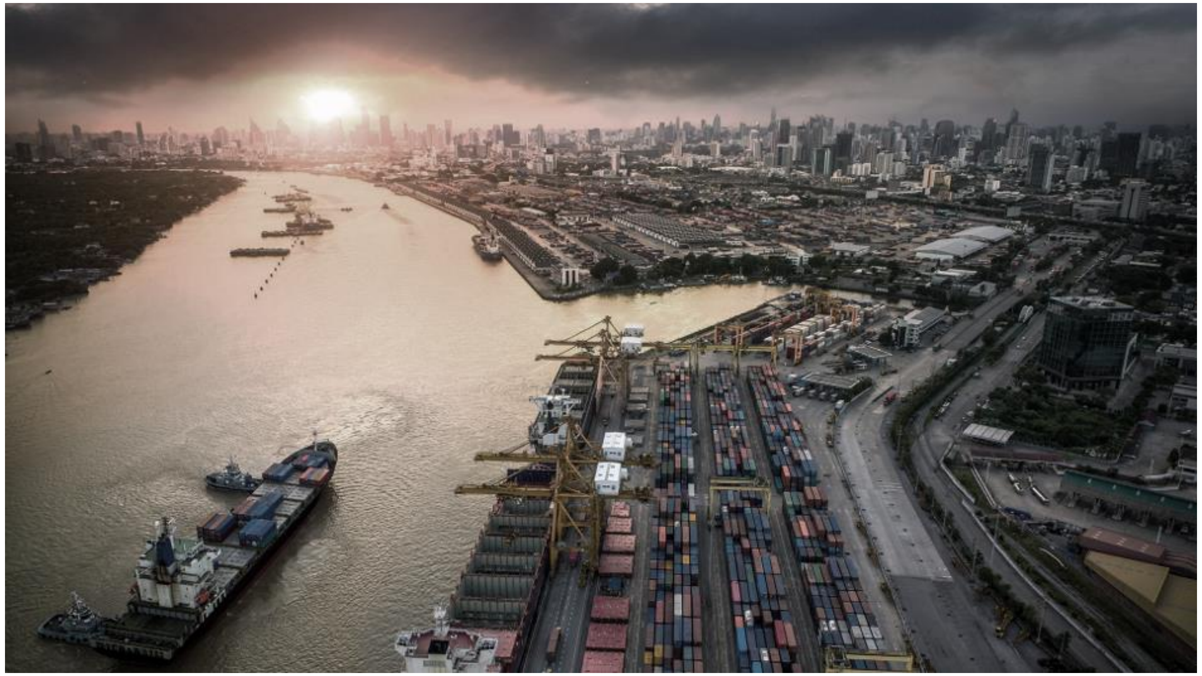
Swiss Re Institute

Swiss Re Corporate Solutions

sigma 6/2020: De-risking global supply chains: rebalancing to strengthen resilience

Irina Fan, Head of Insurance Market Analysis

Welcome & Introductions



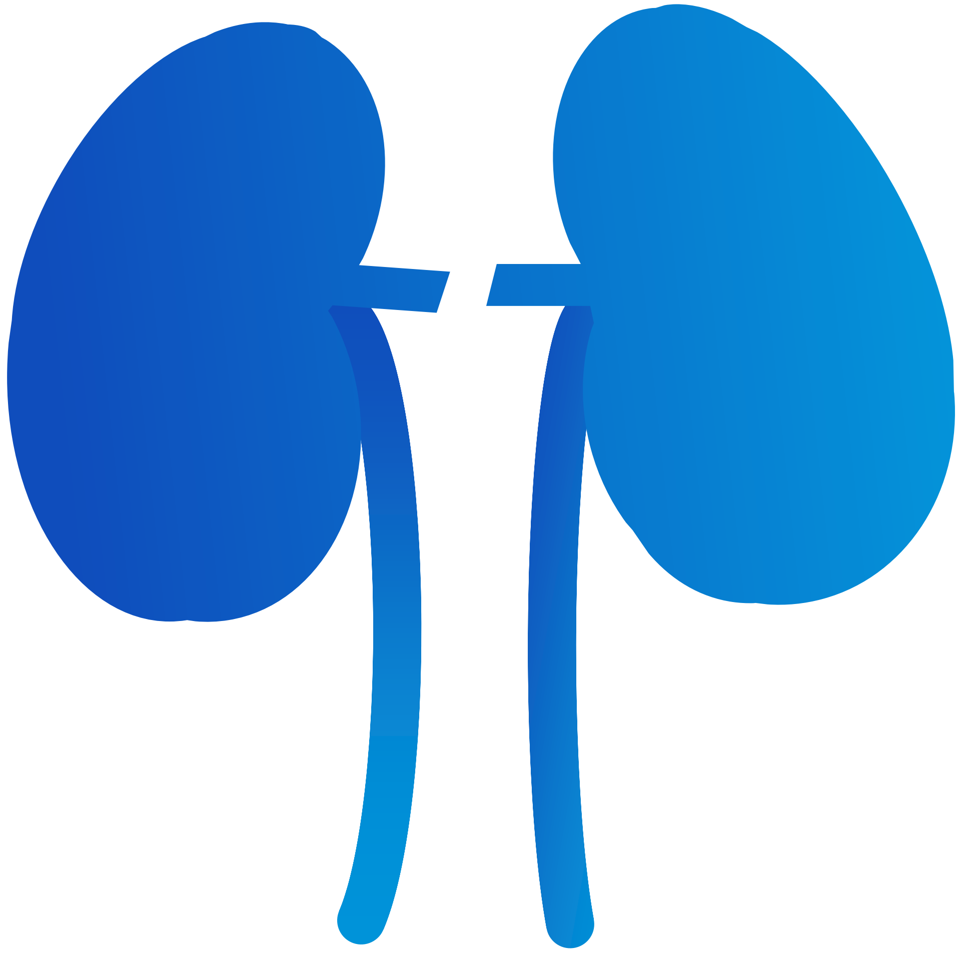
Your Panel of Speakers

- **Stephen Higginson**
  Head Customer & Distribution ANZ, Swiss Re Corporate Solutions
- **Irina Fan**
  Head of Insurance Market Analysis, Swiss Re Institute

"A ship in port is safe, but that is not what ships are built for. Sail out to sea and do new things"

~Grace Hopper

Supply Chains: the key point(s) to remember!



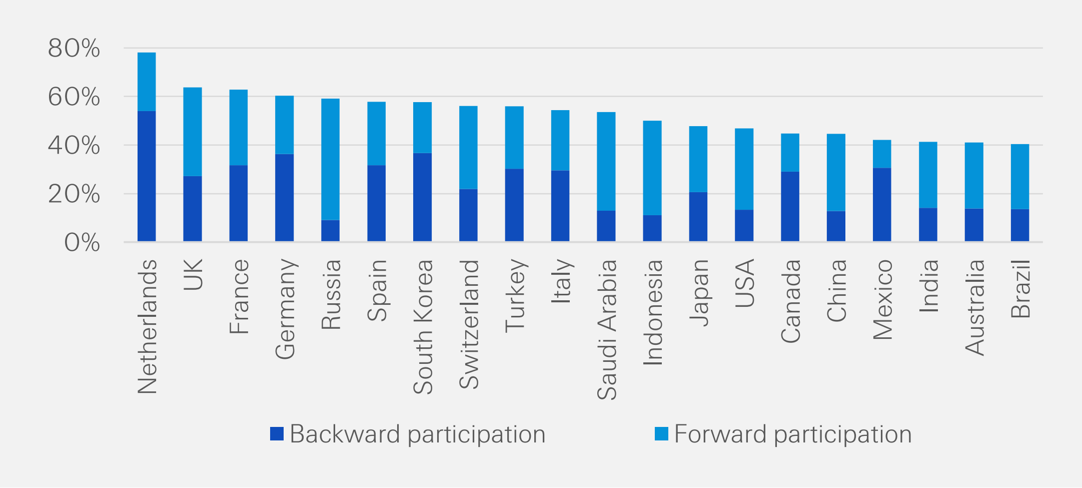
Driving forces: supply chain changes are under way

"Underlying drivers, such as diminishing cost arbitrage benefits, costly disruptions from more frequent natural catastrophe events, new technology and rising political risks, are reshaping global supply chains. COVID-19 is just an accelerator."

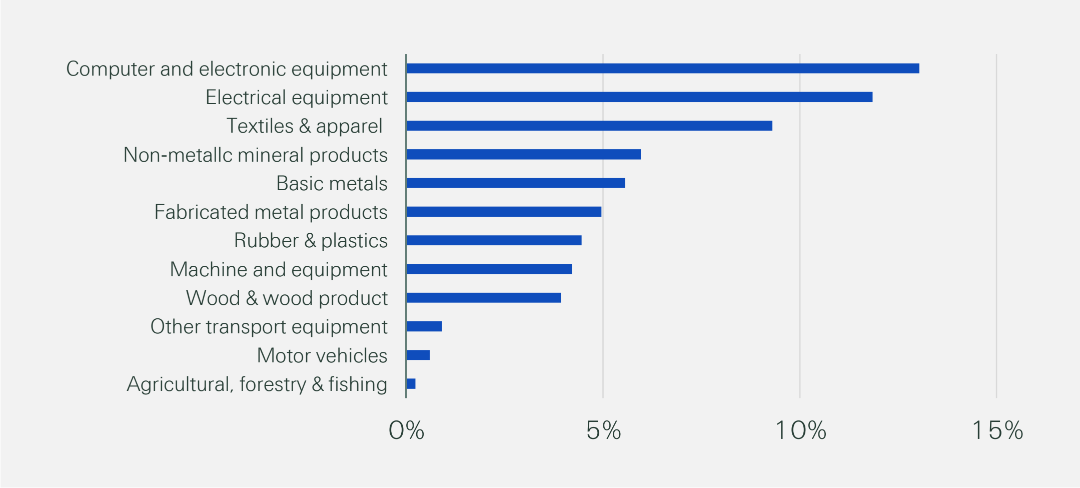
Global supply chain disruptions: China in focus

- In the **world's largest 20 economies, 40-80% of exports are integrated into global supply chains**
- **As the largest supplier of intermediate goods, China is at the core of GSCs and disruptions**
- **The computer and electronic equipment trade is most vulnerable,** with ~13% of its intermediate inputs coming from China

Participation of the 20 largest economies in GSCs (% of total export values added, 2018)



Chinese intermediate input as a % of total global output excl. China, by industry (2015)



Note: Forward participation is defined as a country's domestic value-added content embodied in intermediate exports that are further re-exported to third countries, as a percentage of total exports. Backward participation is foreign value-added content embodied in a country's exports as a percentage of total exports.
Source: UNCTAD-Eora database, Swiss Re Institute

COVID-19 has instilled new urgency for restructuring of Global Supply Chains

Underlying drivers

Diminishing cost arbitrage advantages
(narrowing wage differentials)

Rising political risk
(ie rising protectionism, trade war)

Social values
(ie ESG, equality, diversity & inclusion)

Increasing cost of business interruption
(ie natural catastrophes)

3D printing and digital manufacturing
(ie tailored products instead of mass production)

Accelerator

COVID-19

Supply chain adjustments

Diversification
(geographic, suppliers)

Relocation/parallel supply chain

Reshoring/stay close to consumers

Simplified supply chain

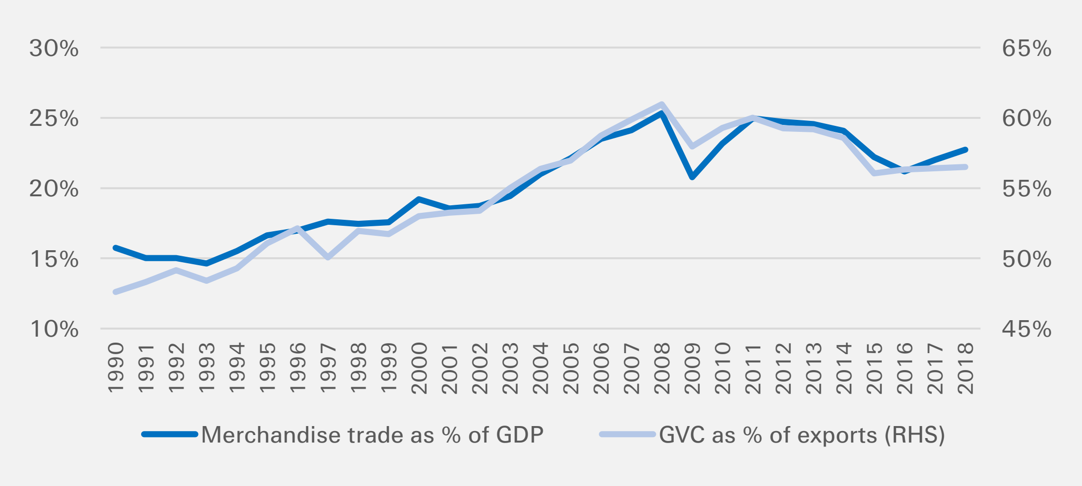
Insurance and risk transfer solutions

Source: Swiss Re Institute

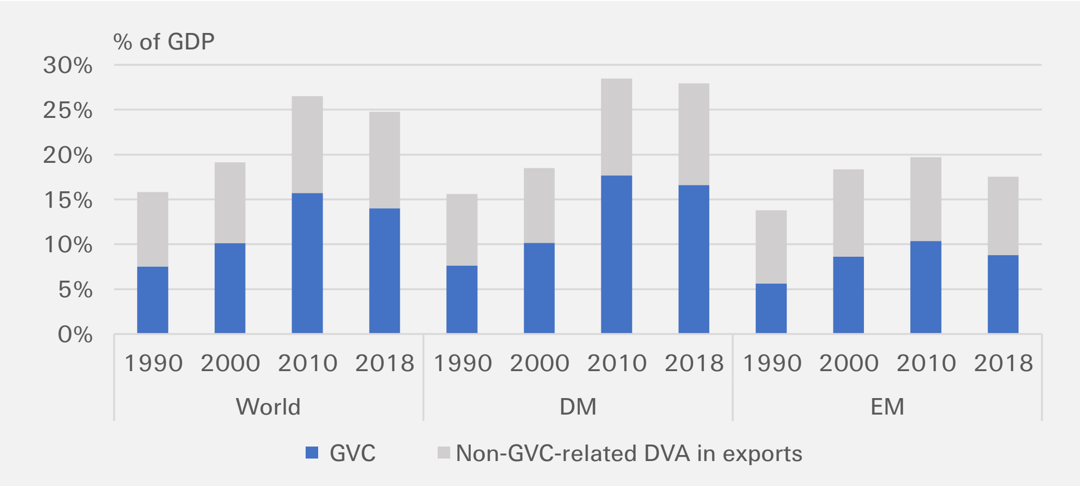
Globalisation has peaked before the Global Financial Crisis

- As part of the overall **fallout from the GFC**, there been some tempering of the globalisation "spirit" over the last decade
- Globalisation has fueled **economic inequalities** in advanced economies and contributed to populist shifts in many countries
- Large free trade agreements such as the Trans-Pacific Partnership (TPP) and Transatlantic and Trade Partnership (TTIP) have not closed or ratified due to **protectionist shifts in politics**

Global trade and supply chain participation



Decomposition of exports in global value chains, % of GDP)

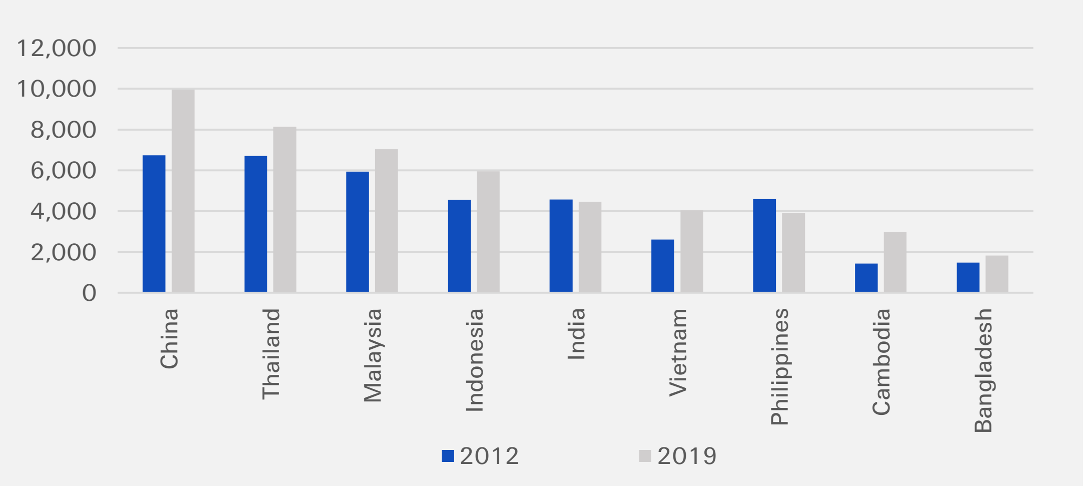


. Source: UNCTAD-Eora database, World Trade Organization, Swiss Re Institute

Diminishing cost arbitrage advantages

- China has lost its labour cost advantage over other Asian markets
- There have also been improvements in ease of doing business elsewhere in Asia, in particular Thailand, Malaysia and Vietnam.

Annual cost of manufacturing workers in emerging Asia (USD)



Ranking of emerging markets in Asian markets in terms of logistics, ease of doing business and local procurement rates

Country	Logistics (2018)	Ease of doing Business (2019)	Local procurement rate (2018)
China	26	31	66%
India	44	63	56%
Indonesia	46	73	42%
Malaysia	41	12	36%
Philippines	60	95	29%
Thailand	32	21	57%
Vietnam	39	70	36%
Cambodia	98	144	6%
Bangladesh	100	168	24%
Myanmar	137	165	32%

. Source: JETRO, World Bank, Swiss Re Institute

Economic growth and insurance market implications

"Relocation or reshoring will generate ~USD 1 trillion from additional exports and investments to alternative locations and USD 63 billion from new insurance premiums, as well as positive growth during the transition. But ultimately, long-term potential growth will be lower due to efficiency losses."

Globally, industry sectors most likely to move ……

Non-economic factors such as national strategic priorities are becoming increasingly important in decision-making

	Economic factors	Non-economic factors	Share of export (%) with shift potential		Market capitalisation
			low	high	USD bn
Pharmaceuticals			38	60	6’044
Apparel			36	57	868
Communication equipment			34	54	2’720
Medical devices			37	45	2’760
Transportation equipment			29	43	564
Textiles			23	45	113
Furniture			22	45	90
Aerospace			25	33	1’137
Computers and electronics			23	35	111
Electrical equipment			23	34	1’519
Machinery and equipment			19	25	1’332
Automotive			15	20	1’611
Semiconductors and components			9	19	2’570
Chemicals			5	11	2’477

Note: Non-economic factors include policy driven shifts (eg, essential goods for national security). Market capitalisation as of13 August 2020.
Source: Risk, resilience and rebalancing in global value chain, 6 August 2020, McKinsey, Thomson Reuters, Swiss Re Institute

High Low

Potential impacts on economic growth and insurance

- The new dynamics will generate **USD 1 trillion from additional exports and investment to alternative locations** during the 5-year transition
- **Global GDP will gain by 0.2% per year during the transition, but long-term growth potential will be lower due to efficiency losses**
- New insurance demand will **increase global insurance premiums by USD 63 billion** during the transition

Potential winners

	Relocation to	Reshoring
1	Vietnam	US
2	Cambodia	Germany
3	Malaysia	France
4	Thailand	Italy
5	Philippines	UK

Note: Relocation countries are ranked by relative attractiveness; see "Production relocation scorecard" on slide 20 or Table 2 in report. Reshoring countries are ranked by 2018 volumes of intermediate goods imports.
Source: Swiss Re Institute

Our growth stimulation model

USD billion	Trade Effect	Additional investment needed	GDP effects p.a. (%)	Insurance premium
Relocation to countries	200	287	+0.70	**26**
Re-shoring countries	100	406	+0.20	**37**
World	300	694	+0.21	**63**

Note: (i) We assume that China loses 20% of value-added exports to 20 lower-wage emerging markets and another 10% to re-shoring to advanced markets over a five-year transition period. (ii) There is need for additional investment in plants and equipment to expand production in the new locations. We assume a capital-to-output ratio around 1.4 for the emerging economies and around 4.1 for the advanced. (iii) We assume China will take policy reaction to fully offset the negative impacts of the trade diversion and shift the production capacity to produce for domestic consumption and/or new export markets.

Adding resilience to global supply chains

Supply chain risks

- Catastrophes
- Failure of transport and communication networks
- Interruptions in financing
- Regulatory & political risks

Risk mitigation

- Redundancy of suppliers, factories, clients
- Increased inventories
- Simplified production processes
- Regionalization and reshoring
- De-coupling of geopolitical spheres of interest

Triggers demand for commercial insurance

Examples for risk transfer via insurance

- **Business interruption (BI)** and **contingent business interruption (CBI);** Cover for losses or extra expenses resulting from physical damages at own premises (BI) or at the premises of a customer or supplier (CBI)
- **Non damage BI (NDBI)** and **supply chain insurance;** Cover for non-physical damage events (at suppliers) and resultant business interruption
- **Political risk** resulting from interference and/or currency trade; e.g. covers for currency inconvertibility risks
- **Regulatory impairment covers;** e.g. non-approval and certification from regulators in pharmaceutical manufacturing

The role of technology in supply chain risk management

Role of Technology

- End-to-end data platform to reduce operational risk
- Data security and sharing of critical information across the supply chain
- Examples:
  - Low-cost sensor solutions
  - Advanced data analytics
  - Blockchain

New opportunities

- **Digital marketplace** – efficient distribution of insurance products
- **Digital risk as a service** – Servicing risk with event-triggered, data-driven digital services and claims processing
- **Resilience as a service** – 360 ° risk intelligence in real-time

Swiss Re Partnership with Microsoft

Digital Market Centre to help develop large-scale tools that predict and manage risks:

- Initial focus on automotive industry, industrial manufacturing and natural catastrophe resilience
- Assessment of business risks with a focus on complex, interconnected systems and their wider implications for society, governments and economies

Key takeaways

The urge for Global Supply Chain resilience	**Macro trends in reshaping the global supply chains were in place already pre-COVID-19**. The ramping up of US-China trade tensions and COVID-19 instils greater urgency for Global Supply Chain resilience
Opportunities during transition	**Parallel supply chains will emerge**. We estimate they **will generate ~USD 1 trillion from additional export and investments globally**, boosting growth **and adding USD 63 billion from insurance premiums over a 5-year period**
The trade-offs in the long-run	Medium-term global growth is expected to increase, but **longer-term economic growth will be adversely affected. The adverse impacts on growth will be larger, should politics lead to more friction in the trade of goods and services,** lowering productivity growth

"We must free ourselves of the hope that the sea will ever rest. We must learn to sail in high winds."

~Aristotle Onassis

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Thank you!

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