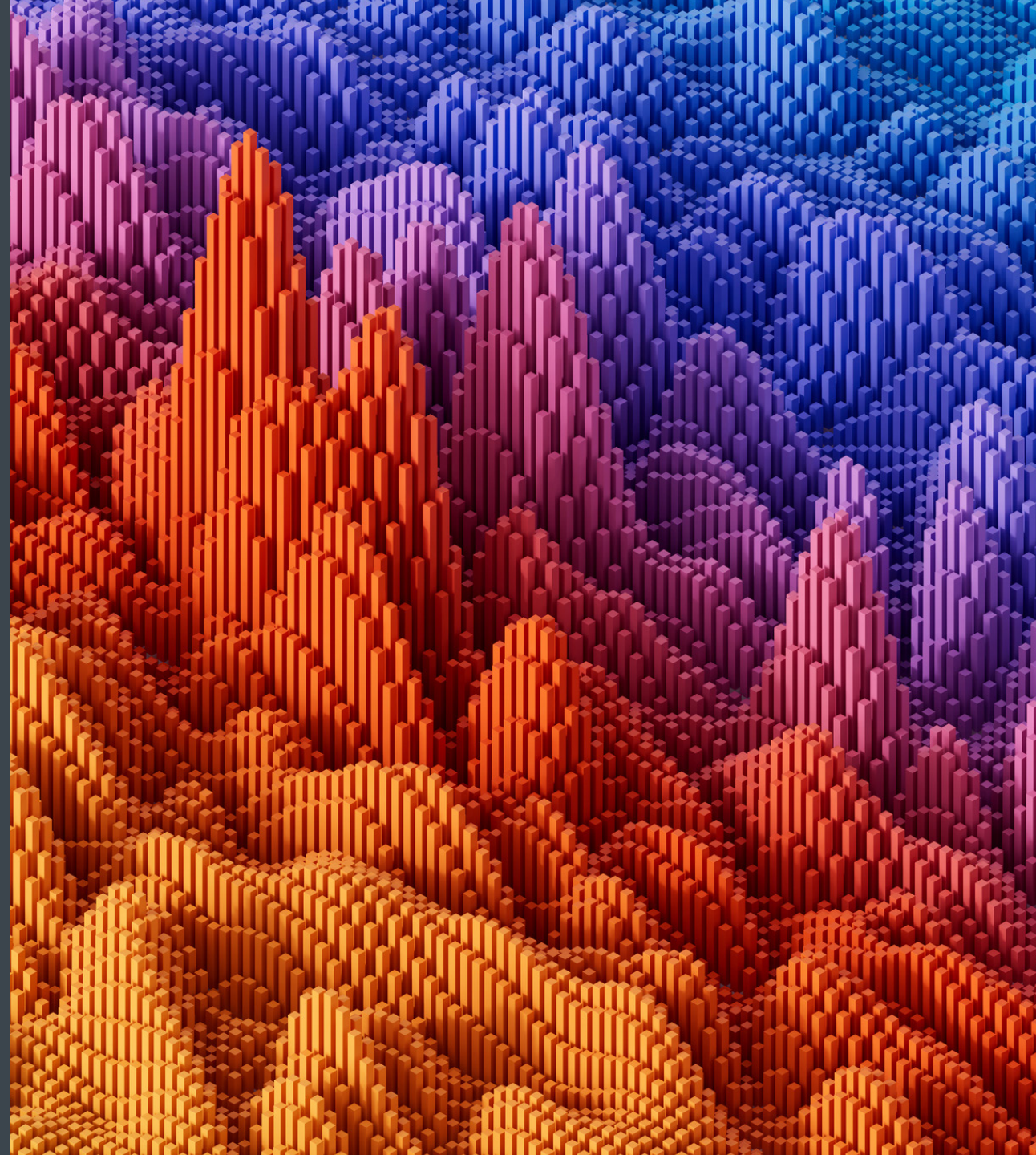


NAVIGATING SUPPLY CHAIN VOLATILITY

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# ACTIONABLE INSIGHTS FROM THE 2023 INDEX



## ABOUT THE INDEX

The KPMG Supply Chain Stability Index, in association with the Association for Supply Chain Management (ASCM), is designed to help supply chain professionals understand the stability of supply chain operations in the U.S. It also serves as a helpful barometer for the greater global supply chain community.

### Summary: Supply chain stability improving, but challenges remain

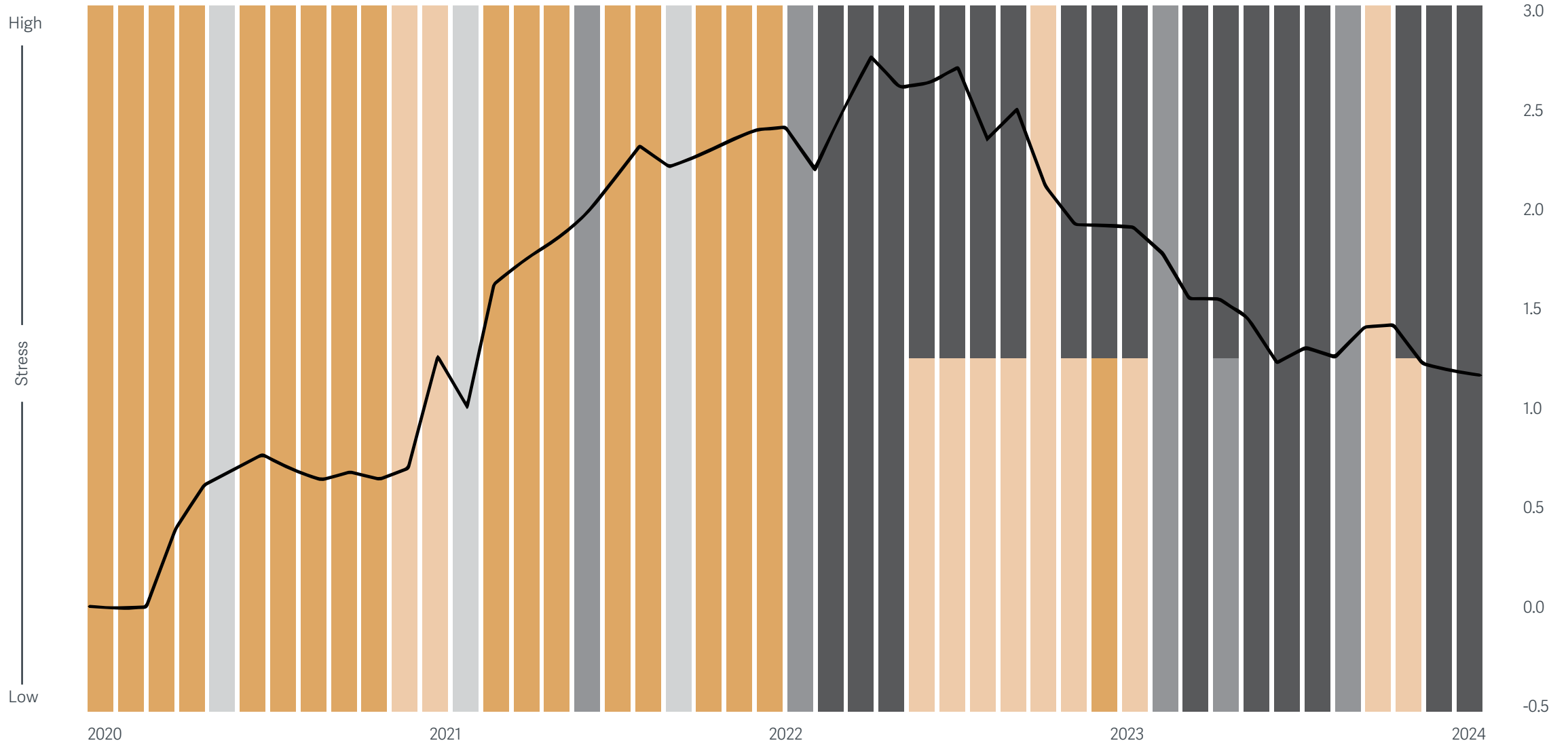
While 2023 saw welcome signs of increased supply chain stability, the U.S. has not fully recovered from the effects of past disruption and continues to experience ongoing market volatility. The Supply Chain Stability Index reflects a reduction in operations instability, starting in January 2023 at [2.34] and ending in December 2023 at [1.12]. This is a testament to the tireless efforts of countless supply chain organizations that have worked diligently to build resilience and reverse the trends of prior years. At the end of 2023, cross-border patrol (CBP) closures between US and Mexico trade corridors as well as rising conflicts resulting in commercial ship attacks in the Red Sea contributed to some ongoing supply chain disruption.

While a complete return to pre-pandemic normalcy in 2024 remains unlikely, due to both lingering and anticipated disruptions, there are positive developments: First, just-in-time (JIT) inventory strategies are making a tentative comeback, with manufacturers, wholesalers and retailers finding a balanced approach to inventory levels as predicted. Meanwhile, in the labor market, the intense competition for talent is easing slightly. Lower unemployment rates and the growing adoption of automation are contributing to this shift.

But there are significant challenges, as well. The greatest potential disruption lies in the logistics sector, where geopolitical factors and ongoing volume fluctuations due to reshoring and nearshoring continue to be major risks. As supply chains navigate the ever-evolving path to stability in 2024, maintaining vigilance and adopting resilient strategies will be crucial for continued progress.



Event Type ■ Cyber ■ Disease ■ ESG ■ Geopolitical ■ No Major Event ■ Safety — Stability Index



## INSIGHTS: EVOLVING SUPPLY CHAIN DYNAMICS

Moving forward, identifying and implementing best practices — including advancements in artificial intelligence (AI) and the concurrent development of workforce skills and competencies — will consistently differentiate leading companies from those falling behind within any given sector. With this in mind, three key areas deserve special attention:

### **Inventory optimization:**

Inventory levels, which were inflated during the pandemic, continue to be strategically reduced across the supply chain. This deliberate effort signifies a shift toward a more comprehensive approach to inventory management, from planning through execution. In fact, all nodes within the supply chain have seen improvements resulting from purposeful attempts to rid themselves of this excess.

### **Automation and the future of labor:**

There continues to be a fight for talent, especially for entry-level positions across the end-to-end supply chain. That said, the previously intense competition is experiencing a slight easing. All indications are that lower unemployment rates and the growing adoption of automation are contributing to this trend.

### **Ongoing logistics challenges:**

Global movement of goods continues to face unexpected disruptions primarily due to geopolitical tensions. Ocean freight is most affected, particularly between Asia and the European Union — and to a lesser extent, the United States. These factors contribute to residual risk within the sector.



## MARKET APPLICATION: INVENTORY OPTIMIZATION

JIT inventory management is making a comeback, signaling a shift toward efficiency after a period of increased focus on resilience. During the late stages of the pandemic, many companies adopted a “just-in-case” approach, leading to significant inventory buildup. This strategy brought about significant excess inventory in 2022, amid inflation and changing market demands.

Throughout 2023, supply chain organizations of all types actively reduced this surplus, often resorting to promotional discounts that affected profitability. Still, by the end of the year, most actors had not only recovered from the post-pandemic inventory shock, but also started returning to JIT practices. During the first half of the year, inventory to shipment ratios decreased across the network, with companies being able to carry less inventory to meet demand:

- **Manufacturing:** 43% (0.28 to 0.16)
- **Wholesale:** 41% (0.27 to 0.16)
- **Retail:** 43% (0.14 to 0.08)

These figures highlight the significant progress made, with improvements being realized through more sophisticated capabilities such as AI to help sense demand and position inventory. Supply chain organizations now more than ever recognize the importance of building more advanced capabilities for effective inventory strategy, ensuring inventory serves as an asset rather than a liability.



## MARKET APPLICATION: AUTOMATION AND THE FUTURE OF LABOR

Recent economic indicators suggest a shift in the labor market, with the potential influence of increased automation. In manufacturing, job growth experienced a consistent decline since the second quarter of 2022, averaging a 30% year-over-year reduction. While still above pre-pandemic levels, this trend is noteworthy. Key contributors include reduced, delayed, or canceled construction of new production facilities, primarily as a result of inflation-driven increases in the cost of capital. Higher labor costs stemming from unionized efforts and negotiated compensation also played a major role.

In transportation and warehousing, job growth exhibited a more volatile downward trend, with significant fluctuations. This sector ultimately experienced a 43% decline in 2023 and now sits near pre-pandemic levels. This was primarily driven by some of the same aforementioned factors including: reduced, delayed, or canceled construction of new distribution facilities; inflationary pressures; potential overestimation of e-commerce demand; and unionization and renegotiated labor packages.

While these trends raise questions about potential job displacement due to AI-enabled and industrial automation, it is crucial to consider the broader context. Effective implementation of automation can offer advantages to both job satisfaction and efficiency. When strategically applied and viewed as a positive return on investment — with both fiscal and social benefits — AI and automation can benefit both organizations and employees. This highlights the need for continuous monitoring of labor market trends and comprehensive consideration of the potential impact of automation on various industries.

## MARKET APPLICATION: ONGOING LOGISTICS CHALLENGES

Geopolitical factors continue to pose risks to the logistics sector. Both 2022 and 2023 saw significant disruptions in distribution, transportation, and capacity, which led to cost volatility and a decline in customer experience, especially with regards to on-time delivery of products and services. Key issues included delayed deliveries and rising costs — for instance, ocean freight between Asia and the European Union.

Some stabilization did occur, with domestic truck rates and air freight costs between the U.S. and Asia remaining relatively stable in late 2023. However, global events like the Houthi attacks are still causing disruption, with ocean freight rates between Asia and the European Union experiencing a near 5-fold increase in just one quarter. This is yet another clear example of the impacts that geopolitical events have on the global supply chain.

But there are also positive signs: Asia-to-U.S. rates have seen a smaller increase (1.3-fold) and remain significantly lower than pandemic highs. Meanwhile, nearshoring efforts in Mexico and Canada continue to advance, mitigating reliance on specific regions such as China. These ongoing shifts underscore the importance of continuous monitoring and adaptation in the face of a complex geopolitical landscape. This need has driven corporate investments in emerging technologies such as generative AI to help monitor events that impact demand and supply — a trend that will continue to evolve over time.

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## About ASCM

The Association for Supply Chain Management (ASCM) is the global pacesetter of organizational transformation, talent development and supply chain innovation. As the largest association for supply chain, ASCM members and worldwide alliances fuel innovation and inspire accountability for resilient, dynamic and sustainable operations.

ASCM is built on a foundation of world-class APICS education, certifications and career resources, which encompass award-winning workforce development, relevant content, groundbreaking global standards and a diverse community of professionals who are driven to create a better world through supply chain.

ASCM solution sets address your organization's biggest challenges while accelerating transformation initiatives. Mentoring and capability training from ASCM will fast-track your team's strategic improvement projects. Through specially designed learning programs from entry-level positions through our APICS certifications, your teams will be better equipped to help streamline operations and drive transformation across your end-to-end supply chain.

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