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GLOBAL TRADE: BATTLING OUT OF DEMAND AND PRICE SHOCKS

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ANA BOATA
Head of Economic Research
ana.boata@eulerhermes.com

FRANÇOISE HUANG
Senior Economist
francoise.huang@eulerhermes.com

ANO KUHANATHAN
Sector Advisor & Data Scientist
ano.kuhanathan@eulerhermes.com

Executive Summary

- *The invasion of Ukraine and renewed Covid-19 outbreaks in China are hitting global trade with a double whammy in 2022: lower volumes and higher prices. We now expect trade to grow by +4.0% in volume terms in 2022 (-2pp lower than expected before the war), and as much as +10.9% in value terms (vs. +7.2% previously expected). Already existing before the war, the risk of a double-dip in global trade volume in H1 2022 has increased.*
- *The confidence and demand shock will result in a loss of USD480bn in exports to Russia and Eurozone countries in 2022 (roughly evenly split between the two destinations), with companies in Eastern Europe the most exposed.*
- *Looking at Russia as a supplier in global and regional value-chains, Eastern Europe remains the most at risk, while a complete cut-off of relations would mean the Eurozone's largest four economies losing up to 0.4% of their GDPs and 1.1% of their exports.*
- *Renewed Covid-19 outbreaks in China, where the zero-Covid policy continues, is the larger issue for global supply chains: Delivery times are likely to remain elevated throughout 2022.*
- *The cost of trade could be pushed up by higher oil prices: Brent and container freight prices have shown a 90% correlation since 2020, suggesting a potential record-high peak of USD14,000/FEU for freight rates. Net exporters of commodities (Middle East, Norway, some economies in Latin America) could benefit from higher commodity prices and potential substitution effects away from Russia. In Europe, Germany's trade surplus would be reduced by one third and France's trade deficit could rise by more than two thirds.*

The invasion of Ukraine and renewed Covid-19 outbreaks in China will hit global trade with a double whammy in 2022: lower volumes and higher prices. We now expect trade to grow by +4.0% in volume terms in 2022 (-2pp lower than expected before the war), while trade in value terms surges by +10.9% (vs. +7.2% previously expected). After the contraction in Q3 2021, the risk of a double-dip in global trade volume in H1 2022 has increased further[1] – not only due to supply-chain bottlenecks, but also because of lower demand. The economic consequences of the war in Ukraine will slow GDP growth around the world, especially for economies

[1] See our report *Global Trade Report: Battling out of supply-chain disruptions*.

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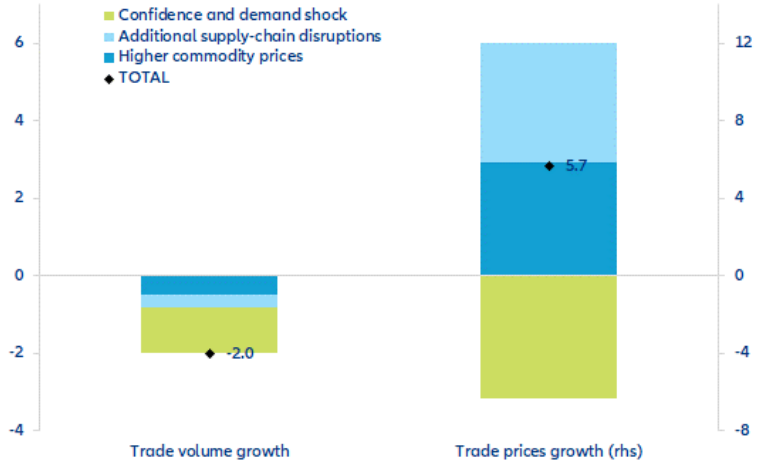
in Europe[2]. The resulting confidence and demand shock explains more than half of the downward revision in our forecast for trade growth in volume in 2022 (see Figure 1). Conversely, trade prices growth has been revised upwards by 5.7pp, with commodity prices and additional supply-chain disruptions contributing roughly equally.

Figure 1 – Breakdown of 2022 trade growth forecast revisions (pp)



Source: Allianz Research

The confidence and demand shock will result in a loss of USD480bn in exports to Russia and Eurozone countries in 2022 (roughly evenly split between the two destinations), with companies in Eastern Europe the most exposed. While Russia as an end-demand market is not systemic at the global level (representing just 1.2% of global imports on average in 2015-2019), the multi-year recession it is likely to face could lead to losses in the region. The most exposed countries are Moldova, Slovakia, Serbia, Slovenia and Czech Republic, where exports exceed 1.5% of GDP. Among the biggest Eurozone exporters, Germany and Italy are among the top 20 most exposed, with potential losses of up to 0.6% (USD21bn) and 0.5% of GDP (USD90bn) respectively, in the worst case scenario where relationships with Russia are completely frozen.

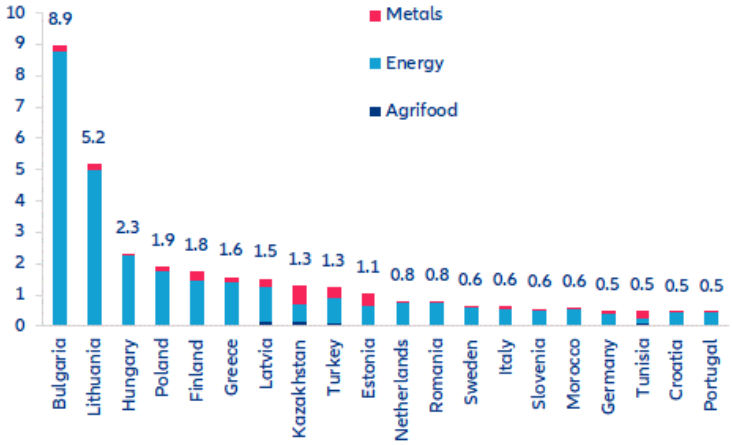
Looking at Russia as a supplier in global and regional value-chains, Eastern Europe remains the most at risk, while a complete cut-off of relations would mean the Eurozone's largest four economies losing up to 0.4% of their GDPs and 1.1% of their exports. Looking at the world's exposure to goods produced in Russia[3], the sectors of focus are energy (e.g. oil, gas), metals (e.g. aluminium, palladium, nickel) and agrifood (e.g. wheat, corn) as Russia respectively represents around 9%, 3% and 2% of each sector's global exports. By looking precisely at the amount of energy, metals and agrifood inputs produced in Russia that end up in other countries' outputs (through direct and indirect trade linkages), we find that Bulgaria (close to 9% of GDP), Lithuania (more than 5% of GDP) and Hungary (more than 2% of GDP) are the most exposed (see Figure 2).

[2] See our report *Economic Outlook: Energy, trade and financial shockwaves*.

[3] The current conflict involves Ukraine and threatens its participation in global trade. However, we choose to focus on Russia for a couple of reasons. First, despite its importance in some key materials (e.g. Ukraine corn exports represent about 12% of the global total), Ukraine is a relatively small trading partner for other countries. Ukraine's participation in global trade (i.e. imports + exports) amounts to about 0.5% of global exports, while it adds up to about 3% for Russia. In addition, its stock of FDI is 10 times lower than that of Russia, making it a much smaller player in global value chains. Finally, data availability on Ukraine's supply-chain linkages is limited.

Some Western and Northern European countries are also among the top 20 most exposed, including the Netherlands (0.8% of GDP), Sweden (0.6%), Italy (0.6%) and Germany (0.5%). This compares with 0.3% of Chinese GDP depending on Russian inputs, and 0.1% for the US. Looking at how much Russian value-added is used in other countries' exports yields similar results, with Eastern European economies the most exposed, while up to 1.1% of exports from the largest four economies of the Eurozone could be at risk (compared with 0.7% for China and 0.2% for the US).

Figure 2 – Russian energy, metals and agrifood inputs used in respective countries' output (% of GDP), top 20 exposed in relative terms



Sources: OECD, IMF, Allianz Research

Europe is thus by far the most at risk of supply-chain disruptions caused by the Russian invasion of Ukraine and ensuing sanctions. Beyond food and energy commodities, which can be easily substituted with other suppliers, metals are actually more sensitive products. Indeed, they are often part of an industrial process that has been designed to take into account the particularities of a certain supplier. As such, changing suppliers, even when possible, is not an easy task as it might require industrial adjustments. Based on the critical materials analysis from the European Commission, we observe that Russia represents over 10% of imports for about 20 metals, with key applications in transport equipment, high-end electronics (batteries, semiconductors, smartphones), construction and automotive (see Figure 3).

Figure 3 – Key metal inputs from Russia to the EU

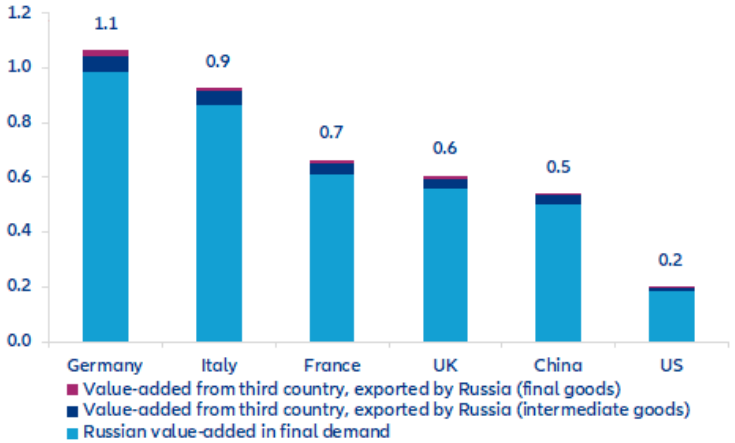
Metal	Share of EU sources (%)	Example Use/products
Scandium	67%	Aerospace components and transport/sport equipment (e.g. bicycle frames)
Vanadium	60%	Steel alloys
Tungsten	50%	Bulbs, heavy metal alloys
Palladium	46%	Converters in automotive industry, jewelry
Yttrium	34%	Aluminum and magnesium alloys
Cobalt	31%	Aerospace components, glass, ceramics, batteries
Dysprosium	25%	Specialty cements, hard discs
Erbium	25%	Metal alloys, amplifiers, lasers
Europium	25%	TV sets, monitors, antiforgery marks on Euro bank notes

Galdolinium	25%	Metal alloys
Holmium-Thulium-Ytterbium-Lutetium	25%	Batteries, computers, smartphones, fiBer optics, superconductors etc.
Lanthanum	25%	Hybrid vehicle batteries
Neodymium	25%	Magnets used in medical equipment, toys, smartphones, turbines etc.
Praseodymium	25%	Magnets used in hybrid vehicles, wind turbines
Samarium	25%	Alloy magnets used in small motors and electronic appliances
Terbium	25%	Screens, lighting
Phosphate rock	16%	Fertilizers
Platinum	16%	Automotive converters, jewelry
Nickel (refined)	14%	Stainless steel, batteries
Aluminum (refined)	13%	Extensive use from cans to construction equipment to transport equipment
Germanium	12%	Semiconductors
Nickel	12%	Stainless steel, batteries
Rhodium	10%	Converters

Sources: European Commission, Allianz Research

To account for secound-round supply-chain effects of ongoing events, value-added that needs to transit via Russia before reaching its final destination also needs to be taken into consideration, on top of that directly produced in Russia. We find that the latter has a much larger impact than the former (see Figure 4), which is even negligible outside Europe. This confirms Russia's limited role in global and regional supply-chain logistics. Indeed, even if high-frequency data show that the number of tankers moving in the Black Sea and Baltic Sea, and the number of container vessels anchored in Russian ports, have declined since the start of the war, it is important to keep in mind that Russia represents just around 2-3% of the global tanker fleet and containerized trade.

Figure 4 – Value-added produced in and transiting via Russia in final demand (% of total final demand)

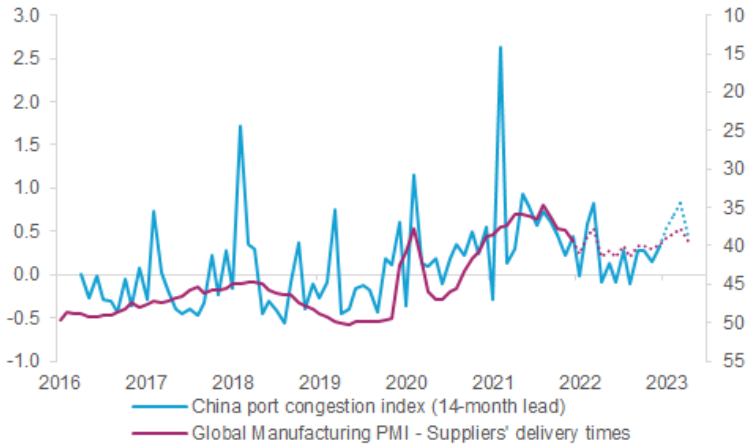


Sources: OECD, Allianz Research

New Covid-19 outbreaks in China are the larger issue for global supply-chains as the sustained zero-Covid policy is likely to keep delivery times elevated throughout 2022. Local lockdowns and more restrictions in response to rising infections in cities such as Shenzhen and Shanghai are likely to impact production and logistics in China. Data show that congestion waiting times and anchorage outside the Yantian port and the

outer Pearl River Delta have risen over the past few weeks. For now, they remain below the levels seen during summer 2021, when outbreaks led to temporary port closures. However, this new bottleneck comes at a time when the global maritime shipping industry is still fragile. A repeat of the temporary port closures in China could have ripple effects on global logistics: The historical relationship between our proprietary China port congestion index and the global manufacturing PMI suppliers' delivery times index (see Figure 5) suggests that delivery times are likely to remain above the pre-pandemic average for most of 2022, and even lengthen slightly at the start of 2023 – though remaining below 2021 peaks.

Figure 5 – China port congestion index and global manufacturing sector delivery times



Sources: UNCTAD AIS database, IHS Markit, Allianz Research

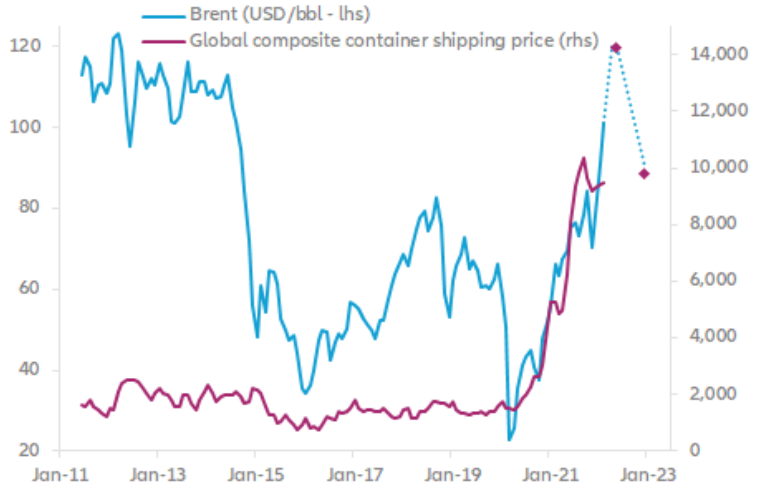
To add to this, the cost of global supply-chain logistics could be pushed up by higher oil prices: Since 2020, Brent and container freight prices have shown a 90% correlation, suggesting a potential record-high peak of USD14,000/FEU for freight rates. Historically, oil prices and container rates were not correlated. In previous business cycles, in times of "normal" demand and high oil prices, shippers have mostly adjusted speed and fleet size rather than prices. For instance, reducing the cruising speed of a vessel by -20% can reduce daily bunker oil consumption by up to -50%[4]. However, the post-Covid environment has led to an exceptional change. With pent-up demand and supply-chain disruptions, firms have been willing to pay a premium to shorten delivery times and shipping companies have been able to reprice rates more aggressively. As such, since 2020, Brent and container freight prices have shown a 90% correlation (see Figure 6), suggesting that oil prices hovering around USD120/bbl could theoretically lead to a new record-high peak for freight rates of USD14,000/FEU (a +40% increase from the previous peak reached in September 2021). Actual freight rates may in the end not increase this much as global demand in 2022 is likely to be softer than in 2021, but shippers still benefit from strong pricing power and should be able to pass on at least part of the higher oil prices. Container freight prices will thus remain more elevated in 2022 than we had previously expected.

In the current context of high oil prices, it is worth mentioning that beyond the tense crude oil market, the global economy is also facing a tense diesel/gasoline market. Inventories are decreasing globally, refining

[4] Ronen, D. 2011, "The effect of oil price on containership speed and fleet size", Journal of the Operational Research Society (62), 211-216

capacities are stretched and producers such as Nigeria, which supply low-sulfur crude oil (that is easier to refine), are struggling to provide more volume to the market. In case of a diesel crunch, the road transport sector could further disrupt global supply chains. Estimated inventories could provide over 200 days of consumption for countries such as Finland, about three months for France, Spain or Hungary but as low as two months in the case of Germany, Italy or even close to one month for the UK or the US.

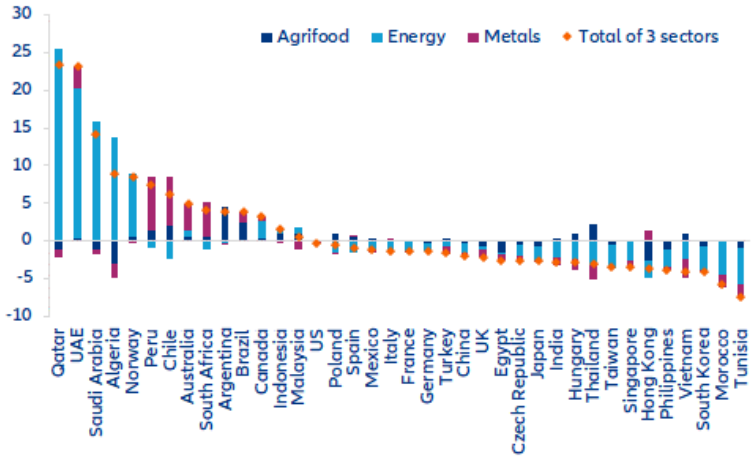
Figure 6 – Oil prices (USD/bbl) and container freight prices (USD/FEU)



Sources: Refinitiv, Bloomberg, Allianz Research

Higher commodity prices are also hitting countries' terms of trade: All else equal, we find that Qatar, the UAE and Saudi Arabia are likely to see the largest increase in their trade balance-to-GDP ratio, while Tunisia, Morocco and South Korea could see the largest declines. Net exporters of commodities (in the energy, metals and agrifood sectors) are likely to benefit from higher prices and potential substitution effects away from Russia. To quantify more precisely the impact on trade balances, all else equal (see Figure 7), we assume that prices in the energy, metals and agrifood sectors remain at current levels for the rest of the year (implying respectively a +70%, +50% and +50% rise compared to 2021). As such, countries in the Middle East, Norway and some in Latin America are likely to see the largest gains in trade balance as a share of GDP. In Europe, Germany's trade surplus would be reduced by 1.4pp of GDP (or one third in absolute terms) and France's trade deficit could rise 1.3pp of GDP (or by more than two thirds in absolute terms).

Figure 7 – Impact of higher commodity prices on trade balances (in pp of GDP), all else equal



Sources: UNCTAD, IMF, Allianz Research

Trade financing may become a headwind for some exporters in 2022 in a context of higher USD funding costs, higher commodity prices and sanctions against Russia. Despite ongoing shocks to the global economy, the Fed will not deviate from its plans of monetary tightening. We thus expect five more rate hikes in 2022 (and four in 2023), while the reduction of the Fed's balance sheet would start as early as mid-2022. In this context, the USD is likely to appreciate (we expect +8% against the EUR on average in 2022), and funding in USD will become more expensive. Data and research literature show that such a mix tends to weigh on global trade: As the USD is the major invoicing currency for trade, a 1% appreciation against all other currencies is associated with a -0.6 to -0.8% decline in total trade volume among the rest of the world[5].

The current context is already pushing up financing needs for commodity trading and squeezing funding for other types of international trade operations. As short-term futures contracts are trading at a high premium compared to longer-term ones, commodity traders who usually buy physical materials and sell futures to hedge themselves from price risk have been facing increased margin calls. This has led to several major commodity powerhouses calling on banks to supply the required liquidity to comply with the margin calls. Some have even lobbied central banks in order to get direct liquidity support.

Finally, sanctions and rules are putting pressure on trade flows with Russia. The EU put in place an export ban covering goods and technology in the aviation and space industry, as well as a prohibition on the provision of insurance and reinsurance and maintenance services related to those goods and technologies. This will hit Russian airlines, one of the key sectors of the economy. Furthermore, the blocking of the biggest Russian financial institutions and the removal of seven Russian banks from SWIFT[6] jeopardizes the possibility of transactions with Russia and is thus drastically reducing G7 exports to Russia. On the Russian side, strict capital controls have been implemented, along with the obligation for Russian legal entities and citizens to resell 80% of foreign exchange (FX) received in business transactions. This means that FX funding for Russia is a limited risk at the moment, but in an adverse scenario where the West completely

[5] For example, Boz, Gopinath and Plagborg-Moller (2017)
[6] Bank Otkritie, Novikombank, Promsvyazban, Rossiya Bank, Sovcombank, VEB Bank, VTB BANK. Russia's largest banks Sberbank and Gazprombank are not yet cut-off.

stops importing oil and gas from Russia, the country could become bankrupt with respect to its imports and short-term external debt-payment needs.

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