your supply chain is higher or lower than the cost of rebalancing?



**75%<sup>1</sup>**  
of business leaders believe the cost of inaction will be higher

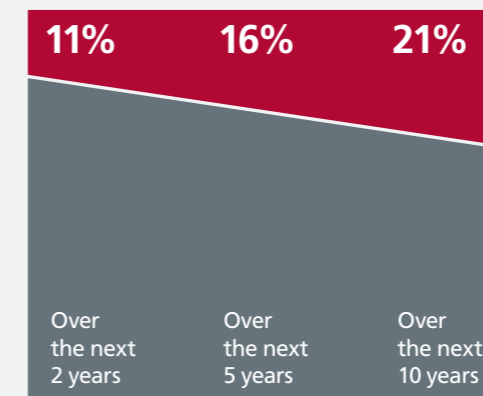
Although the cost of rebalancing is high, the cost of inaction will be higher. According to our survey, three quarters of business leaders believe that inaction will cost more than rebalancing, while less than one tenth believe the contrary. In particular, 86% of Asian business leaders believe the cost of inaction will be higher, the highest across the three regions.

## The high cost of inaction – failing to rebalance puts 21% of profits at risk over the next 10 years

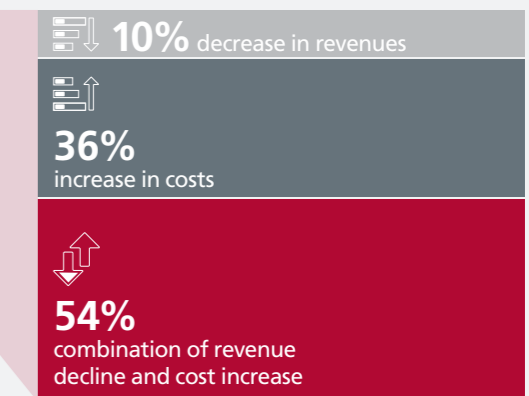
**Q** If your company's current supply chain remains unchanged, what percentage of profits could be negatively impacted / at risk over the following time periods?

**Q** What would be the main driver for the decrease in profits?

Profit at risk<sup>2</sup>



Drivers of profit decline<sup>3</sup>



On average, business leaders believe that failing to rebalance puts 11% of profits at risk over the next two years. This increases over time – 21% of annual profits are expected to be at risk over the next ten years.

More than one third of business leaders believe that the decline in profits is due to higher costs. However, more than half of them also believe that it is due to a combination of revenue decline and cost increase.

Fragile supply chains raise the operating cost of conducting business. This fragility could also impact revenues as businesses fail to fulfil orders in a timely manner, which could lead to reputational damage and lower customer acquisition and retention.

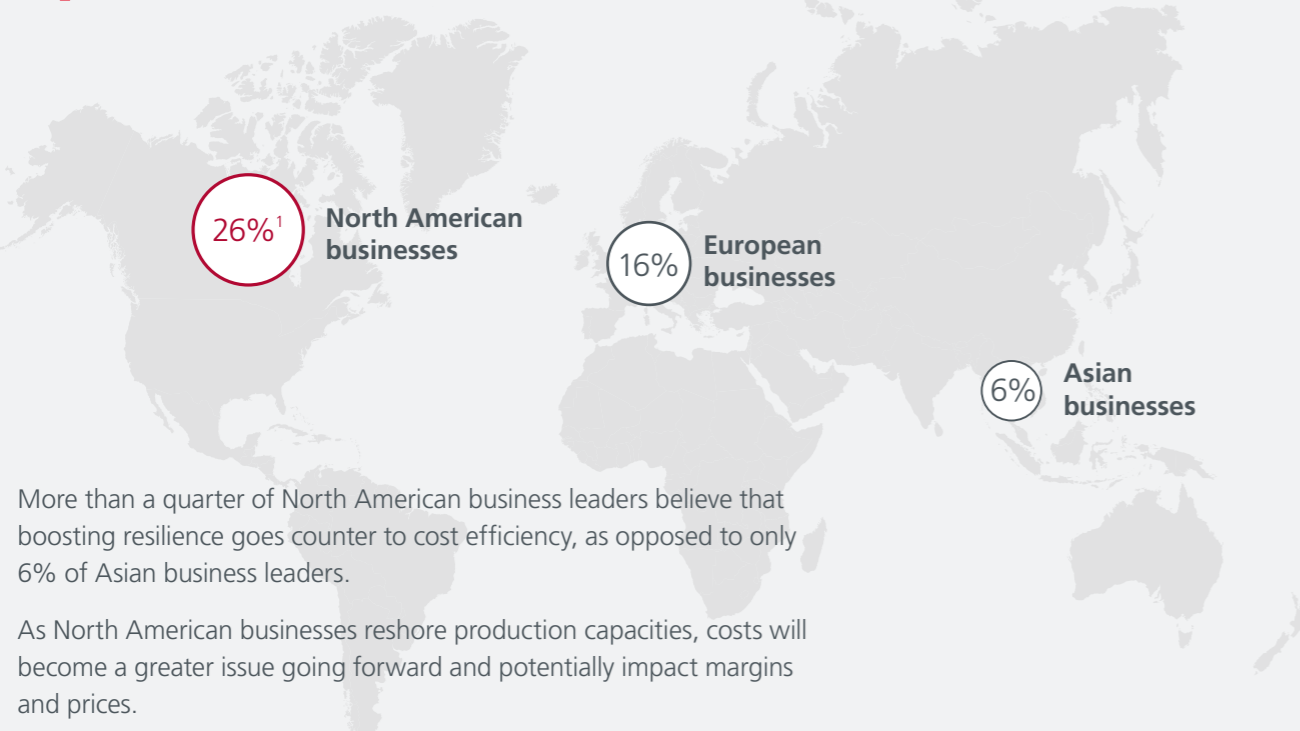
<sup>1</sup> Percentage includes the share of business leaders who indicated 'more expensive' or 'significantly more expensive'.

<sup>2</sup> Share of business leaders who indicated cost of inaction to be 'significantly higher' and 'higher' than the cost of rebalancing. <sup>3</sup> Percentages indicate the average profit at risk among all responses. <sup>3</sup> Percentages indicate the share of business leaders who selected the given option as the main driver of a potential decline in profitability.



## More than a quarter of North American business leaders believe rebalancing is less cost efficient

**Q** Does boosting supply chain resilience / rebalancing potentially contradict cost efficiency?



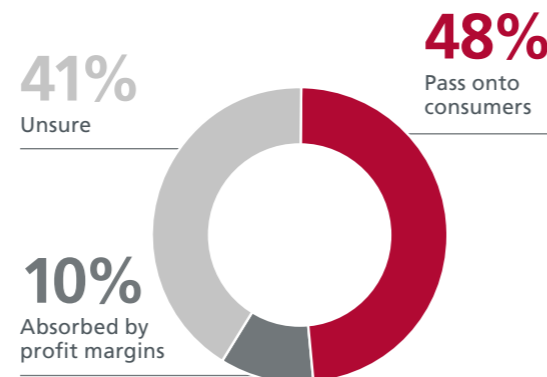
More than a quarter of North American business leaders believe that boosting resilience goes counter to cost efficiency, as opposed to only 6% of Asian business leaders.

As North American businesses reshore production capacities, costs will become a greater issue going forward and potentially impact margins and prices.

However, policies like the Inflation Reduction Act and the CHIPS Act could help to ease some cost pressures.

## Consumers may have to bear the higher costs of rebalanced supply chains

**Q** Would the cost of more expensive supply chains be passed onto consumers or absorbed by profit margins?



Close to half of business leaders believe that the cost of more expensive supply chains will be passed onto consumers.

However, more than 40% of them are unsure about how these costs will eventually impact prices.

## The rebalancing agenda in a nutshell

A rebalancing of global supply chains is already underway. Business leaders indicate that there will be significant shifts in the coming decade. Most agree that rebalancing will result in higher costs but the cost of inaction is even higher. India, Mexico, and markets in South East Asia, Emerging Europe and South America will occupy more prominent roles in value chains and trade. New networks will develop and new opportunities will emerge.

The following section – the rebalancing roadmap – takes a sector-specific lens to better understand the varying rebalancing dynamics faced by different sectors.

<sup>1</sup> Percentage includes the share of business leaders who indicated 'significantly contradict' or 'contradict'.

# The rebalancing roadmap



## A sector-specific view on rebalancing

In this section, we deep dive into the automotives, electronics manufacturing, as well as the pharmaceuticals and medical equipment sectors, as each faces varying pressures when trying to enhance supply chain resilience.

The automotives sector currently encounters both internal and external pressures. Internally, the sector faces significant disruptions as a result of the electric vehicle (EV) revolution. Traditional auto original equipment manufacturers (OEMs) are scrambling to develop new capabilities in battery technologies, and are racing to secure key components and raw materials. Externally, great powers are also competing for technological and market dominance in this sector, creating an additional layer of pressure and complexity.

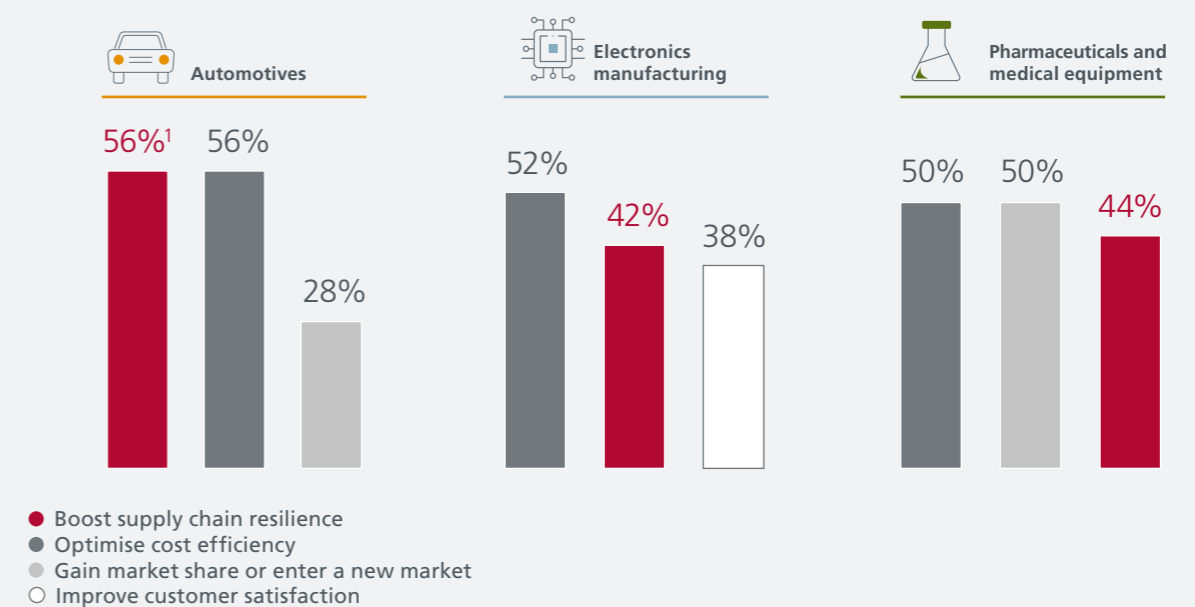
The electronics manufacturing sector's value chain is highly specialised and connected. As a result,

some players – either companies or countries – have significant control over key parts of the value chain, creating serious supply and sourcing fragility. The sector is trying to enhance resilience through diversification; achieving this goal while maintaining cost efficiency, however, is a challenge.

In the pharmaceuticals and medical equipment sector, nationalism has compelled a re-examination and potential reshoring of the value chain. Unlike the other two sectors however, pricing in this sector is especially contentious, and there is a strong political mandate to maintain affordability. The sector is also more restricted in terms of location options for rebalancing, due to regulatory and compliance hurdles, thereby limiting market access.

### Boosting resilience is consistently ranked among the top priorities across the three sectors

**Q** Please rank the following business priorities from the highest to the lowest.

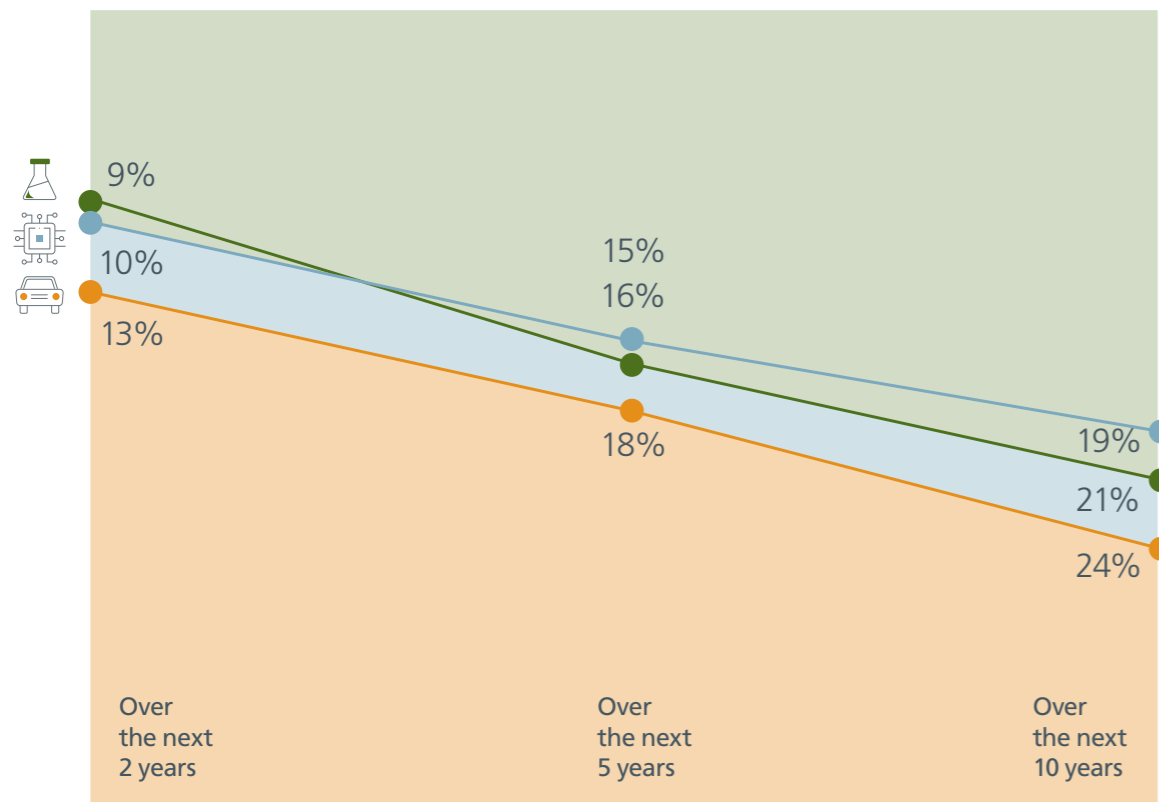


<sup>1</sup> Percentages indicate the share of business leaders who ranked the given priority among the first or second priorities.

## Failure to rebalance will have a significant impact on profits: 19 – 24% of profits could be at risk over 10 years, depending on the sector

**Q** If your company's current supply chain remains unchanged, what percentage of profit could be negatively impacted / at risk over the following time periods?

Profit at risk<sup>1</sup>



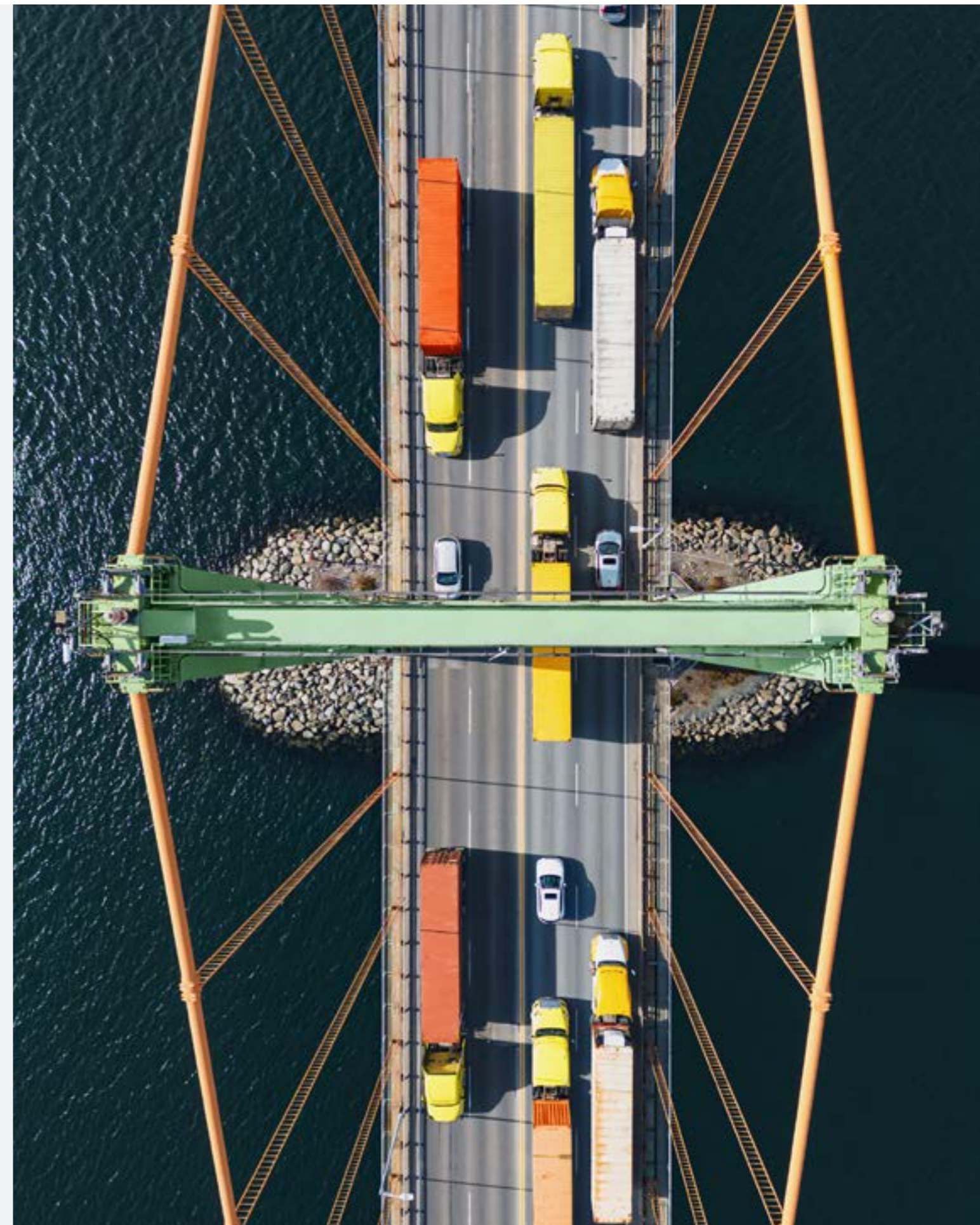
- Automotives
- Electronics manufacturing
- Pharmaceuticals and medical equipment

Business leaders across the three sectors consistently rank enhancing supply chain resilience as one of the most important corporate priorities.

The result is especially salient for the automotives sector. More than half of the sector's business leaders ranked enhancing resilience and cost efficiency as top

priorities. Automotives business leaders are especially concerned about the potential cost of failure to rebalance – 13% of profits could be at risk over the next two years, which increases to 24% over the next ten years.

<sup>1</sup> Percentages indicate the average profit at risk for the sector indicated.





# Overview

## Components production is the top rebalancing priority

Within the automotives value chain, the component production stage is the highest rebalancing priority. Yet, diversification is challenging as many auto components are tailored to specific vehicle types and are based on long-term contracts with specialised suppliers.

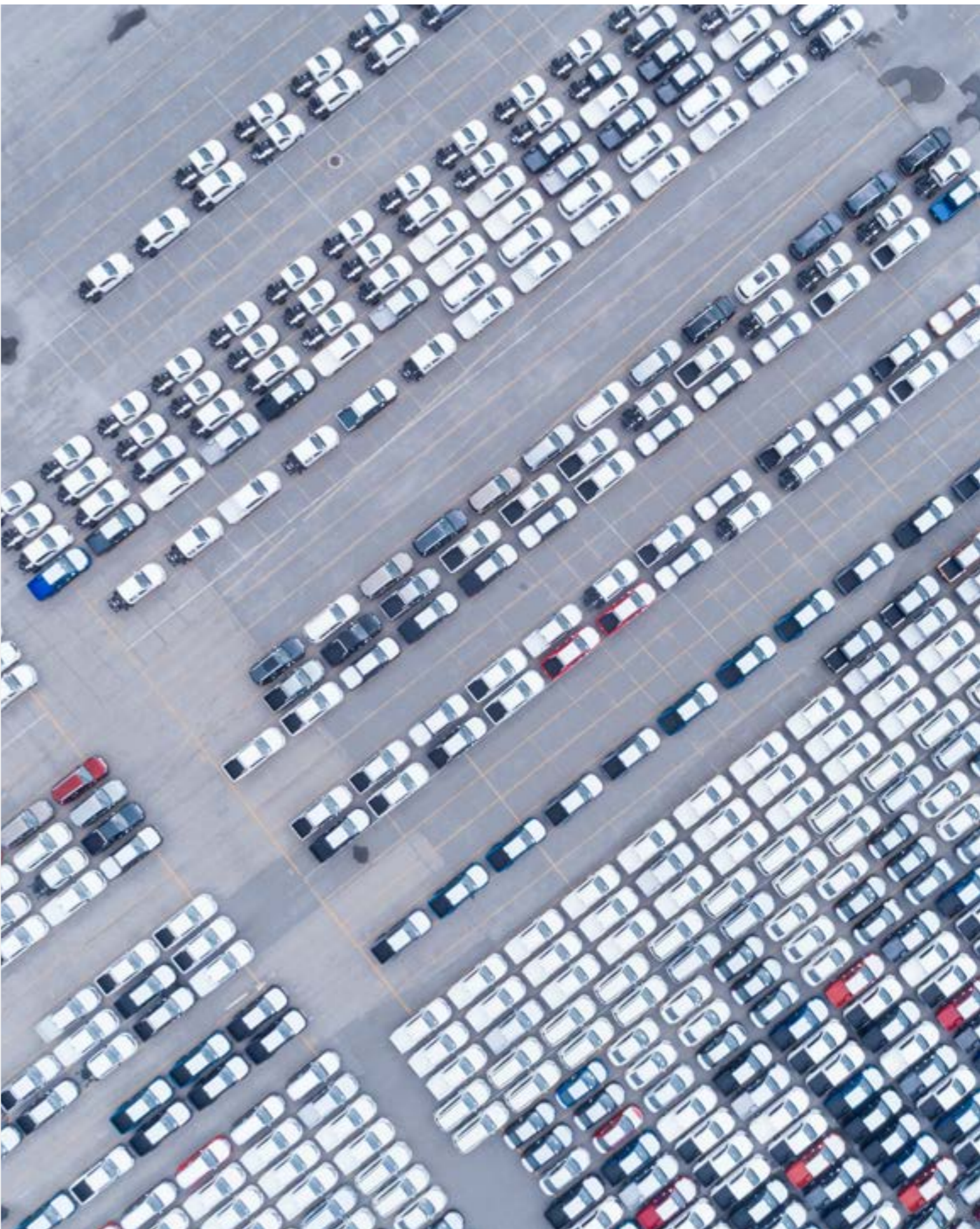
The emergence of EVs creates another layer of complexity. As the industry builds up an EV value chain parallel to the one for conventional fuel vehicles, the critical component – the EV battery – is at the centre of it. In order to be competitive, automakers must source an uninterrupted supply of batteries and battery components.

Building up resilience and capacity at the same time, however, poses challenges. The auto OEMs and their battery suppliers are also facing the thorny issue of raw material supplies, which has the potential to significantly disrupt the value chain.

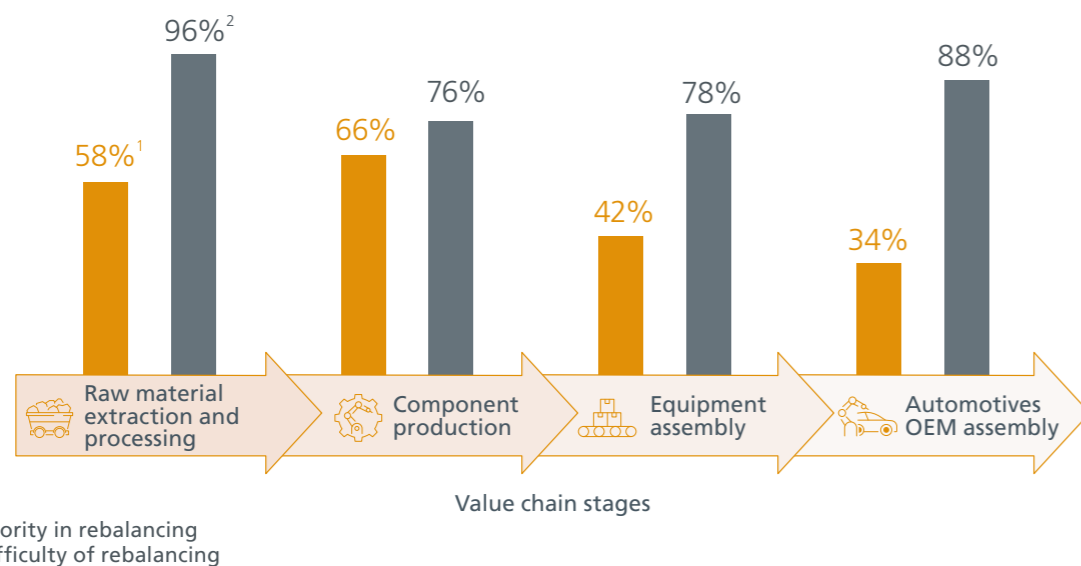
## Raw material extraction and processing is the most challenging to rebalance

Almost all of the automotives business leaders surveyed agree that upstream diversification is the most challenging, given the high geographic concentration of resources and processing capabilities.

According to the International Energy Agency, approximately 70% of cobalt – a key mineral used to enhance the energy density of lithium-ion batteries – is mined in the Democratic Republic of the Congo, while 50% of lithium is mined in Australia. In processing, China dominates the world’s capacity across key energy transition minerals such as copper, graphite, nickel, lithium, cobalt and rare earths.



**Q** Rank the following stages of your industry’s value chain in terms of the level of priority and difficulty of diversification/rebalancing.

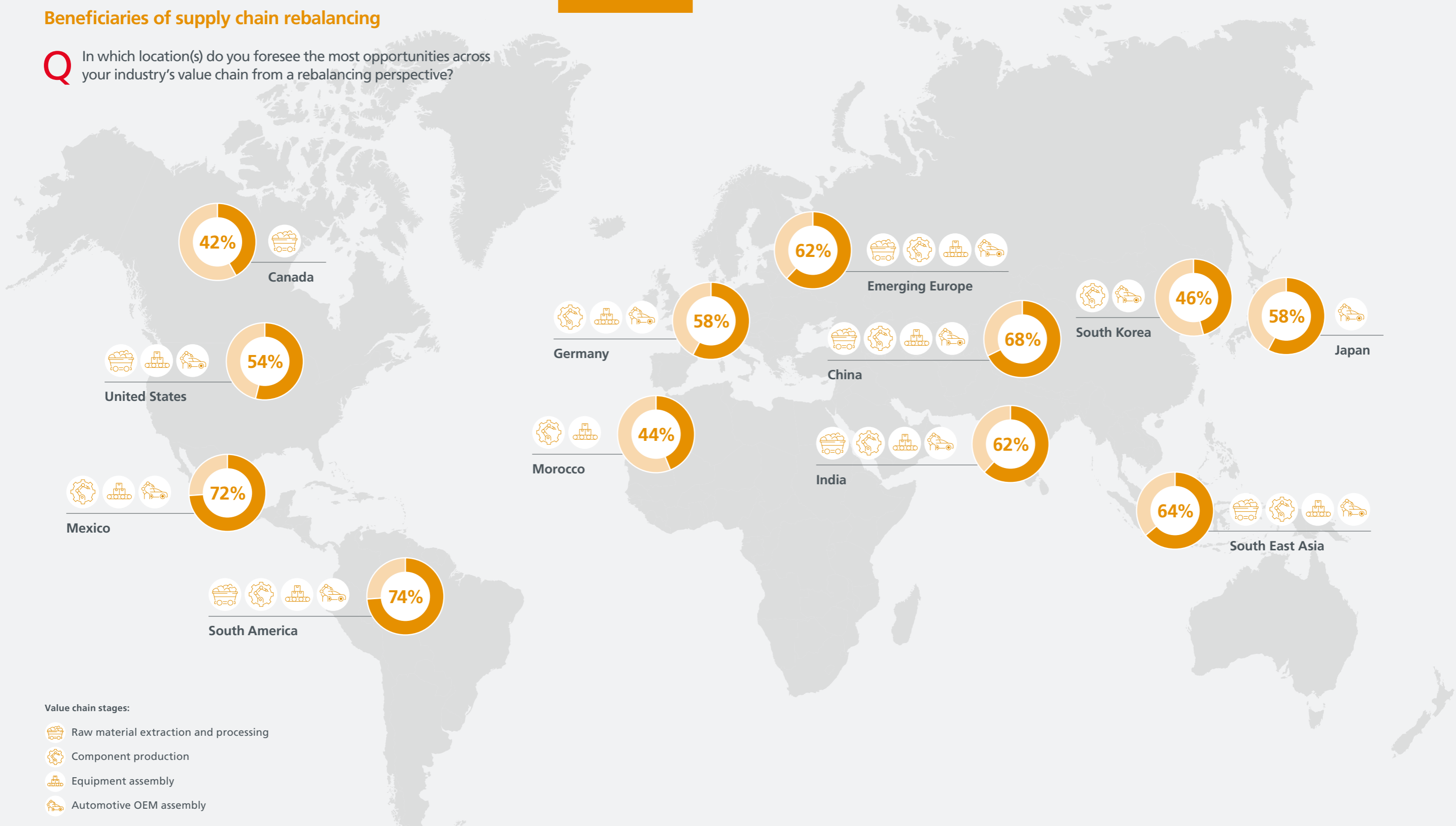


<sup>1</sup> Percentages indicate the share of business leaders who ranked the value chain stages as the first or second priority for rebalancing. <sup>2</sup> Percentages indicate the share of business leaders who indicated any level of difficulty to rebalance the respective value chain stages.





  
**Automotives**

**Beneficiaries of supply chain rebalancing**


**Q** In which location(s) do you foresee the most opportunities across your industry's value chain from a rebalancing perspective?



**Value chain stages:**

-  Raw material extraction and processing
-  Component production
-  Equipment assembly
-  Automotive OEM assembly

Only the value chain stages selected by a significant share of business leaders are indicated by their respective icons on the map.

 Countries that are selected by ≥40% of the business leaders of the sector as a future opportunity location for at least one value chain stage.



Automotives



### Value chains are expected to further diversify into regional clusters

While the automotives industry has traditionally clustered around large consumer markets, the value chain is further regionalising because of supply chain shocks, geopolitical forces and growing end markets.

In the Americas, Mexico is expected to be the biggest winner. The country serves as an ideal manufacturing hub to cater to North America, benefiting from its low labour cost and free trade agreement under the United States- Mexico-Canada Agreement.

In Europe, Germany is expected to remain an important player in the automotives value chain. However, it will be partially supplemented by markets in Emerging Europe.

These markets are witnessing an investment boom, as battery and battery component makers seek to leverage the region's favourable costs and generous incentives from the European Union. North Africa is also seeing investments to build up component and assembly capacities to service the European markets.

China and India's automotives value chains serve their large domestic markets. While India is seeing an increase in investments from mining to assembly, China is expected to maintain its position as a global EV leader.

In South East Asia, markets are vying for EV dominance. For example, Indonesia is leveraging its critical mineral reserves and incentives to court investments. Thailand, a well-established automotives OEM assembly hub for internal combustion engine cars, is receiving foreign direct investments (FDI) to make EVs and components.

### Specific chokepoints in extraction and processing will remain

Business leaders are bullish about raw material extraction and processing capabilities in the US, Canada, South America, Africa, South East Asia, China, India and Australia.

However, chokepoints in mineral supplies will remain. Mineral deposits are unequally distributed, with individual markets often having significant reserves in one mineral.

For example, Australia and Chile together account for the majority of the global lithium supply. Furthermore, China is expected to continue to dominate mineral processing, such as lithium, cobalt and copper, posing a significant single-market sourcing risk to companies and countries.

Countries globally have, however, begun to recognise raw material processing to be strategically important, and are coordinating with key geopolitical partners to grow their capabilities. For example, the US and its G7 partners have entered into the Minerals Security Partnership to build up the minerals' value chain, by coordinating industrial policy at an international level.

## Rebalancing roadblocks

### Costs, capabilities and technology are the key rebalancing roadblocks for the automotives value chain

Q What challenges/roadblocks make diversifying/rebalancing the following stages of the value chain difficult?

Challenges/roadblocks	Raw material extraction and processing	Component production	Equipment assembly	Automotives OEM assembly
<b>Cost</b> e.g., higher cost and more expensive supply chains due to rebalancing	1	2	3	1
<b>Capabilities</b> e.g., lack of capable value chain partners to support rebalancing		1	2	
<b>Technology</b> e.g., lack in tech developments and a need for more investments and R&D			1	
<b>Capital</b> e.g., lack of accessible capital at an affordable cost	2			
<b>Talent</b> e.g., lack of manufacturing or R&D talents in new locations		2		
<b>Trade rules</b> e.g., trade disadvantages due to a lack of FTA <sup>1</sup> coverage and higher tariffs				2
<b>Stakeholder</b> e.g., resistance from governments, suppliers, consumers, employees				2
<b>Supply</b> e.g., lack of substitutes and alternatives of materials, or sourcing security	3			

○ The circles mark the 3 biggest roadblocks faced in rebalancing respective value chain stages. The numbers indicate the ranking, where '1' is the biggest roadblock.

<sup>1</sup> FTA refers to Free Trade Agreement.



## Automotives

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## Overcoming roadblocks<sup>1</sup>

### Business leaders are leveraging partnerships to enhance capabilities

Rebalancing is driven by the OEMs, requiring a strong collaboration with key suppliers across the value chain stages. Businesses are pursuing a partnership-first approach, where they deepen strategic relationships with value chain partners to enhance capabilities and achieve their rebalancing objectives.

For example, many OEMs are engaging in vertical JVs with battery makers. This form of deep partnerships enable OEMs to secure production capabilities and access highly-specialised battery technology, while gaining a capital partner for the long term. OEMs are also investing in their suppliers to help them build up capabilities in new locations; some are even investing in the development of upstream mineral projects to ease raw material supply bottlenecks, a key concern among North American business leaders.

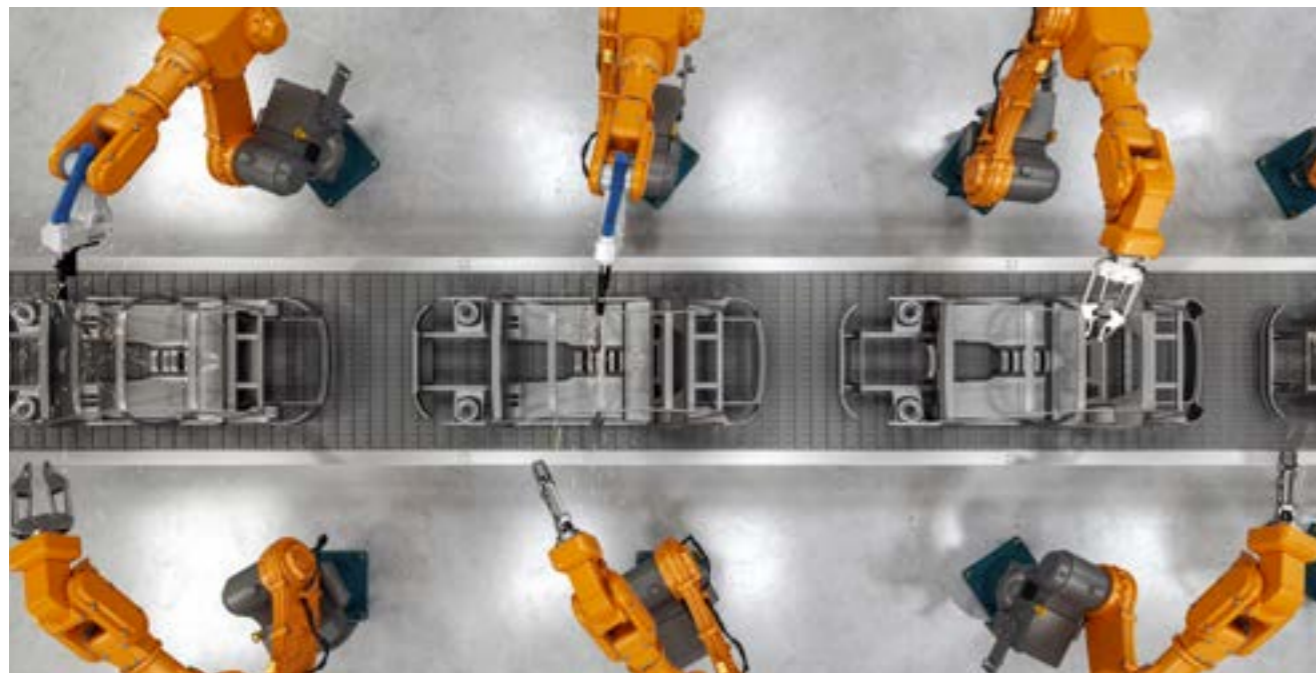
Internally, businesses are building new capabilities by appointing new operations teams, forming new functioning units, and adopting new manufacturing processes.

### From procurement to production, greater cost controls are implemented

From procurement to production, businesses are finding new ways to alleviate cost pressures – a key concern for automotives business leaders across all geographies.

For example, businesses are making procurement more transparent and cost competitive, by engaging in an open bidding process for sourcing components and parts.

Businesses are also tightening department-specific cost-based key performance indicators and installing renewables to power facilities more affordably.



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**Automotives leaders must develop a global supply chain strategy and implement it on a regional basis by setting up product- and supplier-specific clusters.**

Chief Supply Chain Officer, European original equipment manufacturer

<sup>1</sup> Insights synthesised from open question: What are some key considerations to help overcome the previously outlined challenges/roadblocks?



Electronics manufacturing

# Overview

## Component production is the top rebalancing priority

Component production – a highly specialised part of the electronics manufacturing value chain that includes the likes of semiconductors – has been under severe stress in recent years as a result of supply disruptions and geopolitics.

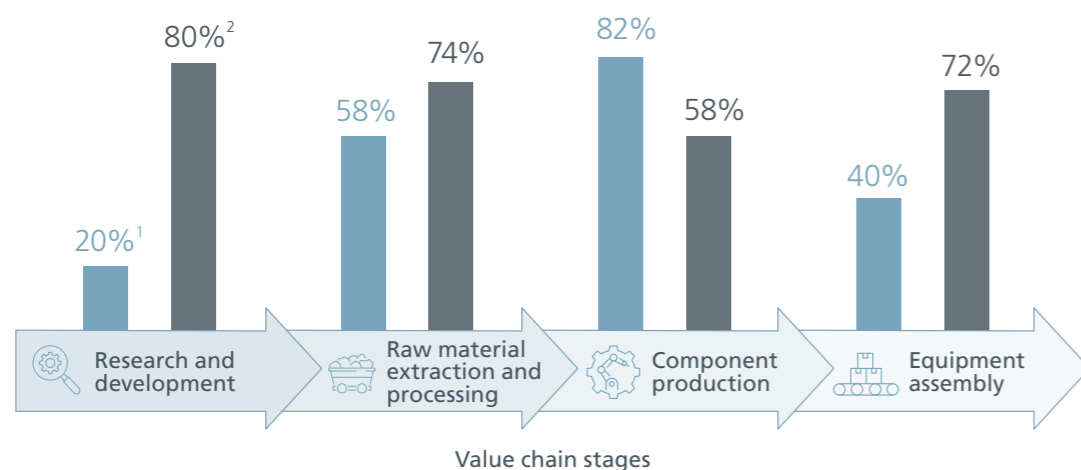
Business leaders in this sector overwhelmingly agree that alleviating this bottleneck in the value chain is a key priority, with American business leaders especially indicating so. Business leaders also agree that this stage of the value chain is the least difficult to rebalance. As a result, significant investments have poured into establishing new component production facilities across Europe and North America.

## Extraction and processing of raw material is the second highest rebalancing priority

More than half of the business leaders surveyed rank raw material extraction and processing as their second highest rebalancing priority, with Asian business leaders even ranking this stage as the highest priority. For extraction, the geological predetermination of mineral reserves limits sourcing to a handful of markets, adding to the complexity of rebalancing this stage of the value chain.

In terms of processing, China is currently the leader across many critical minerals. For other countries to compete with China at scale, it would require not only enormous capital investments and government support, but also significant advances in technological know-how.

**Q** Rank the following stages of your industry's value chain in terms of the level of priority and difficulty of diversification/rebalancing.



● Priority in rebalancing  
● Difficulty of rebalancing

<sup>1</sup> Percentages indicate the share of business leaders who ranked the value chain stages as the first or second priority for rebalancing. <sup>2</sup> Percentages indicate the share of business leaders who indicated any level of difficulty to rebalance the respective value chain stages.



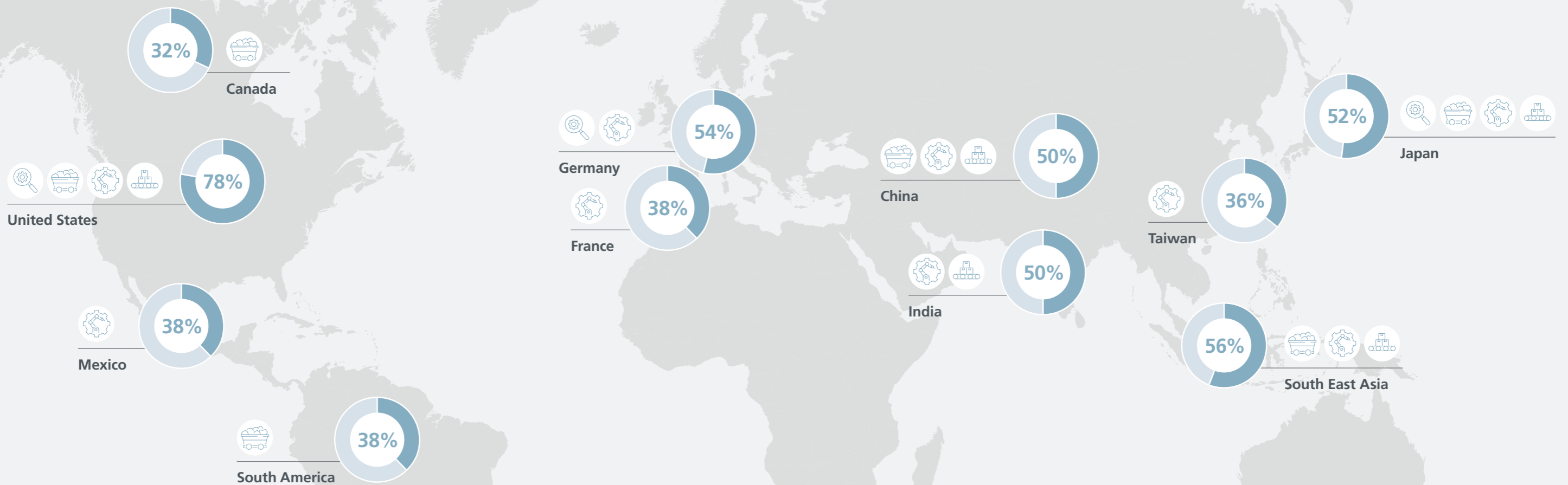




Electronics manufacturing

Beneficiaries of supply chain rebalancing

**Q** In which location(s) do you foresee the most opportunities across your industry's value chain from a rebalancing perspective?



Value chain stages:

- Research and development
- Raw material extraction and processing
- Component production
- Equipment assembly

Only the value chain stages selected by a significant share of business leaders are indicated by their respective icons on the map.

Countries that are selected by ≥30% of the business leaders of the sector as a future opportunity location for at least one value chain stage.



Electronics manufacturing



**Electronics manufacturers are bullish about the US, Japan, China, India and Germany**

Given the complexity of electronics manufacturing, only few markets in the world are large and sophisticated enough to internalise a significant portion of the value chain.

The US and Japan could internalise the value chain from end-to-end. Japan has long been a dominant player in electronics manufacturing, and is a key actor in the processing of critical raw materials - gallium and germanium. The US, a world leader in R&D, is going through a manufacturing renaissance, catalysed by the Inflation Reduction Act and the CHIPS Act.

China, India and Germany occupy large parts of the value chain. While China has significant capabilities in the value chain from processing to assembly, India is quickly building up capabilities in component production and equipment assembly, and expected to become a key player in electronics manufacturing globally. Germany, traditionally occupying a more R&D-oriented role, was recently able to successfully attract large-scale investments in semiconductor fabrication facilities.

**South East Asian markets hold great potential as a regional bloc**

Businesses are also bullish about the role South East Asian economies could play in view of their great potential to internalise a significant portion of the electronics manufacturing value chain, from extraction and processing to assembly.

Malaysia, for instance, has successfully carved out its industry niche as a testing and assembly centre for semiconductors, and is courting investments to move to higher value-adding activities.

Vietnam has received substantial investments from large electronics multinationals in recent years. Boasting the world's second-largest rare earth reserves after China, Vietnam is leveraging its natural competitive advantage and keen to enhance its processing capabilities.

# Rebalancing roadblocks

**Costs and capabilities are the key rebalancing roadblocks for the electronics manufacturing value chain**

**Q** What challenges/roadblocks make diversifying/rebalancing the following stages of the value chain difficult?

Challenges/roadblocks	Research and Development	Raw material extraction and processing	Component production	Equipment assembly
<b>Cost</b> e.g., higher cost and more expensive supply chains due to rebalancing	2	1	1	1
<b>Capabilities</b> e.g., lack of capable value chain partners to support rebalancing	1		3	3
<b>Technology</b> e.g., lack in tech developments and a need for more investments and R&D			3	2
<b>Trade rules</b> e.g., trade disadvantages due to a lack of FTA <sup>1</sup> coverage and higher tariffs		3	2	
<b>Supply</b> e.g., lack of substitutes and alternatives of materials, or sourcing security		2		
<b>Talent</b> e.g., lack of manufacturing or R&D talents in new locations	3			
<b>Infrastructure</b> e.g., lack of adequate physical infrastructure		3		
<b>Rule-of-law</b> e.g., corruption		3		
<b>Capital</b> e.g., lack of accessible capital at an affordable cost				3

○ The circles mark the 3 biggest roadblocks faced in rebalancing respective value chain stages. The numbers indicate the ranking, where '1' is the biggest roadblock.

<sup>1</sup> FTA refers to Free Trade Agreement.



## Electronics manufacturing

Executive Summary

The rebalancing agenda

The rebalancing roadmap

The investment implications of rebalancing

# Overcoming roadblocks<sup>1</sup>

## Business leaders are balancing cost considerations with long-term diversification objectives

Cost consideration is the biggest roadblock, affecting rebalancing decisions across every stage of the electronics manufacturing value chain. European electronics manufacturers are particularly conscious about costs, ranking it as the top rebalancing roadblock across all the value chain stages.

To control costs, business leaders aim to enhance operational efficiency by leveraging technologies such as AI and lean manufacturing techniques. Business leaders are also renegotiating the terms of existing contracts and entering into long-term offtake agreements to become more cost-competitive. In sourcing, businesses are expanding their networks to include newer markets and suppliers to strengthen their bargaining power and reduce their over reliance on a single specific market or supplier.

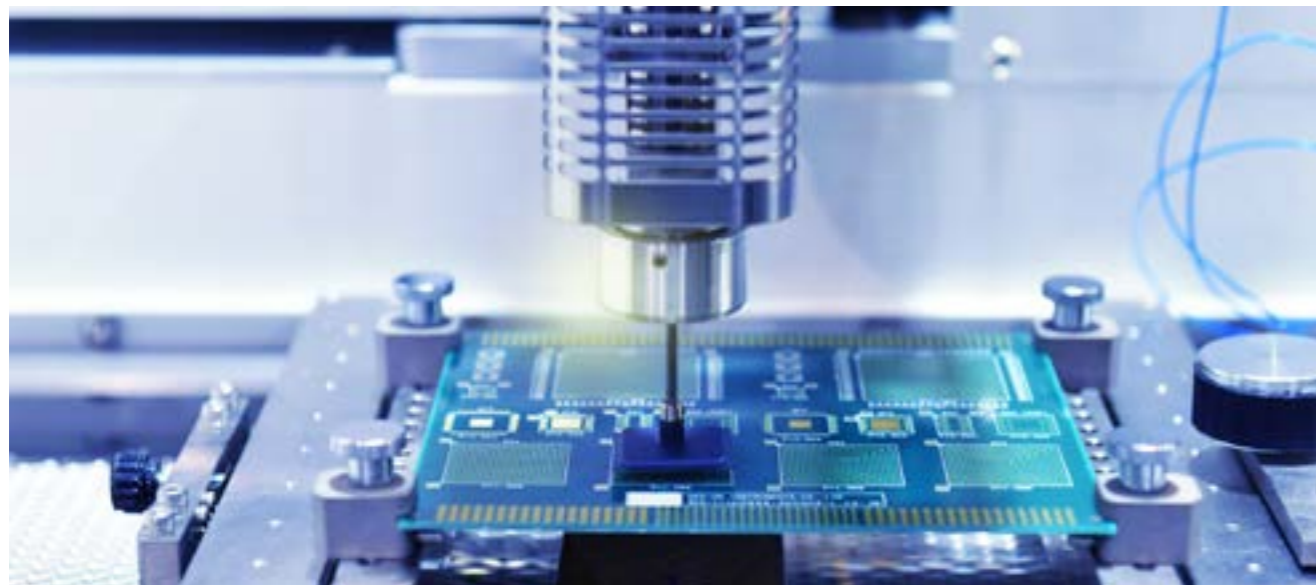
In financing their rebalancing plans, business leaders are carefully calibrating a blended funding structure. This approach goes beyond traditional debt and equity financing, and takes advantage of the incentives offered in this new age of industrial policy.

## Partnerships are vital to overcome capability constraints and enhance competitiveness

Rebalancing the electronics manufacturing value chain requires enormous investments. The value chain's highly-connected and highly-specialised nature dictates that businesses cannot rebalance on their own.

Nurturing strategic relationships is, therefore, of vital importance to gain capabilities and resources that companies lack. For example, businesses are deepening relationships with contract manufacturers, rather than investing in greenfield projects on their own. They are also engaging with local supply chain partners to simplify import and export processes, thereby shortening lead times.

When diversifying beyond established manufacturing economies like China, the lack of capability and technology in new host countries are often major roadblocks, with North American businesses especially concerned about capabilities and Asian businesses with technology. To overcome this, businesses are collaborating with local government bodies and other private players to strengthen R&D and foster innovation.



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**Despite posing significant challenges, these roadblocks are not 'no-goes' but rather 'watch-outs'.**

**To help businesses navigate the complexities of moving value chain activities to a new market, countries should leverage and market comprehensive case studies, to showcase how companies have entered their jurisdictions in the past, and how they were able to build up R&D, production, and sourcing capabilities and capacities.**

Chief Financial Officer, European electronics manufacturing company

<sup>1</sup> Insights synthesised from open question: What are some key considerations to help overcome the previously outlined challenges/roadblocks?



**Pharmaceuticals and medical equipment**

# Overview

## Rebalancing the chemicals and raw material sourcing stage is of the highest priority

Business leaders have identified chemicals and raw material sourcing as their top rebalancing priority. Single market sourcing dependencies, however, make achieving this objective challenging. In pharmaceuticals, for example, only a handful of countries have the infrastructure and capacity to produce biologicals, intermediaries and active pharmaceutical ingredients (APIs) at competitive costs. Notably, India and China account for two thirds of global API production.

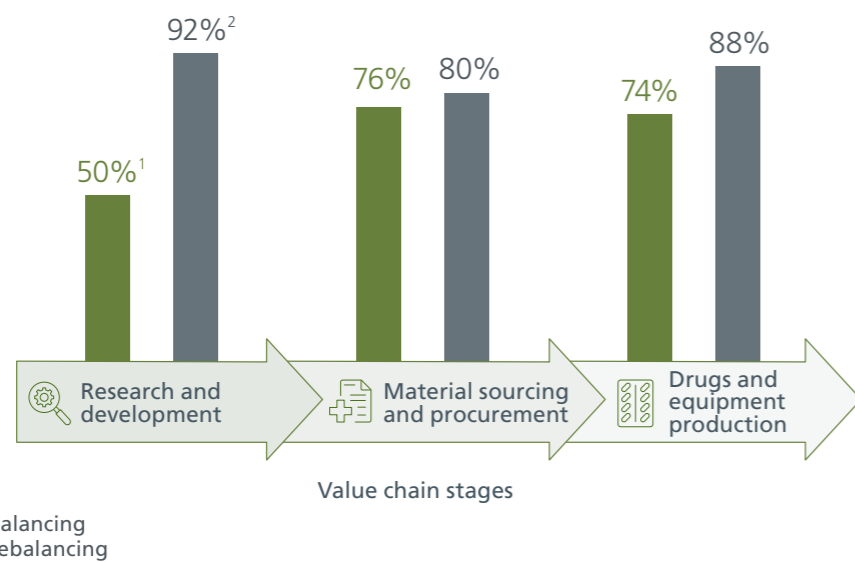
Lack of sourcing visibility is a challenge for the medical equipment segment. Since upstream supplier networks are highly fragmented, businesses have only limited visibility over their complex supply chains. Even for simple products such as sterile gloves or blood bags, sourcing could involve multiple tiers of suppliers.

## The production stage is equal in rebalancing priority

Business leaders agree that the diversification of drugs and medical equipment is equally important. However, the regulatory landscape poses a substantial obstacle to achieving this objective.

Another concern is the infringement of intellectual property (IP). In addition to the usual risks of IP theft and inadequate protection, governments may require foreign companies to enter into JV agreements to facilitate the knowledge transfer domestically. Consequently, businesses face a trade-off to partially relinquish their IP in exchange for expanded market access and favourable costs.

**Q** Rank the following stages of your industry's value chain in terms of the level of priority and difficulty of diversification/rebalancing.



<sup>1</sup> Percentages indicate the share of business leaders who ranked the value chain stages as the first or second priority for rebalancing. <sup>2</sup> Percentages indicate the share of business leaders who indicated any level of difficulty to rebalance the respective value chain stages.

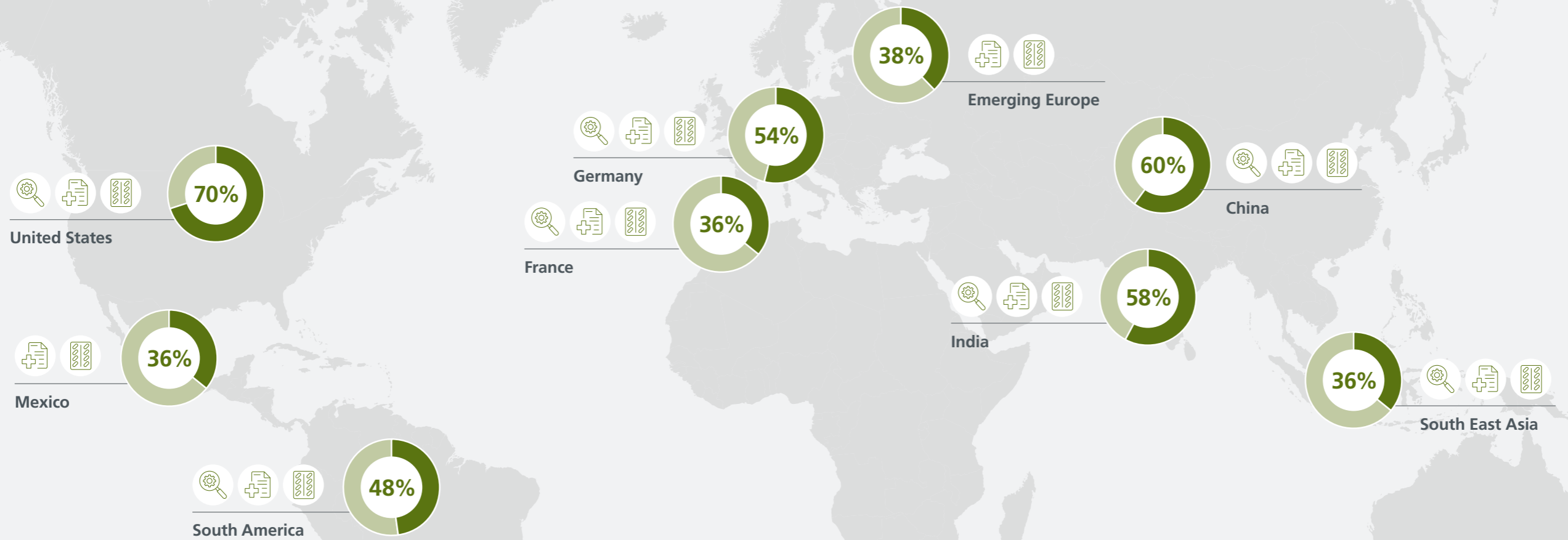




**Pharmaceuticals and medical equipment**

**Beneficiaries of supply chain rebalancing**

**Q** In which location(s) do you foresee the most opportunities across your industry's value chain from a rebalancing perspective?



**Value chain stages:**

- Research and development
- Material sourcing and procurement
- Drugs and equipment production

Only the value chain stages selected by a significant share of business leaders are indicated by their respective icons on the map.

Countries that are selected by ≥30% of the business leaders of the sector as a future opportunity location for at least one value chain stage.



**Pharmaceuticals and medical equipment**



# Rebalancing roadblocks

## Costs, bureaucracy and supply are the key rebalancing roadblocks for the pharmaceuticals and medical equipment value chain

**Q** What challenges/roadblocks make diversifying/rebalancing the following stages of the value chain difficult?

Challenges/roadblocks	Research and development	Material sourcing and procurement	Drugs and equipment production
<b>Cost</b> e.g., higher cost and more expensive supply chains due to rebalancing		1	1
<b>Bureaucracy</b> e.g., permitting, challenges and delays due to lengthy regulatory processes	1		3
<b>Supply</b> e.g., lack of substitutes and alternatives of materials, or sourcing security		1	
<b>Capital</b> e.g., lack of accessible capital at an affordable cost	3		2
<b>Capabilities</b> e.g., lack of capable value chain partners to support rebalancing		2	3
<b>Talent</b> e.g., lack of manufacturing or R&D talents in new locations	2		
<b>Infrastructure</b> e.g., lack of adequate physical infrastructure			3

○ The circles mark the 3 biggest roadblocks faced in rebalancing respective value chain stages. The numbers indicate the ranking, where '1' is the biggest roadblock.

### Countries are expected to build domestic capacity across value chain stages

The US, China, India, and Germany are actively working towards enhancing their capabilities in less developed stages of the pharmaceuticals and medical equipment value chain.

The US, for instance, has a robust R&D infrastructure, but faces limitations in the production of less complex, yet essential drugs, vaccines, and medical supplies.

Consequently, the US government is directing its efforts to bring the production bases of these essential products back to its domestic market. Western European countries like France and Germany – with the latter being one of the world’s largest medical device net exporters – face similar issues, and are also putting in efforts to reshore some production capacity of essential products.

China and India, in contrast, play a prominent role in the sourcing and production stages of the value chain. China, with substantial investments in R&D, is rapidly closing the gap in medical innovation, in fields such as biopharma. India follows a similar trajectory. Currently, the country offers cost effective scale production of APIs, generics, and vaccines, but there are growing investments to bolster the domestic development of originator medicines and manufacturing of medical devices.

### Emerging Europe, Mexico, South East Asia and South America are attractive rebalancing locations

Emerging Europe and Mexico are expected to become significant sourcing and production locations for European and American businesses, respectively, due to their lower labour costs and proximity to large healthcare markets. Emerging European countries like Czechia and Poland, offer cost effective production options for labour-intensive processes. Mexico, on the other hand, has become a major exporter of medical devices and supplies and is expected to further scale its production as American businesses nearshore operations.

South East Asia and South America are also attractive destinations for the sector, from R&D to production. Brazil, with 10% of its GDP spent on healthcare, is investing into clinical R&D and aims to establish itself as the dominant player in the region. Similarly, South East Asian markets like Vietnam and Malaysia are expected to attract significant investments in pharmaceuticals manufacturing. Singapore is positioning itself as a regional hub for biopharma R&D and the production of advanced medical equipment such as microarrays.



## Pharmaceuticals and medical equipment

# Overcoming roadblocks<sup>1</sup>

## Business leaders are leveraging technology and rebalancing to strategic markets

Cost is the biggest roadblock in rebalancing the pharmaceuticals and medical equipment sector. This is particularly the case for North American and European businesses.

Technological improvements and digitalisation can enhance supply chain efficiency and play a role in R&D. For example, AI is helping researchers in the drug discovery process, and has the potential to significantly reduce overhead costs.

Furthermore, businesses are strategically selecting markets that offer pricing flexibility and serve as export bases due to their free trade agreements (FTAs). By establishing in these markets, businesses can improve their margins, and reduce trade-related compliance costs.

Other cost management techniques include implementing energy efficient manufacturing practices, restructuring debt and conducting cost benefit analysis for optimised spending.

## Building robust relationships with regulators is key to overcoming red tape and bureaucracy

Businesses are liaising with public stakeholders to overcome red tape and bureaucracy. Establishing strong

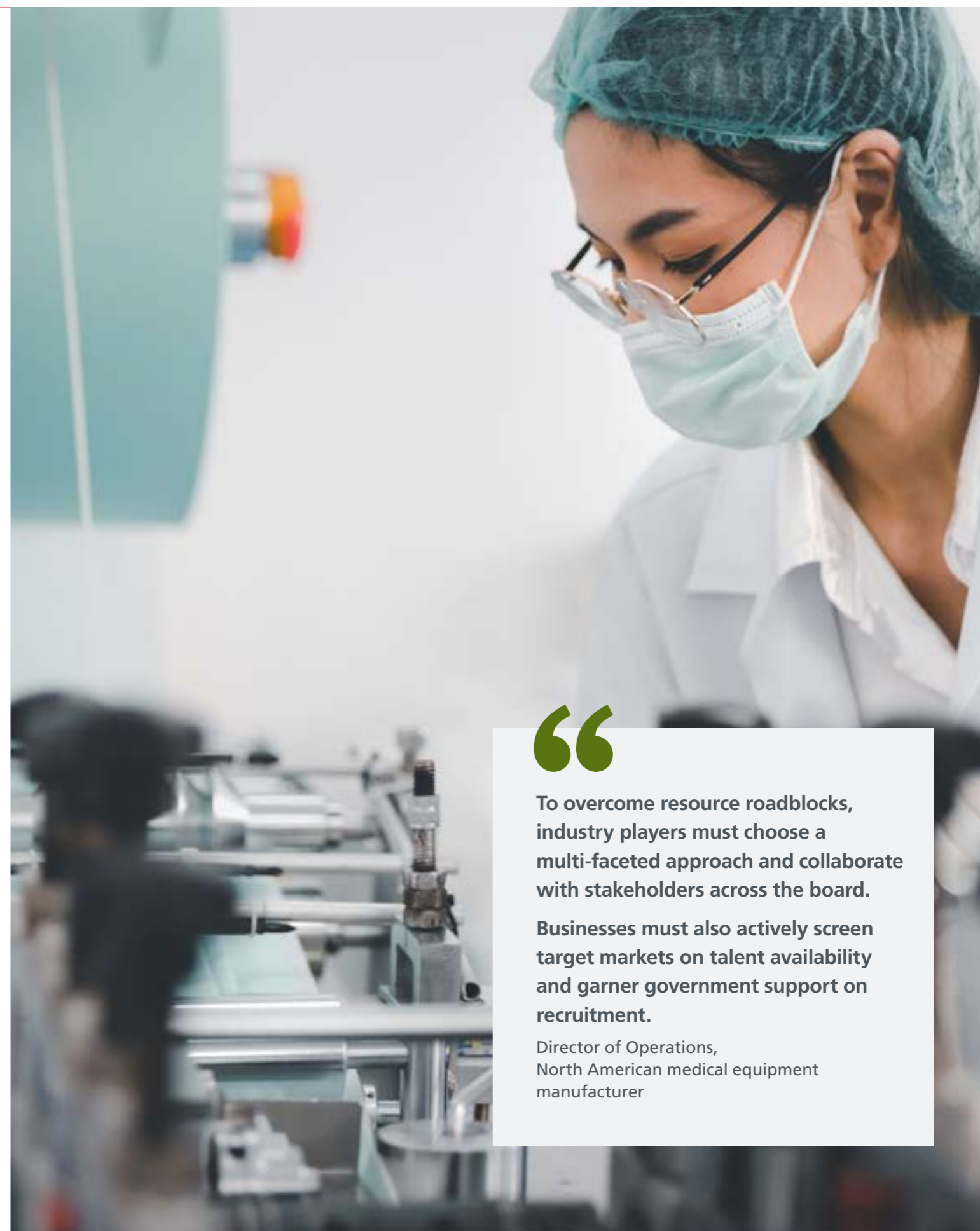
ties with local authorities is particularly important for North American and European businesses, which rank regulatory considerations as significant rebalancing roadblocks.

Businesses are also advocating for favourable legislative changes, such as stricter patent laws and greater IP protection. Additionally, businesses are negotiating investment incentives and seeking support from officials to build a robust local talent pipeline through joint investments in university programmes or private-public research initiatives.

## Industry-wide collaboration is important to alleviate supply constraints

Collaboration at the industry level is a key strategy to reduce supply constraints. Businesses are actively engaging with each other to build industry clusters and jointly invest in shared infrastructure. This move is particularly important for European business leaders, given the high share indicating infrastructure as a roadblock.

Simultaneously, businesses are diversifying by investing in alternative suppliers to reduce previous supply dependencies. To further strengthen supply chain resilience, businesses are deepening relationships with local partners in critical areas such as cold chain logistics.



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**To overcome resource roadblocks, industry players must choose a multi-faceted approach and collaborate with stakeholders across the board.**

**Businesses must also actively screen target markets on talent availability and garner government support on recruitment.**

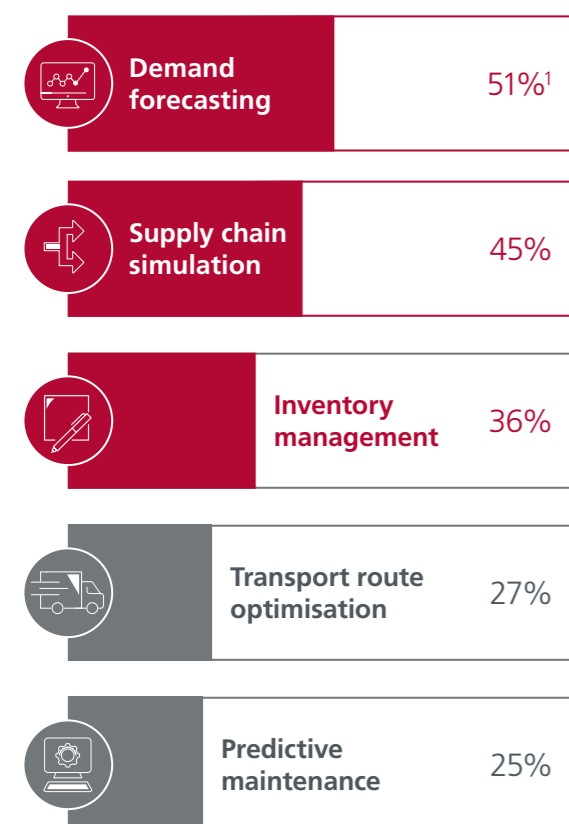
Director of Operations,  
North American medical equipment  
manufacturer

<sup>1</sup> Insights synthesised from open question: What are some key considerations to help overcome the previously outlined challenges/roadblocks?

## AI's growing role in supply chain rebalancing

### AI's demand forecasting and simulation capabilities could help businesses achieve greater efficiency

**Q** Where do you think AI will have the most positive impact in supply chains? Please rank the following use cases from most to least impactful.

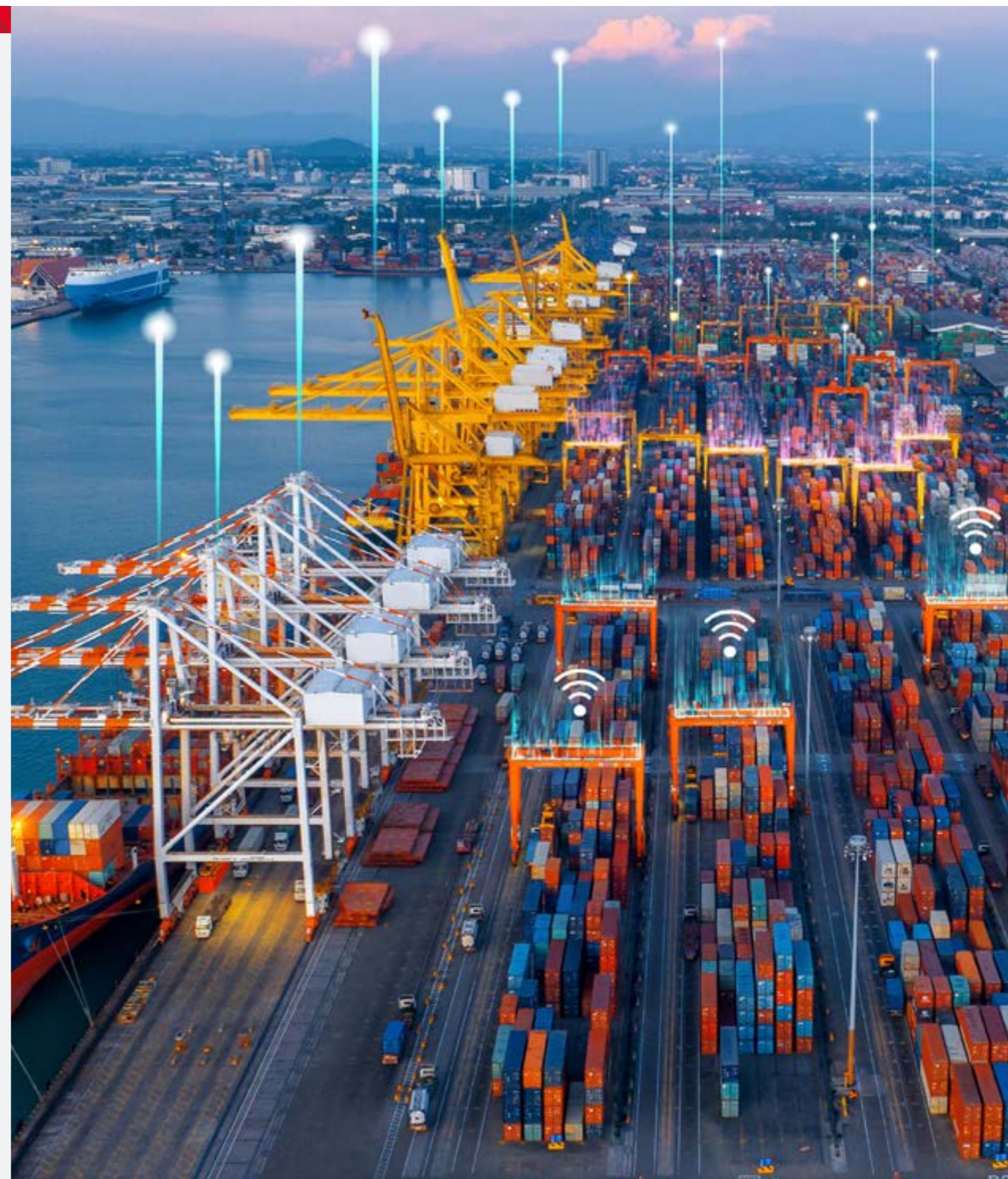


AI is expected to revolutionise efficiency, making it a game changer across various industries. As businesses continue to rebalance their supply chains, the role of AI could become increasingly prominent. With the technology constantly evolving, businesses are seeking new AI use cases to assist in the rebalancing process and enhance their supply chains and operations.

More than half of the business leaders surveyed see AI making the biggest impact in predictive analytics. Pharmaceuticals players are leveraging AI to analyse disease trends to forecast the future market for particular drugs. As businesses rebalance to different markets, accurate demand forecasting facilitated by AI can greatly assist in resource planning.

More than 40% of business leaders expressed that supply chain simulations provide substantial value for their businesses. In the electronics manufacturing sector, for example, AI is used to generate various supply chain scenarios and simulate potential disruptions in the supply of semiconductors. Tier 1 auto suppliers, on the other hand, can leverage simulations to detect inefficiencies in their sourcing process, or model new manufacturing lines to plan for capacities. As businesses establish new connections across supply chains, simulations can help businesses optimise supply flows across these new connections points and enhance planning and efficiency.

Inventory management is another key use case of AI. In fact, 44% of electronics manufacturing business leaders seek to leverage AI to optimise inventory levels to achieve cost savings.



<sup>1</sup> Percentages indicate the share of business leaders who ranked the given applications among the most or second most impactful.



# The investment implications of rebalancing

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## Investment implications

The earlier sections in this whitepaper highlight the urgent need to rebuild supply chains. However, our survey suggests that it is no easy task given the need to balance potentially conflicting priorities and overcome multiple roadblocks. Investors will need to have an in-depth understanding of the different rebalancing and company dynamics to identify potential beneficiaries.

Our survey shows that India, Mexico, and markets in South East Asia, Emerging Europe and South America are expected to grow in importance for future supply chains. However, these markets only have small weightings in the global and regional equity market indices. Emerging Markets (EMs) have a 10% weight in the MSCI AC World Index, while ASEAN accounts for only 1%. Meanwhile, India and ASEAN make up 13% and 6% respectively of the MSCI EM Index. As such, these market capitalisation-weighted indices only provide modest exposure to the countries that are expected to benefit most from the global supply chain rebalancing. These indices also tend to be biased towards the widely held, larger cap stocks, which potentially reduce diversification and alpha benefits in a portfolio. Therefore, investors may want to consider a more focused approach to exploit the alpha potential from the global rebalancing theme.



## A once-in-a generation opportunity for Global Emerging Markets (GEMs)

We believe that the rebalancing of global supply chains presents a once-in-a-generation opportunity for EM countries that have the necessary resources and readiness. China will still be a dominant and influential player in global supply chains given its large and skilled workforce, excellent infrastructure, and huge domestic market. The shift away from China is therefore likely to be gradual and partial. However, the transition will still yield outsized opportunities for many economies and companies across the GEMs. The largest beneficiaries of this transition are likely to be in ASEAN, Latin America, India and EMEA - countries with cheap labour, decent manufacturing bases and are producers of key commodities. The combined manufacturing value add of these countries is less than half that of China. As such, a small shift away from China adds a significant amount of manufacturing value add to these countries. For investors, we believe that much of the opportunities reside in small to mid-cap stocks, which would be best uncovered via a disciplined, fundamentally driven stock-picking investment approach.

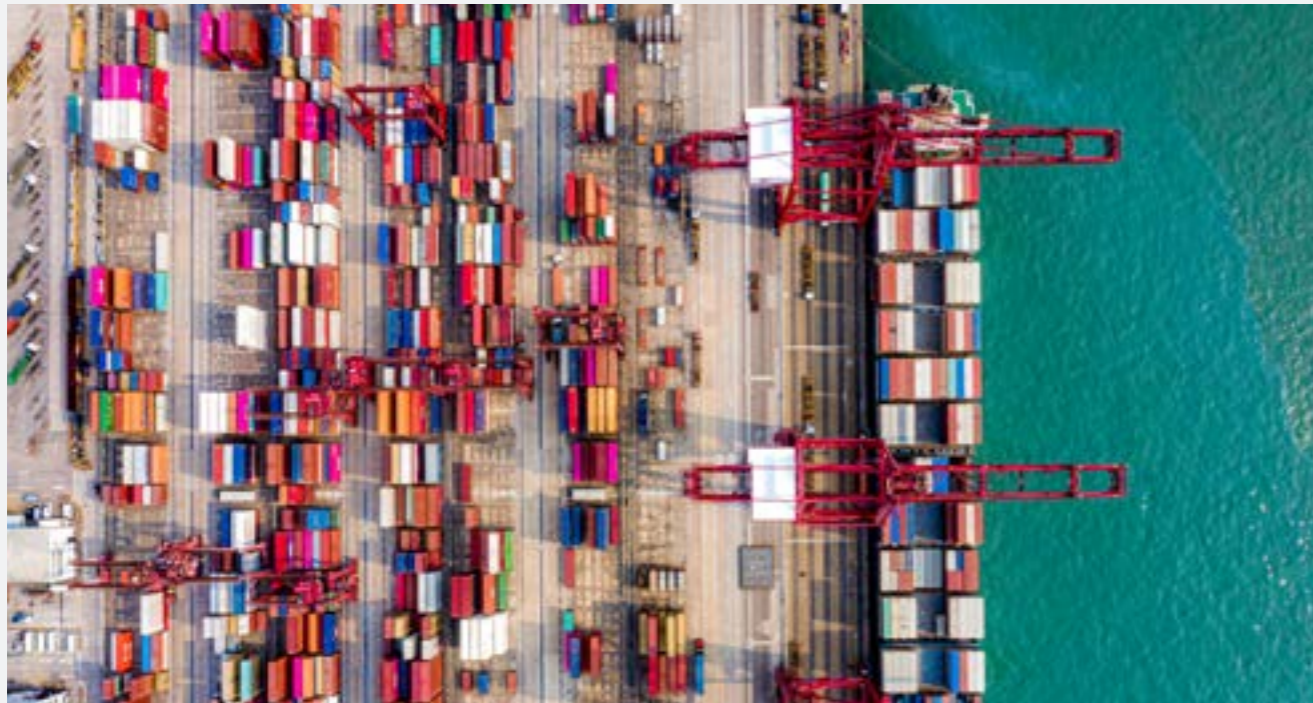
### Global Emerging Markets Equity Team

Eastspring Investments

Foreign direct investment (FDI) flows have become fragmented in recent years, driven by geopolitical tensions, climate events, wars and policy shifts. In particular, the share of FDI flows to geopolitically aligned countries has risen. Onshoring, friend-shoring and strategic diversification of supply chains have caused major changes in flows and will result in new winners and losers. At the macro level, FDI recipients will likely see a near-term boost to economic growth and fiscal balances, while their external positions could also benefit in the longer term should these investments result in competitive export opportunities. Some of the countries that have benefitted to date include Vietnam, Singapore, Malaysia, India, Mexico and Brazil. Looking ahead, EM economies are expected to experience stable and higher growth of 4.1% in 2024 and 4.2% in 2025. Greater fiscal prudence too suggests that credit rating upgrades are on the cards for some LATAM and CEEMEA countries. Currently we see opportunities in local currency debt across Mexico, Brazil and India as well as hard currency debt in Mexico.

### Eric Fang

Portfolio Manager, Fixed Income  
Eastspring Investments



## ASEAN benefits as a China “plus one” destination

The reconfiguration of global supply chains following the onset of the COVID-19 pandemic presents a great opportunity for ASEAN economies to upgrade their participation. Typically, the decision to relocate supply chains will depend on key factors such as labour costs, skilled labour access, infrastructure quality, and information communication technology development. The ASEAN economies stack up relatively well on a number of these areas compared to other regions. The region already boasts of a well-established supply chain for the electric vehicle (EV) industry. Growing connectivity and the complementarities between Asian economies have led to Asia’s rising importance within global supply chains. Separately, the Regional Comprehensive Economic Partnership (RCEP), which is the world’s largest free trade agreement measured by GDP also increases ASEAN’s attractiveness for FDIs, relocation of value chain activities and production facilities. With ASEAN, companies have access to a single market of 600 million consumers.

### Bryan Yeong

Portfolio Manager, Equities  
Eastspring Investments

Companies such as Samsung, Google, Microsoft and Apple have shifted portions of their supply chains to Vietnam in recent years as part of their “China plus one” strategy. Vietnam’s rising importance in the global supply chain and in turn its growing manufacturing sector, have helped to drive the economy. From 2013 to 2023, Vietnam’s exports grew at an average rate of 12% p.a., 4x faster than the global rate. Economic growth averaged 6% p.a. over the same period. We see investing in Vietnam equities as one way to benefit from this strong economic growth. High manufacturing demand leads to greater demand for industrial parks, ports and bank loans. As Vietnam’s robust economic growth boosts its middle-income population, the consumer, retail banking and residential real estate sectors are likely to benefit over the long term.

### Ngo The Trieu

Chief Executive Officer & Head of Investments,  
Eastspring Vietnam

## Ample opportunities from Indonesia's EV roadmap

Indonesia is leveraging its large reserves of nickel and cobalt to develop an integrated electric vehicle (EV) supply chain. It aims to become one of the world's top three producers of EV batteries by 2027 and to produce 600,000 electric vehicles by 2030. The government has so far abolished export duties, lowered import tariffs, relaxed lending rules and provided a tax holiday for EV makers. It will also gradually increase the domestic component requirement on EV makers to incentivise building a more complete supply chain.

There are many opportunities to invest directly in Indonesia's 2-wheeler and 4-wheeler EV supply chain through its listed companies. Indonesia has highly competitive producers of battery materials in the upstream and midstream supply chains. Downstream, there are established companies involved in 2-wheeler manufacturing and sales, 4-wheeler sales and dealerships, EV battery pack and electronic sensor manufacturing, as well as in EV solutions and infrastructure. Beyond the battery material producers, many other downstream companies are still at the early stages of their development. As such, the growth potential is significant as EV adoption in Indonesia accelerates.

There are also spillover benefits arising from Indonesia's strategic focus on EVs. By leveraging its comparative advantage in EV battery production, Indonesia can move up the value chain and enjoy export-led growth. Meanwhile Indonesia's nickel and steel exports have bolstered the country's current account surplus in 2021 through to 2023, enhancing domestic financial stability and reducing reliance on volatile capital flows. Domestic businesses including banks, consumer companies, industrial estates, infrastructure, utilities, transportation, mining, and equipment contractors will benefit from increased activity along the EV supply chain.

### Cesar Rugassi

Equity Analyst  
Eastspring Indonesia



## Manufacturing reforms to underpin India's economy and market

India is enjoying a manufacturing boom as it presents itself as an alternative location for companies looking to diversify their supply chains. This can be seen from India's robust FDI inflows. The production-linked incentive (PLI) schemes have helped attract global companies to set up manufacturing bases in India and domestic manufacturers to expand their production. Unlike earlier schemes, PLI is much more targeted. It focuses on selected sectors, and incentives are disbursed based on capital expenditure and production targets. It also helps that India has one of the best demographic profiles in the world which in turn provides an abundant labour source and growing consumption base. Meanwhile, the National Logistics Policy aims to lower logistics costs to improve companies' overall cost efficiency and profitability. The government's commitment to manufacturing reforms will continue to underpin India's long-term growth and its equity market.

### ICICI Prudential Asset Management Company ("IPAMC")

IPAMC is the Investment Advisor for various India centric funds managed by Eastspring Investments

## Positive knock-on effects from Japan's reshoring

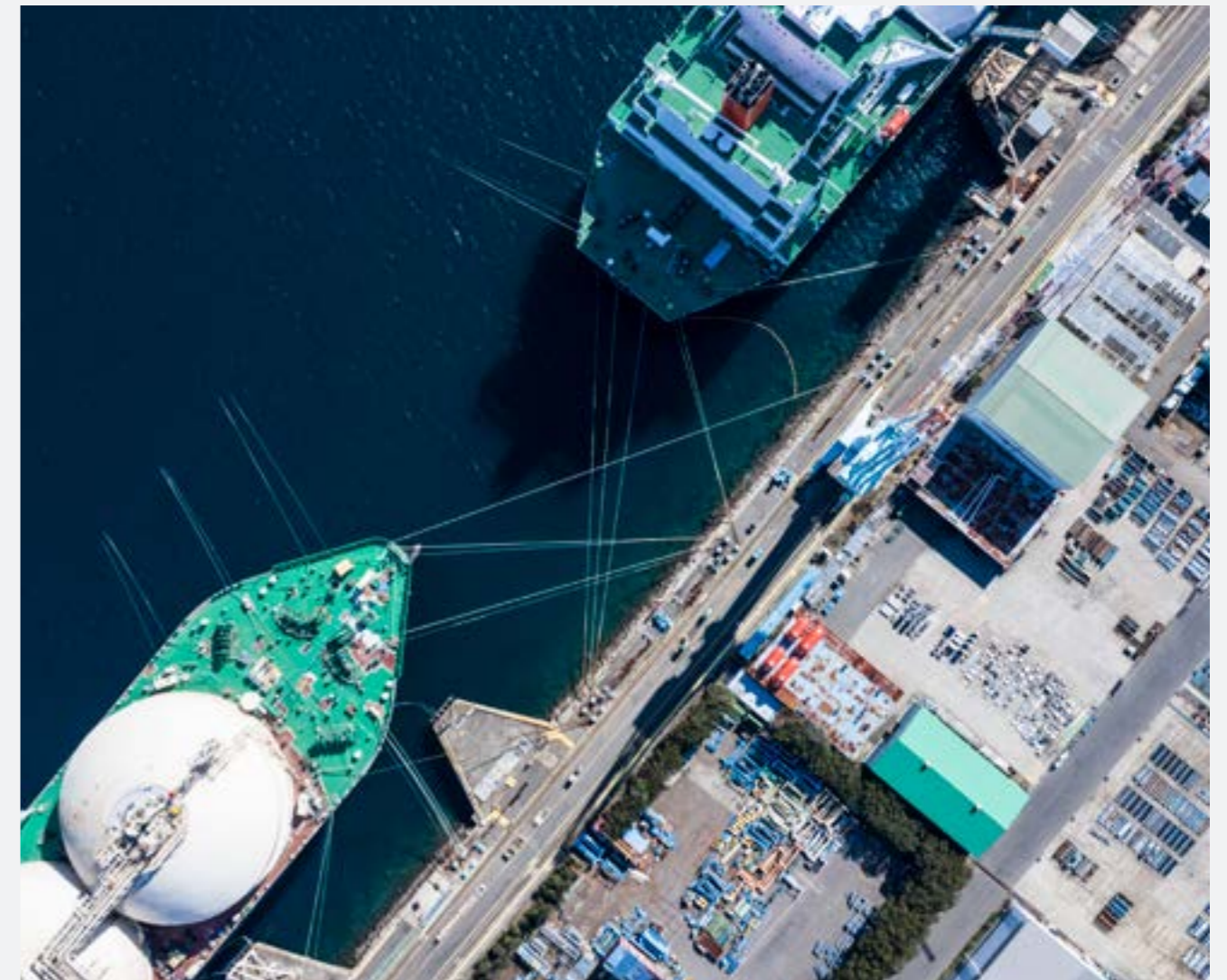
As a global manufacturing powerhouse, supply chain disruptions pose significant risks to Japan's export-oriented economy. Over the last twelve years, various Japanese governments had adopted measures to encourage Japanese companies to diversify and re-shore their manufacturing bases. At the onset of the COVID-19 pandemic in 2020, the late Prime Minister Shinzo Abe introduced a USD2 billion fund to support reshoring. Supply chain security and reshoring are also a key agenda for the current Prime Minister Fumio Kishida.

As an increasing number of companies move their production facilities back to Japan, this is likely to have a material and positive knock-on impact on the

domestic economy in the long term. The reshoring of supply chains, coupled with demand for carbon neutral transitioning, is expected to create a new wave of capex cycle in Japan. This will further tighten the labour market, which will help sustain wage growth, and support Japan's GDP as well as corporate earnings growth in the medium and long term. We believe there are diverse investment opportunities arising from the global supply chain shifts, especially among the domestic-focused and mid-cap companies which tend to be overlooked by many investors. A bottom-up, contrarian and best idea approach would be well placed to capture these opportunities.

### Samuel Hoang

Portfolio Manager, Equities  
Eastspring Investments



## Still positive on China's high-end manufacturing sector

China's large domestic market remains a big attraction for global manufacturers to locate their supply chains in China. Although wage costs have risen, China still offers a highly-developed supply chain ecosystem as well as a robust infrastructure network – China is home to seven of the world's ten busiest ports. Geopolitical uncertainties and other countries' near/friend-shoring policies have pushed China to make its supply chain more resilient by seeking domestic inputs where possible and embracing even greater technology and innovation. China has also diversified its export destinations from the US and Europe to developing countries, with support from the Belt & Road Initiative over the past decade. China's resilience and adaptability will continue to shape global supply chains, even as companies explore diversification and alternative sourcing strategies.

We remain positive on the long-term prospects of China's high end manufacturing sector. Product upgrades, product mix improvements and increasing competitiveness are creating significant export opportunities for Chinese auto, battery, construction, solar, grid equipment and selective consumer sectors. Amid the shifts in global supply chains, China has expressed a growing desire to enhance its self-sufficiency in other strategic sectors, including energy, technology and information. As such, the government's support bodes well for new economy industries such as new energy, consumer, medical services, technology and cyber security.

**Michelle Qi**  
Head of Equities  
Eastspring Shanghai

## Exploiting supply chain data sets for alpha generation

Companies do not operate in isolation even when considering today's geopolitical dynamics. They are connected to their customers, suppliers, competitors, and partners. However, with large scale changes in supply chains set to continue in the coming years, these relationships are likely to have an even bigger impact on profitability.

Quant teams can leverage supply chain data sets to gain a deeper understanding of the relationships between companies and exploit unique opportunities for alpha generation. Although supply chain data is unstructured, incomplete, and highly complex, it can offer powerful insights. A single shock or changes in trading conditions (positive or negative) at one company will be transmitted to connected firms. For instance, when a consumer product company experiences a rapid increase in sales, it will result in increased orders for their suppliers. Nonetheless it can take some time for these suppliers' stock prices to reflect the impact of the higher sales. Active quant investors can earn some "alpha" by trading on this information before it is fully incorporated into the stock price.

**Quantitative Strategy Team**  
Eastspring Investments



Investment Rationale	Asset Class
Gaining even a small share of China's supply chain activity will be impactful for Global Emerging Markets (GEMs) that have the necessary resources and readiness to help companies diversify their supply chains.	GEM equities GEM bonds
Measures to help companies reshore manufacturing bases will lift Japan's economy, spur higher wages, and rekindle domestic consumption.	Japan equities
India's production-linked incentives, abundant labour and growing consumer markets will attract global manufacturers, which will in turn boost India's economy and market.	India equities
Spurred by supply chain shifts, China is increasing its competitiveness in high-end manufacturing as well as increasing self-sufficiency in other strategic sectors.	China equities
ASEAN is a key beneficiary of the China plus one strategy, facilitated by the region's growing trade connectivity and complementarities between countries.	ASEAN equities
Supply chain data sets offer powerful insights of company-supplier relationships, providing quant strategies unique opportunities to earn alpha.	Quant strategies

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