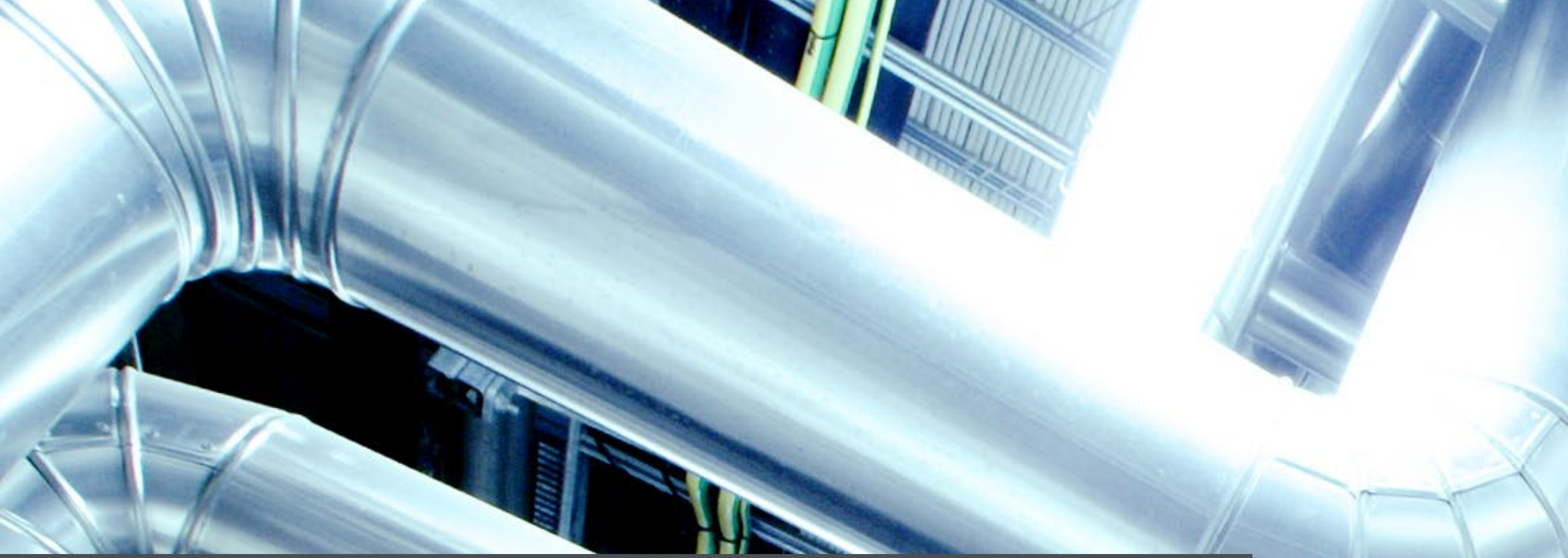

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The Spectre of Disruption

Supply chain risk and what you need to know

Part one

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Introduction

For decades, just-in-time (JIT) supply chains have been the most cost effective, efficient way of getting supplies to manufacturers and products to consumers. But global supply chains are now cracking under the weight of geopolitical events, alongside man-made and natural disasters: from COVID-19 to the Russia-Ukraine war, from rising inflation to the increasing risk of a global recession. This confluence of factors has resulted in unprecedented disruption to JIT models, impacting everything from seafarer and truck driver numbers to energy access and gas deliveries. In addition, Brexit trade barriers have also had ramifications for UK supply chains, and other local factors including workforce strikes and congestion at ports, are playing a part in business interruption (BI) too.

In the first of a two-part report series, we consider these causes and effects and what they mean for business.

Part one

Supply chain disruption: what it means for business

> We are entering a new era, which reflects the deglobalisation of the world economy"
>
> **Dame DeAnne Julius, Founding Member of the Bank of England's Monetary Policy Committee**

Ripple effects

The shortage of raw materials and goods, and associated pent-up demand, has been largely driven by the pandemic but aggravated by Russia's invasion of Ukraine. From electronics through to automotive, different industries are still feeling the strain. In manufacturing, for example, car makers continue to suffer a scarcity in parts, such as semiconductors. And with Ukraine a prime supplier of neon gas – critical for the lasers used in chip-making – neon supply issues and soaring prices have exacerbated the issue, according to policy institute Chatham House. The time it takes to get a new car has lengthened from three months to a year, in some cases, says Peter Kelderman, Marine Risk Management Leader, Chubb Europe.

The prices of containers have also risen dramatically. In the past, the cost of sending a single sea freight container from Asia to Europe, for instance, was around US$1,400 – it can now be as high as US$12,000*, according to Sivakumaran Divakaran, Head of Transportation Risk Management, Chubb Asia-Pacific.

The war between Russia and Ukraine is affecting air freight transportation too. Airlines have been forced to reroute to avoid Russian airspace. With longer journeys, planes are less likely to stop mid-route to refuel and will instead reduce cargo weight to complete direct flights. This has hit the cost of air freight – rates shot up by around 80% between 2020 to 2022, says Kelderman, though they are expected to drop back down (by approximately 40%), albeit not to pre-pandemic levels. Additionally, with global passenger flights not yet back to normal, capacity for transporting supply chain goods as belly freight (transportation of goods via passenger aircraft) is still restricted.

Import delays are also taking their toll on supply chains. While previously, many US businesses stored products in Vietnam and were able to import within 40 days, this has now doubled to 80 days, according to John Venneman, Marine Risk Management Specialist, Chubb North America. He adds: "The delays are caused by ships not being able to get a berth, then the railroad not able to get a container out of the port, and the local trucker not being there to take the container to its final destination." A shortage of vessels and containers is another factor causing disruption, says Kelderman.

*Currency converted from € as of September 2022

> Certain countries are developing more sophisticated cyber techniques towards disrupting businesses"
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But Kelderman warns that alongside real estate costs for local warehouse space, which businesses are turning to, companies face additional financial burdens: "Certain products require specific temperatures or humidity and the mounting costs of heating and energy is going to drive prices up."

Deglobalisation

With global inflation hitting businesses hard, the question among economists is whether this is a short-term phenomenon. Dame DeAnne Julius, international economist and founding member of the Monetary Policy Committee of the Bank of England, thinks we have reached the end of an era of low and stable inflation. "We are entering a new era, which reflects the deglobalisation of the world economy," she says. "The big driving forces behind the low inflation we have had since the early 1990s have been globalisation, the abundance of low-waged workforces and a relatively stable political background.

"This system has now come to an end. The workforce in China is shrinking, with wages going up and some labour shortages there too. So that driver of low inflation has been reversed," notes Julius. "The invasion of Ukraine has also meant we suddenly have a bifurcation of the economic world, with Russia and China declaring themselves best friends, and a common enemy in the US and Western Europe."

"From an economic perspective, they have contrasting but complementary skills. Russia has the oil and commodities that China needs, while China has the manufacturing and technology expertise that Russia lacks. So we can see quite a durable synergy between those two countries."

She adds: "Similarly, from the West, we are seeing increasing restrictions placed on Chinese inward investment into our economies, and this is interfering with the supply chain integration that the globalisation phase really benefited from."

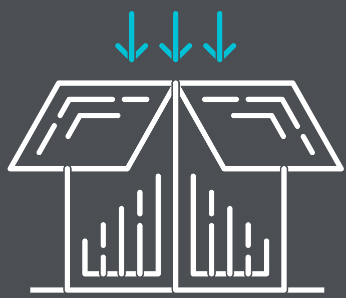
Julius, whose career includes spells with the World Bank, as Chief Economist at British Airways and Shell, and on corporate boards at multinationals, expects a volatile inflation picture driven by sporadic events, such as sanctions or commodity squeezes from Iran and Russia. She urges businesses to think long term about where they invest for their production chains, adding: "They really need to consider the possibility, maybe the probability, that we have a world economy which is divided into two blocks, with the third world trying to balance its interests among those two. If that is the case, I think it will have real implications for the development of supply chains."

Closures and blockages

Sudden closures and fluctuating port capacity are creating instability in global supply chains too. China's zero-tolerance policy towards COVID-19 saw ports shut on a weekly basis during 2022, with shipments accumulating in warehouses. Ships are also being diverted on longer

+850%

The price of a single sea freight container has jumped from around US$1,400 to as high as US$12,000



1.5 days

Ship re-routing is adding up to 1.5 days on to journeys

66%

Cyber hits on a supplier's computer code accounted for 66% of supply chain attacks globally

12 months

The time it takes to get a new car has lengthened from three months to a year in some cases

> “Some products require specific temperatures or humidity for storage and mounting heating and energy costs will drive prices up”
>
> **Peter Kelderman, Marine Risk Management Leader, Chubb Europe**

routes, due to no-go zones set up by the People's Liberation Army around Taiwan waters, according to Divakaran. Re-routing is adding anywhere between half a day to 1.5 days on to journey times.

“What really concerns me is that there is a possibility ships will no longer be able to sail directly between China and Taiwan,” he adds. “This used to be the case a few decades ago, where your last port of call had to be a third country. That might be reintroduced, which means journey times will be a lot longer. Taiwan and China are equally large exporters, so that is really going to have an impact.”

Julius, currently Distinguished Fellow in Global Economy and Finance at Chatham House, believes it is “not yet recognised or accepted” that we are moving into a world where there might be different barriers to the flow of goods. She notes that the Singapore Straights, Suez Canal, and now Taiwan and China are bottlenecks around that world that people may still take for granted.

In the US, ships on the West Coast are backing up at the Ports of Los Angeles (LA) and Long Beach, says Venneman. These ports account for nearly 40% of all shipping containers entering the country. “They are being diverted to the East Coast,” he explains. “Companies are trying to chase capacity and there is an overall lack of stability in this.” With some East Coast ports being converted to container hubs there will also be fewer ports accepting heavy-lift products.

Labour shortages

Mass labour shortages are a major issue globally for the shipping industry and other parts of the supply chain – whether because of strike action or other causes, including ageing populations and skills gaps. At ports, this often means fewer people to unload vessels or manage the collection of containers from harbours, resulting in ships drifting at sea without space to anchor. In China, vessels have been queuing up to enter Shanghai, while scores of big cargo ships heading into the US are ‘slow steaming’ to consume less fuel. Goods are being shifted inland instead, which affects transportation costs due to the requirement of more processes and people.

Russia and Ukraine supply 14.5% of the global seafarer workforce, according to the International Chamber of Shipping, with many Ukrainians having returned home to fight. On the roads, there are also chronic driver shortages, says the International Road Transport Union, which is further hampering the movement of goods. An estimated 100,000 truck drivers are absent because of the war, says Kelderman, which is having “a big impact on an already tense labour situation”.

In the UK, where post-Brexit Britain is still causing trucks to stack up trying to get across the English Channel,

Dame DeAnne Julius, International Economist and Founding Member of the Monetary Policy Committee of the Bank of England, says:

“The shift from quantitative easing (QE) to quantitative tightening (QT) by major central banks, alongside their increases in interest rates, is squeezing the availability and price of liquidity for firms that need working capital to keep their supply chains functioning smoothly. The emergency funding that the Bank of England needed to make available in late September showed how quickly a disruption in one market (long-term gilts) can cause panic in another (pension funding based on derivatives).

“And if exchange rates are moving significantly then that, too, complicates paying a price for transporting goods from Country A to Country B, when they have different currencies. You set the price; you get the deal. But by the time the goods get to B, exchange rates have moved, so you have either lost money or gained some. To manage this risk there really needs to be significant sophistication in hedging exchange rates during a time of changing interest rates and financial market turbulence. At present, the unusually strong dollar has pushed the yen, euro and sterling to new lows. Since many traded commodities are priced in dollars, this also adds to costs on the importer's side and contributes to their domestic inflation.”

68%

of small businesses in Latin America say supply chain disruptions have had a notable impact

> "Companies' finance departments will have to navigate through all kinds of problems they haven't really faced before"
>
> **Dame DeAnne Julius, Founding Member of the Bank of England's Monetary Policy Committee**

supply chains have also been disrupted by strikes. For example, workers at its largest container port in Felixstowe initiated an eight-day walk-out in August 2022 over pay demands – another knock-on effect of the rising cost-of-living crisis. In a similar move, staff at another UK port, in Liverpool, went on a two-week strike (ending on 3 October). Liverpool port workers have also been planning further strike action this autumn.

The threat of national strike action by railroad unions in the US in September, over quality of life provisions in a new contract, was narrowly averted after a tentative agreement was reached. If it had gone ahead, it was predicted it would cost the economy US$2 billion a day, idling 7,000 trains.

Venneman warns: "The effect of this would be very similar to the port backups that we have been seeing. Of those idled trains, some of them are used to take containers discharged from vessels at ports to places inland (an average intermodal train carries 618 containers). All meaningful cargo flow would stop and there are currently nowhere near enough trucks or drivers to compensate for these trains going out of service."

He adds: "If such a prolonged strike action were to happen, it has the potential to be way worse than the port backups."

In Latin America, alongside global issues, there is a concerning manifestation of social unrest, resulting in strikes and protests, as well as frequent looting and destruction of private property, according to Xavier Pazmino, Regional VP Marine, Chubb Latin America. This is disrupting production activities and the supply chain in general, he says. According to the NFIB Research Foundation: Small Business Economic Trends, 68% of small businesses in the region (as at January 2022) reported that supply chain disruptions have had a notable impact on their business. Such unprecedented disruptions are particularly crippling in a region that predominantly exports raw materials and import-finished products.

“An estimated 100,000 absent truck drivers from the Russia-Ukraine war are having a big impact on an already tense labour situation”

Peter Kelderman, Marine Risk Management Leader, Chubb Europe

On the horizon

With cyber criminals becoming ever more sophisticated, cyber crime is emerging as a potential destabiliser to supply chains, regardless of how they are structured. Supplier assets that can be targeted include configurations, data, hardware, processes or people. Attack techniques range from a malware infection to impersonating a supplier’s personnel. Last year, threat mapping by the European Union Agency for Cybersecurity revealed that attacks on a supplier’s computer code were emerging as the biggest risk area globally (accounting for 66% of supply chain attacks).

Cyber exploitations are also increasingly focusing on the manufacturing industry. It replaced financial services as the top attacked industry worldwide in 2021, accounting for 23% of all incidents, says IBM. Ransomware was the number one attack type and 26% of incidents targeted Asia.

In the UK, the majority of organisations surveyed by the government in 2021 had not formally reviewed the cyber security risks posed by their immediate suppliers and wider supply chain (only 12% had done so for their immediate suppliers and just 5% for wider supply chains). This is despite four in 10 businesses reporting cyber security breaches or attacks in the preceding 12 months.

In addition to awareness around hacking in general, businesses should be alert to the added risks posed by the geopolitical dimension, warns Julius: “State actors, in Russia and in China, as well North Korea, are involved in cyber attacks and that aspect will probably grow. We are now in a situation where certain countries are developing more sophisticated techniques toward disrupting businesses.”

She adds: “Many companies rely on digital technology to track shipments, and the extent that these can be disrupted, or the financial flows disrupted, means cyber security becomes a really big issue when you’ve got state actors, not just criminals.”

So, how can businesses navigate this ever-changing landscape, marked by geopolitical instability and erratic inflation? In part two of this report series, we explore what companies can do to boost resiliency in their supply chains and mitigate risk.

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