



Supply chain strains and strategy

A boardroom perspective

kpmg.com/cn





Demand and complexity	02
Supply chain outlook: Constraints and inflationary pressures will persist	03
Forces driving clean supply chains	05
Boardroom lens on supply chain risk and resilience	07



Demand and complexity

In light of the severe and widespread supply chain disruptions caused by COVID-19, many companies are reassessing their supply chain strategies, identifying supply chain risks and vulnerabilities, and designing and implementing plans to improve supply chain resilience and sustainability. Indeed, the Russia-Ukraine war will no doubt exacerbate supply chain pressures for many companies, depending on their sector and global reach. And while this paper was written prior to the invasion, its insights and board oversight considerations still hold true.

“Whether it’s relying on suppliers in countries with political instability or sanctions; grappling with pandemic-disrupted logistics; ensuring that downstream suppliers are not creating environmental, social, and governance (ESG) risk to the organisation; or addressing risk arising from new regulations impacting third-party data security, an organisation’s supply chain is subject to, and creating risk...more than ever.”¹ Not surprisingly, two thirds of global chief executives responding to KPMG’s recent CEO Outlook Survey said they are rethinking their supply chain strategy in the wake of COVID-19, with a particular focus on supply chain risk and resilience.

Oversight of the company’s supply chain risks and sustainability efforts presents boards (and board committees) with a challenging and complex set of issues both near- and longer-term, with major implications for risk and reputation.

To help boards in their oversight efforts, this paper from the KPMG Board Leadership Centre and Eurasia Group offers insights on the systemic and geopolitical factors shaping the global supply chain environment, as well as the actions and expectations—by investors, regulators, and other stakeholders—driving companies to accelerate their progress toward clean and sustainable supply chains.

¹ Building a Bridge Between Compliance and Supply Chain Management, Navex Global’s 2021 Top Ten Risk & Compliance Trends, May 4, 2021.

Supply chain outlook: Constraints and inflationary pressures will persist

Despite continued policy efforts to alleviate logistics bottlenecks, challenges will persist through 2022. Supply chains currently face multiple, mutually reinforcing constraints, making attempts to address backlogs difficult. Even if policy mechanisms successfully resolve one or a handful of these compounding issues, that would have only a marginal impact on overall supply chain throughput. Until there is change in the underlying drivers of the current supply and demand pressures, associated costs will remain above prepandemic levels.

Drivers of current supply chain conditions remain

When the worst initial economic impacts of the COVID-19 pandemic began to pass, the demand for goods rebounded asymmetrically, with a pronounced increase in the U.S. looser fiscal and monetary policies, historically high household savings rates, and the effective shutdown of large swaths of the services economy left cash-rich consumers with no spending options other than online product purchases. This rapid recovery in demand for goods mostly imported from Asia-Pacific put tremendous strain on existing supply chains and commercial flows already facing pandemic-related disruptions.

Compounding this situation, sporadic shutdowns of parts of the supply chain, from manufacturing to ports infrastructure and border crossings, created new bottlenecks. These effects were felt most acutely in East and Southeast Asia, where zero-COVID tolerance containment policies led to the closure of factories in Vietnam and Thailand, as well as maritime ports in China. Most recently, the high rate of transmissibility of the Omicron variant has begun to test these zero-Covid policies again notably in China where the impact of lockdowns will likely have both a supply- and demand-side impact on a population with lower vaccination efficacy and low rates of natural immunity from prior infection. These dual supply and demand pressures on supply chains have had further, downstream effects in the form of shipping container displacements and labor shortages that continue to plague global logistics.

Policy interventions alone will have small impact

National governments have begun to recognise both the economic and political sensitivities to the considerable inflationary pressures that have emerged. In the U.S., President Joe Biden's administration has worked to address the myriad problems facing supply chains. Ultimately, there are two issues preventing a more potent policy intervention in the area:



Bottlenecks are compounding and mutually reinforcing, meaning there is no single issue for policy solutions to tackle.



Supply-chain bottlenecks are not confined to any one country, limiting the impact of any one country's policy efforts.

A few recent examples of the administration's efforts to address these bottlenecks include the October announcement to keep the ports of Los Angeles and Long Beach open around the clock to double throughput and ensure goods deliveries ahead of the end-of-year shopping season. Although this move did increase the rate of container loading and unloading, addressing this problem created another as container yards at ports became more congested. This example illustrates the self-reinforcing nature of the current difficulties. In another attempt to unblock port traffic, the administration increased dwell fees to speed up the removal of stranded containers to off-site warehousing facilities or reloading onto outbound vessels. This initiative, however, has been delayed and reimagined repeatedly now pushing any implementation to later in the first quarter 2022.

These problems have prompted international discussions about measures to ease supply-chain bottlenecks, including talks led by the G7, the G20, ASEAN, and the Quadrilateral Security Dialogue (a grouping that includes the U.S.,

Japan, India, and Australia). Biden hosted a multilateral supply-chain summit in October 2021. Still, the discussions have yielded few concrete measures to address the problem at a macro level outside of the sharing of best practices on trade facilitation and customs to improve the regulatory environment on cross-border goods flow. U.S. domestic and international efforts to invest in new and improved supply-chain infrastructure may have an impact in the longer-term.

Risks of continued supply chain disruption to continue in near-to-medium term

While factors were looking favorable for some easing of logistics bottlenecks in early 2022, the rise of the Omicron variant and the threat of impact to both supply and demand drivers will continue to weigh on supply chains.

On the demand side, one of the reasons supply-chain problems in the U.S. have been so acute is the annual, cyclical import demand spike resulting from the holiday buying season. Typically lasting from the end of summer through October, significantly lengthened lead times stretched the 2021 holiday import and shipping season well into November, prolonging and exacerbating demand amid an already stretched transpacific supply-chain capacity. Nonetheless, this season has come to a close, and the rate of inbound cargo ships arriving off U.S. West Coast ports has already slowed year-on-year. This slowdown, however, is in part attributable to new transit measures implemented for transpacific crossings in which freight shipping is slowing transit times to arrive at U.S. West Coast ports at an anticipated time when berths may be available.

In the United States, recent pronouncements from the Federal Reserve signaling monetary liquidity tightening coupled with a normalization of average personal savings rates will also likely put downward pressure on spending through 2022 potentially softening demand as rates rise.²

Despite the softening of near-term demand drivers in the U.S. coupled with policy efforts to address domestic logistics bottlenecks, the Omicron variant will continue to be a source of considerable near-to-medium term risk

to supply and demand drivers, particularly in countries maintaining a zero-Covid policy environment.

This risk is particularly pronounced in China given the combination of its strict zero-Covid tolerance policies and its centrality to global supply chains. China's refusal to administer foreign mRNA vaccines domestically with higher efficacy coupled with lower historical rates of natural immunity from prior infection has left much of the population vulnerable to this particularly transmissible strain of the virus. This dynamic will likely test a zero-Covid policy, which may not loosen until at least following China's 20th Party Congress later this year. Thus far, isolated manufacturing centers have been impacted at the provincial level and maritime ports have yet to face widespread shutdown instead facing some slowdowns from labor testing protocols and transmodal access.

Omicron's risk to international commercial air travel may prove another supply-side constraint to logistics in the near-term. What was previously a bright spot in the supply chain narrative following the post-Delta variant easing of commercial air travel limitations, Omicron will once again pose downside risk to the commercial air travel industry, which carries approximately 50 percent of all air freight capacity in the bellies of passenger aircraft.

While uncertainties around the impacts of the Omicron variant will dominate downside risk to supply chain logistics in the near term, other challenges remain on the horizon. Unionised labor agreements at U.S. West Coast ports will come up for renewal in the early summer months of 2022, and labor historically has used its leverage over port throughput and processing speeds in contract negotiations. In 2022, labor at unionised ports will have greater leverage than usual, with implications for ongoing constraints at U.S. maritime ports.

Following the process of ports' union contract renegotiations, the annual holiday shopping season will begin again, reimposing demand strains on still-ailing transpacific supply lines. While it remains to be seen if consumer demand will remain historically high through 2022 given U.S. monetary tightening and a normalisation of household savings rates, the return of the annual import season could exacerbate outstanding supply chain bottlenecks.

² Greg Ip, "Prepare for an Unsettling Monetary Tightening Cycle," Wall Street Journal, January 27, 2022.

Forces driving clean supply chains

Climate and environment

Clean supply chains—arrangements for the sourcing, manufacturing, and transportation of business goods that seek to mitigate and prevent environmental and social problems—are increasingly on stakeholders' radars.

While companies have historically viewed environmental performance as a legal or reputational requirement, environmental factors are increasingly seen as underlying financial risks, driving the trend toward decarbonizing and creating climate resiliency throughout the supply chain.

Climate-related financial considerations were the first to be treated this way, but other environmental considerations are now coming into focus, particularly biodiversity and water. As demands for a more sustainable supply chain increase—both from investors and consumers—disclosure requirements will become more onerous and standardised, and a premium will be put on the ability to track the relevant data.

On the environmental side, there are four key trends to track: Finance, data availability, net zero commitments, and trade:

Finance. As environmental risks to companies converge with financial risks, investors have become more focused on environmental performance. They are looking beyond companies' emissions to those produced throughout their supply chains—so-called Scope 3 emissions. The financial implications of climate were highlighted in 2015 when the Financial Stability Board identified climate as a key risk to the global financial system and launched the Task Force for Climate-related Financial Disclosures (TCFD).

The trend toward sustainable investing will continue as institutional investors, asset managers, banks, and regulators remain focused on limiting exposure to carbon-intensive companies and investments. At the latest UN climate conference (COP26), 450 firms from 45 countries signed onto the Glasgow Financial Alliance for Net Zero, which commits members to reduce emissions in their operations and investments.

To address investor demand, companies will increasingly need to disclose emissions from suppliers to the extent possible. Moreover, while disclosure has been voluntary and flexible until now, there is movement toward more standardised and regulated disclosure of climate impacts. Just before COP26, the UK announced that large UK companies will need to comply with mandatory TCFD-aligned disclosure standards for climate-related risks beginning in April 2022. Central banks in the UK and the EU will begin performing regular climate stress testing of the financial system, while the U.S. Securities and Exchange Commission has also been considering mandatory disclosure requirements. In addition, the newly launched International Sustainability Standards Board (ISSB) is expected to issue in mid-2022 baseline global standards that can be adopted by countries. The embrace of mandatory disclosures increases the pressure to understand and to move toward more sustainable supply chains, but it will also make it easier for financial institutions to standardise their climate commitments.

Data availability. Increased data availability will allow brands to track and evaluate supply chain emissions more easily. Open-source data collaborations launched at COP26—including some backed by big tech—seek to support sustainable operations and investments. Several platforms use satellite data to identify emissions from land-use changes and industrial sources.

One area where increased data availability has had a big impact is on satellite monitoring of deforestation rates in the Amazon region and relatively low-cost monitoring of methane emissions from oil and gas facilities. The spread of satellite and other advanced technologies facilitates the onerous and costly task of gathering and verifying data associated with supply chain emissions and enhances the legitimacy of emissions reporting. The wider uptake of corporate climate disclosures globally will provide more impetus for data transparency initiatives and technologies.

Net zero commitments. Continued pressure from investors and consumers will drive additional and more comprehensive net zero commitments. As of March 2021, about one fifth of the world's largest companies had committed to net zero targets. While these targets can be applied to any geography or part of a company's operations and suppliers, about 27 percent included their supply chains³.

While few rules have been set for net zero claims, there is a move toward standardization and accountability. The Science Based Targets initiative recently launched the Net-Zero Standard, a certification for net-zero targets. Climate Action 100+ is another corporate framework that encourages regular reporting from major emitters on their progress in areas such as carbon emissions, governance standards, and quality of disclosures. The formalization of TCFD-aligned disclosures in multiple jurisdictions and the impending publication of ISSB standards later this year will add further clarity to reporting expectations and make it more difficult for companies to claim an inability to report on sustainability metrics.

Trade. Environment, particularly climate concerns, will continue to find its way into trade talks. One of the clearest examples of the new importance of this issue is the continued hold-up of the EU-Mercosur free trade agreement. While the agreement was finalised in principle in 2019, it remains on hold indefinitely as the EU insists that Brazil strengthen its antideforestation efforts in the Amazon. Similarly, the U.S.'s decision to lift Section 232 steel and aluminum tariffs on EU producers was framed primarily in climate terms. In exchange for allowing more European steel and aluminum into the U.S. market, the U.S. and EU agreed to promote low-carbon steel produced in the U.S. and EU and search for ways to discourage carbon-intensive steel production going forward, particularly from China. Similar climate concerns, particularly in carbon-intense sectors such as industrial goods, will continue taking on a higher-profile role in future trade talks.

Perhaps the most high-profile and potentially far-reaching trade initiative under consideration is the EU's Carbon Border Adjustment Mechanism (CBAM), which would extend the EU's climate policies beyond its own borders. By adjusting the price of imports to align with the price of the goods produced under the EU's carbon pricing rules, the CBAM would have an impact up and down supply chains, particularly those in the areas the CBAM intends to cover, including aluminum, cement, fertilisers, iron, and steel.

Beyond climate

While climate has been at the forefront of environmental financial risk, biodiversity and water will start attracting more attention also. A joint analysis by the World Economic Forum and PwC found that \$44 trillion of economic value (over half of global GDP) is dependent on nature, which creates risk for products and supply chains as the extinction rates of plants and animals increase. The newly launched Taskforce on Nature-related Financial Disclosures has announced a membership that will include major banks and corporations and will devise disclosure guidelines similar to those of the TCFD.

Water supply will increasingly become a key factor in supply-chain security because of concerns about drought and flooding, as well as energy access for hydro-dependent electricity grids. Companies that provide climate impact forecast data, such as FourTwenty Seven (acquired by Moody's) and Jupiter Intelligence, are being used by firms to identify the risks climate change poses for company operations and their supply chains. As water patterns change, the geopolitics of this resource will become increasingly important, adding another layer of complexity to understanding supply chain resilience.

Human rights

Human rights and labor issues have achieved prominence recently through multilateral actions such as the International Labor Organisation's (ILO) Declaration on Fundamental Principles and Right at Work in 1998 and the UN Human Rights Council's endorsement of the UN Guiding Principles on Business and Human Rights in 2011. Nevertheless, critics argue that the mostly voluntary approaches to these issues have proven ineffective, prompting a new push to deal with them.

³ Richard Black et al., Taking Stock: A global assessment of net zero targets, The Energy & Climate Intelligence Unit and Oxford Net Zero, March 2021.

Boardroom lens on supply chain risk and resilience

For the past 18 months, companies have been navigating unprecedented supply chain stresses and strains with the ultimate goal of assuring supply—and survival. At the same time, scarcity and unpredictability of raw materials and manufacturing inputs have introduced a hoarding phenomenon, as many companies are overbuying capacity-constrained items. This behavior has exacerbated the supply/demand imbalance.

Some companies are not yet addressing the underlying supply chain structural issues, and the problem is being pushed down the road. Other companies, however, are undertaking major projects to address supply chain vulnerabilities and improve resilience and sustainability.

In the near-term, a key role for the board will be to help ensure that significant projects being undertaken by management to rethink, rework, or restore critical supply chains are carried out effectively, such as:



Updating supply chain risk and vulnerability assessments



Diversifying the supplier base



Reexamining supply chain structure and footprint



Reducing dependency on China and developing more local and regional supply chains



Deploying technology to improve supply chain visibility and risk management



Improving supply chain cybersecurity to reduce the risk of data breaches and high-profile ransomware attacks



Developing plans to address future supply chain disruptions.



Importantly, are the company's various supply chain projects being driven by an overarching vision and strategy? Who is leading the effort, connecting critical dots, and providing accountability?



What supplier development protocols do we have in place—e.g., supplier codes of conduct, supplier training, supplier audits, third-party verification, supplier benchmarking, and collaboration?⁴

At the same time, boards will need to sharpen their focus on the company's efforts to manage a broad range of ESG risks in its supply chain. Such risks—particularly climate change and other environmental risks, and important “S” risks such as human rights, forced labor, child labor, worker health and safety, as well as diversity, equity, and inclusion (DEI) in the supply chain—pose significant regulatory and compliance risks as well as critical reputation risks for the company.



How is management monitoring the supply chain, including mapping, visibility, and traceability?

Indeed, the pressure on companies to manage these risks and adopt sustainability practices is intense and comes from many sources, including investors, research and ratings firms, employees, customers, governments, and regulators globally, as well as the media and local communities.



What steps is the company taking to reduce the environmental impacts of its supply chain—e.g., carbon offsets, environmental technologies, sustainability standards and certifications, third-party collaboration?⁵

Below we have identified a number of considerations for boards in their oversight of ESG risks in the supply chain, and management's efforts to build and maintain a sustainable supply chain.



How robust are the supply chain-related disclosures that are included in the company's ESG disclosures and sustainability reports? How do these disclosures compare to peers? Are external stakeholders satisfied with the level of transparency?



How robust is management's process to identify the broad range of ESG risks and vulnerabilities across the supply chain? Does management have a clear view of the end-to-end supply chain, including the various tiers and sub-tiers?

“As supply chain issues continue to draw the scrutiny of investors, regulators and consumers, and implicate a range of ESG issues, it will become increasingly important for boards to familiarise themselves with how their companies are managing their supply chains across first-tier and lower-tier participants, including overseeing how supply chain considerations are integrated into operational, strategic and risk management processes.”⁶ How the board, through its committee structure, provides effective oversight of supply chain risk, resilience, and reputational issues should be front and center for the business—as it is for investors, customers, regulators, and other stakeholders.



How effective is the company's supply chain risk management framework and processes? Do we have the right level of coordination between the company's compliance, risk, and cybersecurity professionals and its supply chain professionals? Are there mitigation plans in place for potential disruptions?

⁴ “State of Supply Chain Sustainability 2021,” the MIT Center for Transportation & Logistics and the Council of Supply Chain Management Professionals.

⁵ Ibid.

⁶ David M. Silk, Sebastian V. Niles, and Carmen X. Lu, “The Other ‘S’ in ESG: Building a Sustainable and Resilient Supply Chain,” Harvard Law School Forum on Corporate Governance, August 14, 2020.

About the KPMG Board Leadership Centre

The KPMG Board Leadership Centre offers support and guidance to non-executive directors, whether managing a portfolio non-executive career or embarking on a first appointment. Membership offers you a place within a community of board-level peers with access to topical and relevant seminars, invaluable resources and thought leadership, as well as lively and engaging networking opportunities. We equip you with the tools you need to be highly effective in your role, enabling you to focus on the issues that really matter to you and your business. Learn more at kpmg.com/cn/boardleadership

“As supply chain issues continue to draw the scrutiny of investors, regulators and consumers, and implicate a range of ESG issues, it will become increasingly important for boards to familiarise themselves with how their companies are managing their supply chains across first-tier and lower-tier participants, including overseeing how supply chain considerations are integrated into operational, strategic and risk management processes.”⁶ How the board, through its committee structure, provides effective oversight of supply chain risk, resilience, and reputational issues should be front and center for the business—as it is for investors, customers, regulators, and other stakeholders.

Contact us

Frank Mei

Partner, Head of Governance, Risk and Compliance,
China
KPMG China
+86 (10) 8508 7188
frank.mei@kpmg.com

Alva Lee

Partner
Head of Governance, Risk and Compliance,
Hong Kong
KPMG China
+852 2143 8764
alva.lee@kpmg.com

Johnson Li

Partner
Governance, Risk and Compliance
KPMG China
+86 (10) 8508 5975
johnson.li@kpmg.com

Kelvin Leung

Partner
Governance, Risk and Compliance
KPMG China
+86 (755) 2547 3338
kelvin.oc.leung@kpmg.com

Some or all of the services described herein may not be permissible for KPMG audit clients and their affiliates or related entities.

kpmg.com/cn/socialmedia



The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavour to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

© 2022 KPMG Advisory (Hong Kong) Limited, a Hong Kong (SAR) limited liability company and a member firm of the KPMG global organisation of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. All rights reserved. Printed in Hong Kong (SAR).

The KPMG name and logo are trademarks used under license by the independent member firms of the KPMG global organisation.