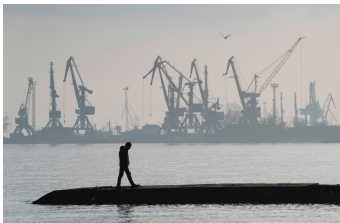


A global power struggle

The Ukraine war means the world is now looking for alternative energy supplies with gas and oil the focus of ING's coverage this week. Supply chains are being reshaped and markets, along with central banks, are also having to face up to renewed financial threats

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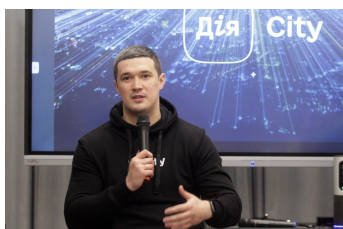


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The Russian invasion of Ukraine is severely impacting many markets. Here, we look at the cross-credit reaction to the crisis, we identify the implications...

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What China's 'Two Sessions' mean for the climate and commodities

China's biggest political event of the year, the 'Two Sessions', highlighted the need to enhance energy security - a new priority that will...

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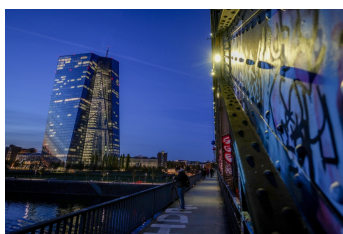


Commodities, Food & Agri

Russia-Ukraine conflict: What it means for grain and oilseed markets

The sad events we are seeing in Ukraine have brought the issue of food security to centre stage. Disruptions to supply chains along with self-sanctioning...

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ECB continues with normalisation, keeping maximum optionality

Moving on with tapering and keeping the door wide open for a rate hike before year-end, while ensuring maximum flexibility. Today's ECB...

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United States

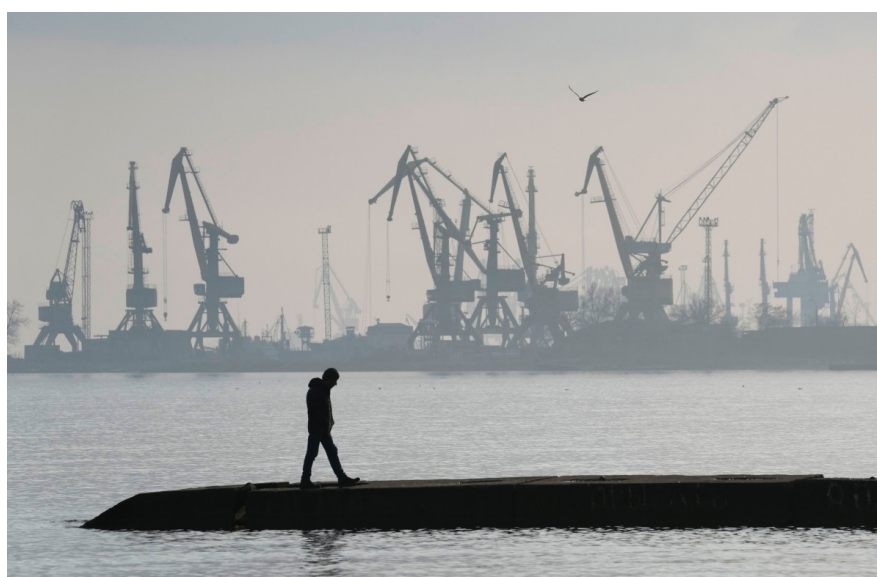
US inflation at a 40-year high and the only way is up

Consumer price inflation hit a new 40 year high and will soon get close to 9% as businesses' surging commodity and labour costs get passed onto...

By James Knightley

Russia-Ukraine crisis to reshape supply chains, flatten world trade

The improvement in global supply chains has ended before it ever really began. The war in Ukraine will bring longer-lasting disruption and the trade outlook will bear the consequences of sanctions. Expect a new round of delays and protracted supply shortages



Man walks with harbour cranes in the background, at the trade port in Mariupol, Ukraine.

Supply chains: a new round of challenges

The war in Ukraine is putting global supply chains to the test again. Even before the conflict began, supply chain frictions had only improved marginally from the pandemic. While container handling had picked up significantly in many regions, schedule reliability - the actual on-time performance of individual vessel arrivals in ports tracked by Sea-Intelligence - dropped to 30.9%, marking a new all-time low. In terms of shipping rates, there has been some relief in the spot market, but the shift to long term contracts has meant that higher container tariffs are now locked in.

Russia and Ukraine: no major EU trade partners, but closely linked to several countries

The share of Ukraine's global goods imports and exports only amounts to 0.3% each, while Russia's export share is 1.9% and its import share is 1.4%. However, although the share in world goods

trade is small for both countries, they are crucial oil, gas and grains exporters and have close links to Baltic states and other Eastern European countries, namely Lithuania, Bulgaria, Finland, and Latvia. On average, almost 40% of trade in these four countries was linked to Russia between 2015 and 2020, not only through goods imports and exports, but also through value added as partners in supply chains. Lithuania and Bulgaria have particularly close ties in this regard; Russian value-added as a percentage of final demand is roughly 6% in both countries. The trade share with Ukraine between 2015 and 2020 was far smaller, with Lithuania (1.9%), Hungary (1.7%) and Poland (1.5%) seeing the highest shares.

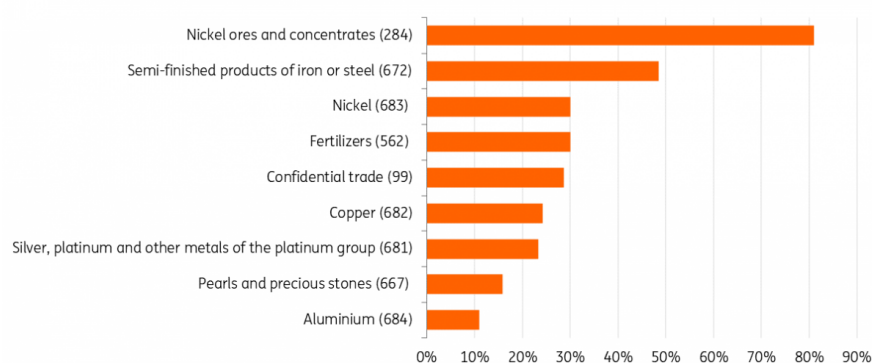
Sanctions are a blow for European trade with Russia and transit traffic

EU countries have banned exports of a range of high-tech products, equipment, materials, and machinery to Russia and extended the scope of sanctions to Belarus. These products cover at least 40% of the export package to Russia based on the EU sanctions list. Formal sanctions, in addition to extensive self-sanctioning, will have a strong impact on trade this year. Shipments to and from Russia have been banned, resulting in stagnating commodity flows. Due to the closure of Russian airspace, air freight traffic is being hindered. In addition, rail transport between Asia and Europe via Ukraine on the 'Silk Road' has been impeded, making transportation through both countries highly uncertain. In terms of tonnage, air cargo covers only 1% of world trade and the Silk Road takes 1-2% of container traffic between Asia and Europe. But in terms of value, this takes a [much bigger share](#), as higher valued (consumer) products like electronics, pharmaceuticals and high-end agriproducts could be involved. According to the Kiel Trade Indicator, world trade could decline by 5.6% in February compared with the previous month, even though the conflict only started to escalate in the last week of February.

Distortion of commodity markets and trade impacts supply chains the most

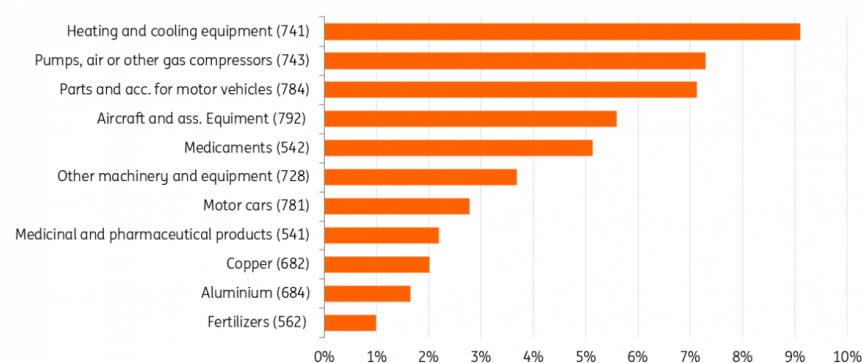
The biggest hit to supply chains would come from any severe disruption to Russian energy exports, as several European countries are dependent on Russia for energy. But even in the absence of this, there are more challenges to come. In addition to exporting agricultural products such as [wheat, corn, and sunflower oil](#) (India, China, the Netherlands, and Egypt are large consumers) both Ukraine and Russia export large amounts of steel, palladium, platinum, and nickel, among others.

Selected imports from Russia based on most traded goods between EU and Russia %-share of Extra-EU imports



Source: Eurostat, EC. *Energy goods are exempted. Nickel ores and concentrates do not belong to the most traded goods in terms of value, but are an indicator of the dependency on Russia in other areas than energy

Selected exports to Russia based on most traded goods between EU and Russia %-share of Extra-EU exports



Source: Eurostat, EC. *Energy goods are exempted. Nickel ores and concentrates do not belong to the most traded goods in terms of value, but are an indicator of the dependency on Russia in other areas than energy

In fact, 81% of nickel ores and concentrates of the EU's Extra EU-27 imports come from Russia. Specifically, the EU gets 30.1% of its nickel imports, 48.5% of semi-finished products of iron or steel and more than 20% of copper and platinum from Russia. Belgium and Denmark receive over 90% of their Extra-EU share of semi-finished steel from Russia while Latvia relies on Russia for 92% of its fertilisers. Russia's share in German Extra-EU imports for semi-finished iron or steel products amounts to 74% and 46.1% for copper. Even if the trading amounts are not always high, there are clear dependencies in some areas.

Automotive sector already faces supply chain consequences

The automotive industry, in particular, faces renewed operational problems because of the war, while the semiconductor shortage continues to drag on. BMW and VW have already seen production interrupted at European sites due to disruptions in the supply of components from Ukraine, such as wire harnesses. This affects both the production of conventional cars and electric vehicles, with some lead times extending into next year.

Avoidance of Russian ports and mutual closing of air space leads to new inefficiency and less air cargo capacity

Overseas: Self-imposed restrictions by exporting European companies and the looming closure of ports for Russian vessels as well as re-routing to avoid affected areas are creating delays and uncertainty. Some of the world's largest container carriers including MSC, Maersk, CMA CGM and Hapag Lloyd, [controlling about 60% of global container shipping](#), have suspended bookings of nonessential cargo to and from Russia and partially also Ukraine due to safety reasons. Consequently, cargo for these destinations is piling up in ports. But even if cargo is still shipped to Russia – and payment can be accepted – it will still receive extra customs inspection due to the sanctions in place, delaying handling and shipments in European ports. Some 10% of the total annual container throughput at the port of Rotterdam, Europe's largest port, is linked to Russia and 13% of its total volume, with large amounts of heavy crude oil, LNG and coal. Rotterdam serves also as a hub for several metals. About 5% of throughput is linked to Russia at the second and third largest European ports, Antwerp and Hamburg. But this is not limited to shipping and seaports, as air traffic is perhaps even more affected.

Overland and through the air: The blockage of the Ukraine rail route has already limited transport capacity and detours have to be made by air. Consequently, capacity is suffering from new reductions due to inefficiencies and loss of freight capacity. For example, Lufthansa anticipates a 10% capacity reduction on the Asia-Europe route due to the conflict between Russia and Ukraine. And one of the world's largest cargo-only carriers, Airbridge cargo, is also based in Russia. On top of this, [soaring fuel prices are significantly pushing up transport costs](#). Another large airfreight carrier, Cargolux, introduced a surcharge because of the implications of the war for capacity and routes.

Shortage of workers: 10.5% of all seafarers come from Russia and 4% from Ukraine, according to the International Chamber of Shipping. In the Black sea, many crewed vessels are stuck due to hostilities and port closures. The closure of airspace makes travelling and relocation for seafarers more difficult as well. The truck driver shortage in Europe could also intensify as an estimated 4,000 to 5,000 truck drivers are held up in Ukraine, according to IRU. Although this is only a fraction of the 3.8 million heavy truck and bus drivers employed in the EU, it intensifies the shortage of 400,000 truck drivers across the EU.

What does this mean for supply chains and our trade outlook?

Delays and congestion suggest longer-lasting problems for supply chains. Sailing and air freight schemes have to be reorganised and delays will intensify as Russian products are subject to sanctions, meaning that container cargo destined for Russia will receive extra customs inspection. Delivery of crucial preliminary products to European manufacturers will be delayed, if they arrive at all. On top of that, scarcity and delays mean further price pressures, resulting in rising prices for producers and consumers.

World trade will weaken more sharply than previously expected. Following the pandemic, continued supply chain troubles and higher inflation and shipping costs pose further downside risks to our trade outlook. Sanctions on several products previously exported to Russia, voluntary bans on exports and efforts to reduce oil and gas imports will all hit global trade this year. Nevertheless, we continue to expect some growth in world trade volume in 2022. The US economy and the Asian region ex-China have limited direct economic linkages to the area, speaking in favour of continued trade, although they are not immune to the indirect consequences of this conflict, such as a sharp

drop in demand from Europe. Trade growth might hover just above the 0% area if the war drags on. But whatever happens, trade flows will be significantly reshaped.

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Europe would face a desperate scramble to replace Russian gas

Europe's dependency on Russian energy has been a longstanding concern within the region, particularly for natural gas. These worries have only grown. Given the current Russia-Ukraine war and the resulting sanctions, there are worries that Russian gas flows could stop. And that would be seriously tough for Europe

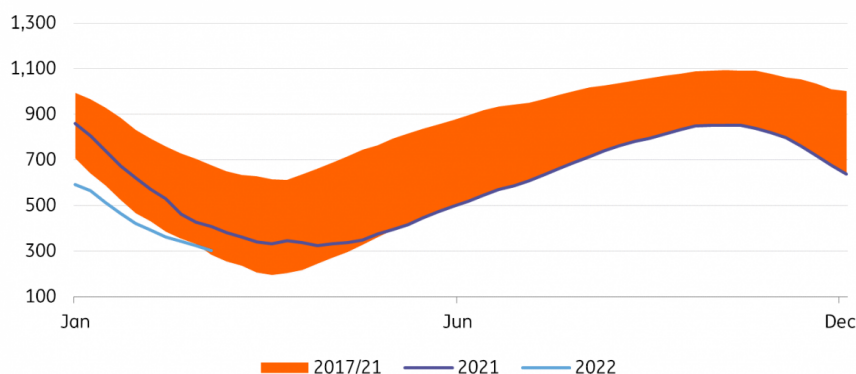


A gas extraction plant in the north of the Netherlands

Price action reflects deep concerns over supply shortfalls

The price action in the European gas market over almost the last year has reflected a significant tightening. This was largely a result of reduced Russian gas flows into Europe, which saw the region enter the heating season with record-low inventories. More recently, uncertainty over how Russia may react to European sanctions and the suspension of the approval of the Nord Stream 2 pipeline has raised concerns over gas supply going into next winter. As a result, Dutch hub prices, TTF, have rallied to record levels of EUR345/MWh recently, and prices were up more than 400% at one stage this year.

Low European inventories in uncertain times leaves the market more vulnerable (TWh)



Source: GIE, ING Research

European supply & demand overview

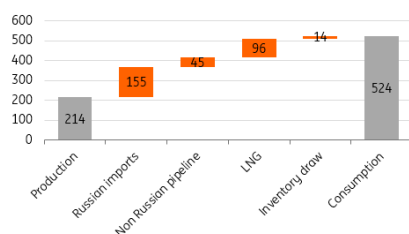
European gas production has fallen over the years, driven by a reduction in the production cap at the Groningen gas field in the Netherlands. The Dutch government implemented a production cap which has been reduced over the year with the idea to do so until the field shuts. The production cap this year was 3.9bcm, although this will potentially be lifted to 7.6bcm. The current gas year is expected to be the last operating year of the field. Total European output, including Norway and the UK, totalled around 214bcm in 2021.

Falling domestic output over the years has meant that Europe relies increasingly on imports to meet domestic demand. European gas demand is estimated to total around 524bcm in 2021, leaving a domestic deficit of 310bcm. This means that almost 60% of European demand must be met by imports.

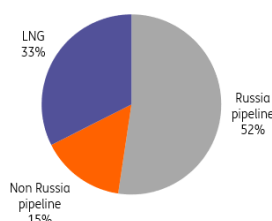
In 2021, European gas imports totalled around 296bcm (Norway is included in European production), of which Russia was the largest contributor, making up 52% of this number. LNG imports made up around 32% of total imports, whilst the remaining 16% includes supply from North Africa and Azerbaijan.

European gas balance & imports

2021 European gas balance (bcm)



European gas imports (%)



Source: Rystad, IEA, Eurostat, GIE, ING Research

Limited growth in domestic production

There is the potential to increase domestic European output over the course of the year. Between Norway, the UK and the Netherlands, we assume that output could be increased by 14bcm. There are some new gas fields in the North Sea ramping up, whilst the Netherlands will potentially increase its production cap for the Groningen gas field. This is probably where the most uncertainty lies when it comes to domestic production.

Groningen could theoretically scale up production by more meaningful volumes. However, politically this will be a difficult decision, given that the production cap has been gradually reduced due to seismic activity in the region and in fact, the field was set to enter a stand-by position from next year. Although clearly there is the potential for this to be delayed. The Dutch government has indicated that it will give more clarity on Groningen production levels before 1st April.

Marginal increases in non-Russian pipeline flows to Europe

Looking outside of Europe there is limited room for an increase in pipeline flows. We assume potential increases of around 2bcm from both Algeria and Azerbaijan. Although the increase in supply from Algeria is questionable due to growing domestic demand.

LNG will need to do most the work

It is clear that marginal increases in domestic production and limited increases in pipeline imports will fall well short of making up for Russian gas flows. Therefore, Europe will rely heavily on the LNG market to try to reduce a potential shortfall from a halt in Russian gas flows.

At first glance, there does appear to be a fair amount of spare LNG capacity globally. We estimate that spare capacity sits at around 125bcm and this includes export terminals which are set to ramp up over the course of this year. However, it is safe to assume that not all this spare capacity is available. Firstly, in the current price environment, if capacity were available operators would certainly be maxing out. This suggests that some of these countries which are sitting on spare export capacity are either facing disruptions or there are issues with the availability of feed gas. Therefore, actual spare capacity is likely more limited than this number suggests.

We can't assume that all necessary LNG supply can be diverted to Europe to meet any shortfall

Furthermore, we cannot just assume that all necessary LNG supply can be diverted to Europe to meet any shortfall. Ignoring import capacity constraints for now, the European market will need to compete aggressively with Asia for LNG supply. This competition will be even more aggressive given the limited spare capacity in the market.

Russia is also a large LNG supplier to Europe, making up around 20% of total LNG imports. It is the third-largest supplier to Europe after the US and Qatar. If Russian pipeline flows were to be halted, it is likely that Russian LNG would also not make its way to Europe.

In addition, around 70% of LNG trade is done under long term contracts, with a large part of these

having strict destination clauses. As a result, this does significantly reduce the amount of available LNG that could make its way into Europe. This leaves around 30% of trade that is done on spot or short-term contracts. One would expect that where there is flexibility, we are already seeing these flows directed to Europe, given the premium the market is trading to Asia. Therefore, this suggests that there is limited upside to the record LNG imports seen in January 2022 of around 12.9bcm (9.5mt) according to data from ICIS LNG Edge.

US LNG supply is key

The US has already played a key role in increasing supply to Europe in recent months. The country's LNG exports have been on the rise since the end of last year, climbing to 7.4mt (10 bcm) in January 2022. Meanwhile, the percentage of US LNG cargoes heading to Europe jumped to almost 75% in January, eating up exports that had previously been delivered to Asia. This reflects how Europe's premium gas market has attracted more flexible LNG supply.

The US is likely to continue to increase exports to Europe

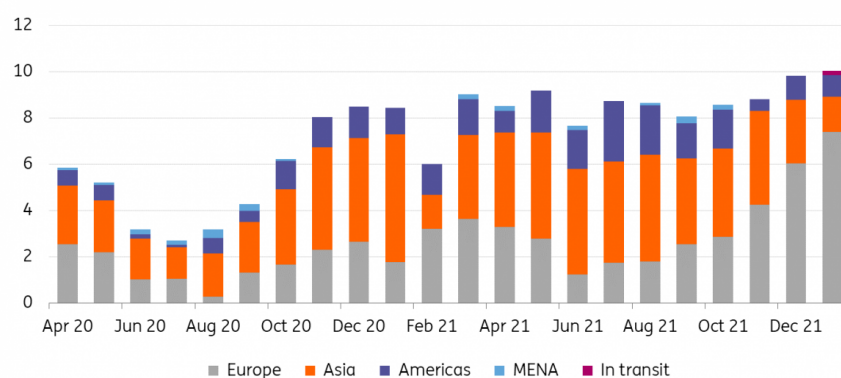
The US is likely to continue to increase exports to Europe in the current environment as new capacity ramps up. The US is on track to have the world's largest LNG capacity of 118.1 bcm by the end of 2022, as Sabine Pass Train 6 and Calcasieu Pass' 18 trains are expected to start full commercial operation this year and together add 19.4 bcm of capacity. Looking beyond 2022, another 21.2 bcm of US liquefaction capacity will come online by 2025. This will not help with the gas shortage in Europe this year but will contribute to the region's future LNG import prospects when more regasification facilities are built.

Existing US LNG facilities, despite running near capacity, can also redirect more of their LNG exports to Europe thanks to the flexible terms under US LNG contracts. The majority of these contracts feature free on board (FOB) delivery, where the buyer can in most cases decide where to ship the cargoes. This is in contrast to delivery ex-ship (DES) contracts, where a specific delivery destination port is identified.

According to Bloomberg New Energy Finance's estimates, the US will have 12.2 Mt (16.6 bcm) from FOB contracts to portfolio buyers, 7.4 Mt (10 bcm) of spot and excess supply, and 12 Mt (16.3bcm) of FOB contracts to Asian buyers between April and September—this means that roughly 65 Mt (88bcm) of US LNG supply will, in theory, be flexible to be redirected for the whole of 2022.

Such flexibility should help maintain a relatively high percentage of US LNG exports to Europe should gas prices in Europe stay favourable. But as discussed above, competition from alternative buyers could substantially cut the ultimate number of cargoes flowing to Europe. For instance, given the current energy crisis, Asian LNG buyers from countries like South Korea and Japan may be reluctant to give up their contracted excess supply. Concerns over gas supply shortfalls could also send Asia's LNG prices higher, narrowing or even eliminating the observed price difference between Asia and Europe.

US LNG exports by destination (bcm)



Source: BNEF, ING Research

European import capacity is a bigger problem

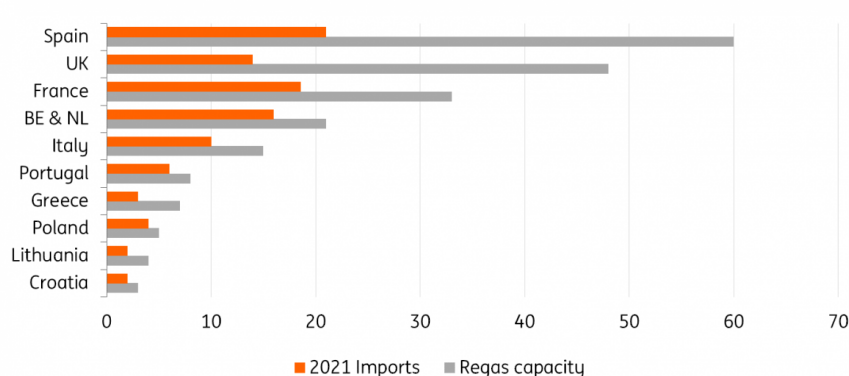
The bigger issue for Europe is the limited amount of regasification capacity. So regardless of whether there is enough export capacity, Europe will struggle to completely offset Russian gas due to capacity constraints on the import side. Annual regasification capacity in Europe stands at 204bcm (excluding Turkey). Over 2021 utilisation rates at regasification plants stood at around 47%. However, in more recent months this would have increased nearer capacity due to stronger prices in Europe leading to robust imports. Therefore, there is limited spare capacity to allow for increased imports from current levels.

In addition, the bulk of spare capacity sits in Spain, and the issue is that Spain is not well connected to pipeline infrastructure in the rest of Europe. Spain's spare capacity will, therefore, do little to help ease the shortfall elsewhere in Europe. In 2021 Spain imported around 21bcm, well below its regasification capacity of around 60bcm.

If we exclude Spain from the amount of spare regasification capacity in Europe, this leaves the region with around 68bcm of available capacity. Therefore, this suggests that under the best-case scenario Europe would be able to increase LNG imports by a similar number. However, this still falls far short of the 155bcm imports of Russian gas we saw in 2021. Also, it is worth highlighting again that Europe will need to compete aggressively for these volumes.

We will see more investment in regasification infrastructure in Europe as the region tries to diversify away from Russian gas. Germany recently announced plans to build two LNG import terminals, however, these will take some time and so will not be able to help in the event of any shortfalls in Russian pipeline flows this year.

European regasification capacity vs. 2021 imports (bcm)

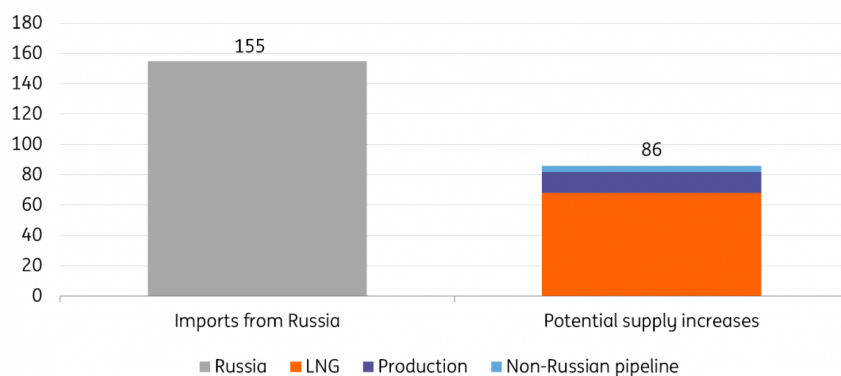


Source: GIE, Government data, Various reports, ING Research

Europe will be left short if Russian flows stop completely

While there is some flexibility in LNG supply, the key constraint for Europe at the moment is the limited amount of regasification capacity. We estimate that under a best-case scenario Europe could increase LNG imports by around 68bcm from 2021 levels. This is still far short of the 155bcm which was imported from Russia last year.

Increasing supply from elsewhere is still not enough to offset a loss in Russian gas imports (bcm)



Source: Rystad, IEA, Eurostat, GIE, ING Research

When we take into consideration domestic production increasing by 14bcm from Norway, the Netherlands and the UK, along with increased pipeline flows from non-Russian sources of 4bcm, Europe will only be able to meet around 55% of Russian pipeline flows. Therefore, we would need to see fuel switching when it comes to power generation, along with the potential for demand destruction from other users in order to ensure adequate supply.

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Is REPowerEU too focused on renewables as a way to cut out Russian gas?

The European Commission has rolled out its plan to reduce gas dependence on Russia. Renewables get too much attention considering their limited potential to replace gas for heating purposes



Reducing Europe's gas dependency on Russia has everything to do with heating demand, and far less with power demand

The European Commission's so-called REPowerEU plan aims to cut out 100 billion cubic metres (bcm) of Russian gas imports – worth roughly two-thirds of total imports from Russia – by the end of this year. From a short-term economic perspective, the Commission's emergency measures on energy prices are [the most important](#). These are the four key takeaways from an energy system perspective:

[European Commission presents plans to reduce dependence on Russian gas](#)

1 Liquefied natural gas will need to do most of the work

What the Commission has in mind is to cut out 100 bcm of Russian natural gas from its imports. The EU [imported](#) 155 bcm of natural gas from Russia in 2021 through pipelines, a level that has remained consistent in the last five years, ranging from 152 to 166 bcm.

REPowerEU focusses on replacing Russian gas with non-Russian gas supplies of 60 bcm, most of which would come from increasing liquefied natural gas (LNG) imports. Such an objective seems very challenging, given current European import capacity and the cost at which this would be done.

The plan targets another 20 bcm to come from front-loaded wind and solar renewables adoption, to replace gas use in the power sector.

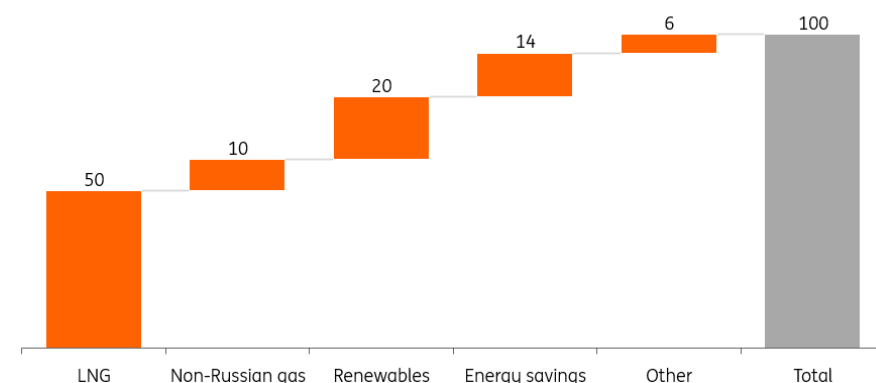
Energy savings in buildings, like turning the thermostat down, could save another 14 bcm, something the International Energy Agency also [recommended](#).

Other measures such as front-loaded biogas adoption, green hydrogen uptake, and heat pump installation could also support the transition out of Russian gas. But the potential of these is very limited in the short term.

[How Europe can cut natural gas imports from Russia significantly within a year](#)

REPowerEU proposes to reduce Russian natural gas imports by two-thirds this year (100bn cubic meter)

Alternative solutions to Russian natural gas pipeline flows, in billion cubic meter (bcm)



Source: ING Research, European Commission

The numbers show no lack of ambition, [although](#) it remains to be seen how much of the Commission’s proposal will be rubber-stamped at the two-day EU summit in Versailles this week.

2 Short term climate pain, versus long-run gain

Assuming the EU wants to almost fully reduce its Russian gas dependence ([by 80%](#)), it would mean an additional 30 bcm from the gas-to-coal switch. The plan doesn’t mention explicitly gas-to-coal switches or [carbon capture and storage \(CCS\) solutions](#) to reduce the carbon footprint of fossil fuels, but Frans Timmermans, the Commission’s vice president for the European Green Deal, [mentioned](#) a few days ago that countries could do this in line with 2030 climate goals.

[Germany](#) is already reactivating coal-fired power plants as it is reluctant to prolong its remaining nuclear reactors. This bodes badly for European greenhouse gases in the short run. The [recent](#)

[drop](#) in the EU carbon price only adds to that.

On the other hand, note that REPowerEU comes on top of climate change policies the EU is currently negotiating with the [Fit for 55 package](#), which is designed to cut emissions faster this decade. REPowerEU is a step up from what the Fit for 55 package intended and confirms that climate ambitions and energy security are not incompatible.

Full implementation of Fit for 55 would already reduce the EU's annual fossil gas consumption by 30%, equivalent to 100 bcm by 2030. REPowerEU would increase that figure up to 155 bcm by 2030.

[How governments are tempting corporates with CCS: Carbon Capture and Storage](#)

[Carbon prices in the EU crash despite rising fossil fuel prices](#)

[Just how fit is the EU's Fit for 55 climate strategy for Europe's economy?](#)

3 The current market needs mandatory filling targets for gas storage facilities

Europe's gas storage facilities play a pivotal role in providing energy security throughout the winter in which gas use is highest and highly dependent on weather conditions. Currently, after a relatively mild winter, gas reserves are filled by around 30%. Reserves stood at just 20% after the cold winter of 2018.

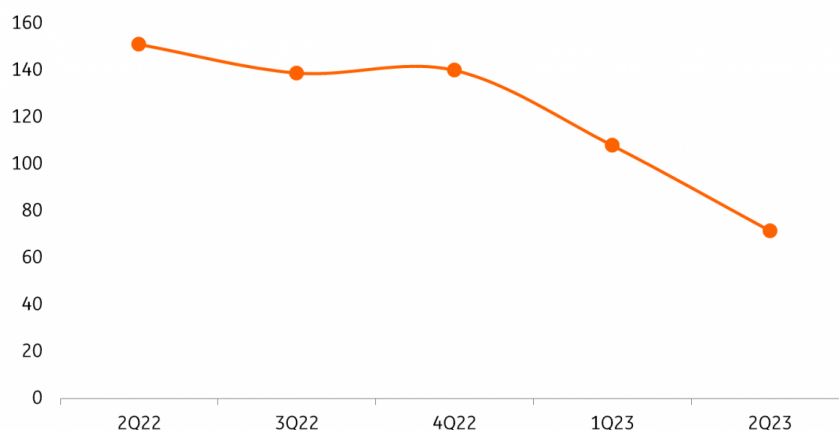
Now that the heating season is almost over, the priority is all about filling up gas storages throughout the summer to prepare for next winter. In April, the Commission wants to present legislation that requires underground gas storage capacity to be filled every year to at least 90% by 1 October. Some countries already have such legislation in place, like France, whilst others, like the Netherlands, don't.

The proposal therefore ends the dilemma for gas operators, who have to choose between filling gas reserves this summer, at a very high cost, or waiting for gas prices to fall, risking the security of supply again next winter.

The forward gas curve currently provides no economic incentive to replenish reserves as prices are expected to be higher in the spring and summer (buying season) and lower during the winter (selling season). Hence, the current market needs mandatory filling targets, although they come at high costs.

The TTF forward gas curve highlights the dilemma of gas operator

In euros/MWh



Source: ING Research, Refinitiv

4 REHeatingEU would have been a better name

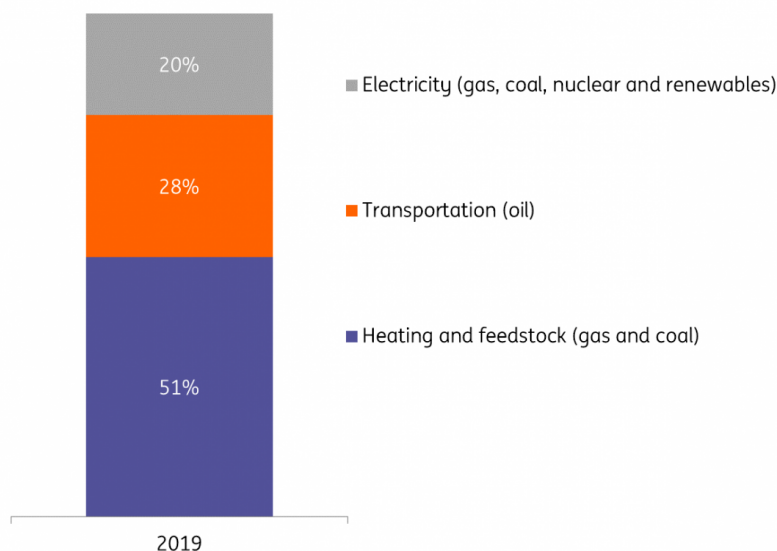
To support the communication of the EU's energy resiliency, Timmermans [suggested](#) we “dash into renewable energy at lightning speed”. That is also indicated by the name of the plan, REPowerEU, as renewables are good at producing power from solar and wind energy.

But renewables do a poor job at producing heat to keep our buildings comfortable and to run high-temperature processes in manufacturing. And that's what Europe needs half of its energy for. This heating demand is predominantly generated by gas and coal use. Only a fifth of Europe's energy stems from power generation, and there gas is only one of the many energy sources that can be used.

So, reducing Europe's gas dependency on Russia has everything to do with heating demand, and far less with power demand. While it is common practice to frame the energy transition in terms of solar and wind power, the potential to reduce Russian gas demand is limited. The focus should be firmly on gas supply and demand for heating purposes. That's why REHeatingEU would have been a better name.

Gas is mostly used for heating purposes in buildings and manufacturing processes

Total energy consumption in Europe per energy use in 2019



Source: ING Research based on International Energy Agency

Europe is still far from being self-sufficient in energy production and is still largely dependent on its imports. The Russian-Ukraine crisis has sped up the process to phase out fossil fuels and to become less dependent on Russian gas. But replacing two-thirds of imported Russian gas in fewer than 10 months is not only a technical challenge. It will also result in a substantial cost for all energy consumers. The success of the plan will ultimately depend on two factors: on the one hand, the political will to take investment and regulatory decisions in a very short amount of time, and on the other, the ability of energy consumers to pay their energy bills and moderate their gas consumption.

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The credit reaction to the Ukraine-Russia crisis

The Russian invasion of Ukraine is severely impacting many markets. Here, we look at the cross-credit reaction to the crisis, we identify the implications of the conflict and what sanctions on and by Russia really mean in practice



The implications so far

Russia's invasion of Ukraine has led to severe economic sanctions and a huge reaction from the corporates working in Russia. Assets of Russia's Central Bank Reserves were frozen by the G7, the largest state-owned banks were cut off from SWIFT, and numerous individuals including some oligarchs were sanctioned by the US/UK/EU and other countries. Around 200 commercial companies are going to suspend, divest or cut off any ties with Russia. The Russian response to the West's sanctions was to impose capital controls that hit external debt payments.

Last Saturday, President Putin allowed Russian borrowers to repay external debt only in ruble and only to investors in jurisdictions that have not implemented sanctions on Russia. Payments to other investors will be accumulated in the special 'S-accounts' but will not be available. The market started talking about technical default, indicative pricing of bonds remained at 20-40 cents per dollar, while Russia's Credit Default Swaps (CDS) rocketed to near 3,000bp vs. 125bp at the beginning of 2022.

Rating agencies put Russia's sovereign rating at pre-default level. Moody's cut Russia's rating to 'Ca' from 'B3'. S&P assigned "CCC-.

Performance before invasion to now

Basis points

	11th Feb	Current	Difference
EUR 10yr Swap rate	0.9	0.8	0.0
EM USD Corp Quasi-Sovereign	267	373	106
Emerging Markets Sovereign	344	483	139
EUR IG Corp	57	79	22
EUR IG Fin	65	98	33
USD IG Corp	143	175	32
USD IG Fin	119	154	35
EUR HY	395	496	101
USD HY	386	425	39
EUR IG Energy	84	149	65
USD HY Energy	388	381	-7
GAZPROM 5yr	318	3,136	2,818

Source: ICE, Refinitiv, ING

Russian exclusion from indices

Among the 'great exodus' of commercial business from Russia, Russian issuers lost their presence in global indices as securities trading has been suspended since 25 February on the Moscow Exchange. Future payments on eurobonds are in question. Key index providers called the Russian segment 'currently uninvestable' and announced plans to exclude Russia from indices: S&P, MSCI and FTSE for stock indices, and JPM and Bloomberg will exclude Russia from bond indices.

According to the Bloomberg Barclays EM Corp Quasi-Sov index, there were 51 Russian corporates and quasi-sovereign bonds included in the index as of 18 February 2022 whose value totalled US\$41bn (3.15% of the index). The total market value of Russian index members plunged to \$12bn as of 7 March (0.90%) vs. \$44.8bn and 3.2% of the market share at the end of 2021.

Liquidity is virtually non-existent in Russian bonds

Russia's sovereign eurobonds' weight in the Bloomberg Emerging Markets Sovereign USD bonds index is estimated at \$38.5bn (or 3.6% of the index) as of the end of 2021. This figure eased to \$33.5bn (3.33%) as of 18 February and plunged to \$6.3bn as of 7 March.

The consequences of this are not just regular exclusion and rebalancing of the index portfolios, but since liquidity is virtually non-existent in Russian bonds there is hardly any possibility to wind down positions in Russian risk assets. In the case of default, or series of defaults over time, investors will need to recognise a loss in the P&L. We would expect key markets in Central and Eastern Europe, the Middle East and Africa regions: MENA countries, South Africa and India, and the Philippines to potentially benefit from this trend.

Technical default on external debt

There is a high probability that investors in various locations will not receive debt

payments/coupons which could be considered as a default.

Starting from Saturday 5 March, FX debt service will be made only in rubles and only to those investors who are located in jurisdictions which have not implemented sanctions, according to Putin's decree ([link](#)) and new clarification made by the Central Bank of Russia ([link](#)). For some investors in countries that have yet to impose sanctions, notably in Asia and the Middle East, along with domestic investors, payments will be allocated in rubles. There will be special payment 'allocation' to particular 'S-accounts' for investors in locations that have imposed sanctions.

We expect there will be numerous cases of investors not receiving any payments on their Russian risk assets

The Russian government has made a list of unfriendly countries, which includes all EU members, the US, Canada, South Korea, Australia, the United Kingdom, Monaco, New Zealand, Norway, Switzerland, Japan, and others. We expect there will be numerous cases of investors not receiving any payments on their Russian risk assets. So, this will mean technical default which may turn to real default and legal actions after the grace period.

Russian issuers have around US\$115bn of external debt outstanding. The total amount of redemptions reached around \$20bn in 2022 including \$2bn of sovereign, \$5.5bn of banks debt and \$11.8bn of non-financial debt. The total default amount could be potentially higher as default in one instrument could trigger cross-default in another. However, we assume that some Russian corporates may start negotiations with investors regarding recognition of these special 'S-accounts'. All in all, the situation is changing so quickly that the willingness and ability to pay will depend on political decisions.

What else could happen theoretically?

The G7 and its allies will continue to impose further sanctions on Russia. Among the most often articulated and significant actions by both sides are:

- The Russian energy sector could face potential embargo sanctions by the US/EU and other countries. The ban on imports could be imposed on selected companies in order to smooth market stress.
- Russia may end its oil and gas exports although a wholesale stoppage is unlikely. Russia may shut down Nord Stream I in retaliation for the shelving of Nord Stream II, Russia's Minister of Energy has commented.
- Russia may shut down the export of base metals (aluminium, nickel, and/or other rare metals like titanium) or impose restrictions on fertiliser exports.
- The nationalisation of aeroplanes could be revoked due to discontinued lease contracts.
- New Russian banks might be cut off from SWIFT (the EU's proposal), or all Russian banks might be cut off from SWIFT (the UK's proposal).
- The list of sanctioned oligarchs will be extended, triggering sanctions against particular companies.

Direct impact is limited for high yield companies but watch for secondary effects

We believe the direct business impact from the Russian invasion of Ukraine appears fairly limited for the majority of the European high yield issuers, with the exception of Russian and Ukrainian corporates and other relatively few names with more material operations in the two countries, such as Renault and Oriflame. However, we feel that second-degree impact is more material, of which the main transmission mechanism is commodity price inflation, from energy to agricultural commodities to metals. Furthermore, there may be some additional, less obvious, supply chain impacts such as those highlighted by Moody's with regards to the Automotive sector (in relation to wiring harnesses manufactured in Ukraine for the European car manufacturing facilities).

While cost inflation may impact some sectors and sub-sectors, such as Transportation, Basic Industries, Packaging, Food Manufacturing, more than others, there is also the varying extent to which businesses can pass those cost increases to the final consumers, which needs to be taken into account. However, on balance, we believe that the overall impact will be felt to a varying degree across the board.

Do not expect a large increase in European speculative grade default rates

In spite of the adverse implications we have highlighted here, we do not anticipate a near-term material increase in default rates in the European high yield market (at least, outside of the emerging market issuer perimeter). We believe that liquidity continues to be sufficient for the near-term but default risks will rise as a result, and default rates may increase in the medium term, notably from 2023 onwards.

EUR investment grade credit widening, other factors will regain control

EUR investment-grade spreads are certainly seeing softness on the back of the Russia-Ukraine news. Spreads were already widening on the back of the likelihood of an earlier taper but then we saw yet more widening and volatility on the back of the invasion. Some sectors, such as oil & gas, utilities and industrials, are under more pressure. The telecom sector generally has little exposure to Russia and we have seen slightly firmer spread developments here.

Corporates with more exposure to Russia are naturally underperforming and will continue to do so as the market looks for true credit metrics. As many corporates announce a withdrawal from the Russian market, we are seeing the impact on earnings and potential write-downs, particularly on top of increased energy prices, associated inflation and supply chain issues. Environmental, Social, and Governance (ESG) scrutiny is another phenomenon to contend with as the social angle of ESG has become a reason to shy away from Russian business.

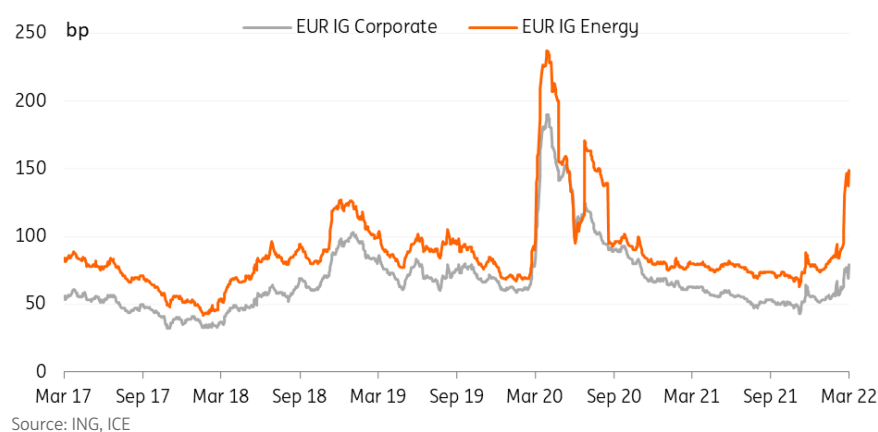
Credit curves have been flattening to crisis levels

Furthermore, shorter-dated bonds have been underperforming thus credit curves have been flattening. This has particularly been seen in the energy sector and can be considered a jump to default. Some names have even seen an inverted curve: Wintershall, Gazprom and EP.

Indeed there has been spread widening, but this has been rather underwhelming compared to the widening seen during the Covid-19 crisis. Technical factors will remain strong this year for EUR investment-grade credit, namely the drop in net supply and demand from the European Central Bank's bond-purchasing programme.

EUR investment grade corporate credit spreads widen

Energy underperforms

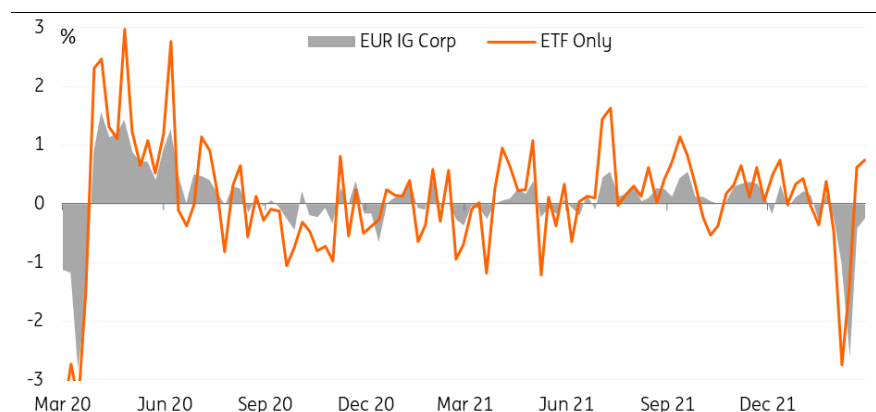


Excess overselling of ETFs is a risk, but demand remains

EUR corporate mutual fund outflows are persisting, with sizeable amounts of consecutive outflows in the past five weeks totalling 4.5% of assets under management (AuM) for the EUR investment-grade corporate market, according to EPFR Global. Exchange-traded funds (ETFs) have actually seen inflows over the past two weeks amounting to 1.4% of AuM. Although on a five-week basis, outflows still total a sum of 3.2% of AuM.

This is good news as massive outflows can create an imbalance between illiquid cash bonds and ETF prices. Excess overselling of ETFs is a risk for credit, such that a negative spiral occurs when the illiquid cash bond market cannot keep pace with the more liquid ETF market. However, ETFs are not currently seeing excess selling as flows between buyers and sellers are roughly matched.

ETF flows turn positive despite overall mutual funds still outflowing



Energy flows from Russia to Europe at stake

The response of European governments and corporates impact many sectors, not least the energy sector. Completed in September 2021, the German regulator has put Nordstream 2's operating licence on hold. The natural gas pipeline, 1,200km long, aims to transport natural gas from the Russian coast near St Petersburg to Lubmin in Germany. With the same capacity as Nordstream 1, the project is estimated to have cost €9.5bn.

While Gazprom, the sole owner of the pipeline, brought 50% of the financing, the rest was provided in the form of loans by five European energy companies: Engie, OMV, Shell, Uniper and Wintershall. Not using the pipeline would mean substantial write-offs for its owners and for each of the five European companies, with an almost €1bn loss. The European Union has not agreed on completely stopping Russian natural gas from flowing into Europe but pressure exists from certain European countries to fully ban gas exchanges from the country. Europe consumes 40% of its natural gas from Russia and any decision to close Nordstream 1 would financially impact Russia as well as a number of European utilities obliged to find gas from other parts of the world at markedly high market prices.

Oil and gas majors already announced measures

With direct operations in Russia, some European oil and gas majors also announced the intention to limit investments or fully withdraw from the country. BP Plc plans to sell its 19.75% in Rosneft. BP's presence in Russia accounts for 35% of the company's oil and gas reserves and Rosneft paid €600m in dividends to BP in 2021. The British energy company estimates that the write-downs of the assets could amount to up to €25bn.

Shell has also announced a full exit. The group has a more moderate exposure to Russia with about USD\$3bn of assets in joint ventures which is small in regards to its massive asset base. Its Russian affiliates and activities brought around €600m of adjusted earnings to the group, representing 4% of total earnings.

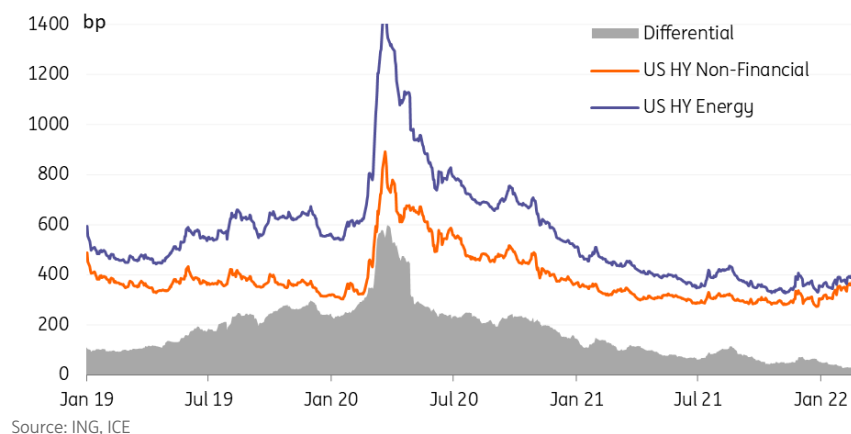
As far as TotalEnergies is concerned, the French energy major will stop providing capital for new projects in Russia but thus far has decided not to withdraw from the country where it has a 19.4%

interest in Novatek, including a 21.6% in the Arctic LNG 2 project and 29.7% in Yamal LNG. Russia accounts for 17% of the group's production.

USD HY Energy outperforms slightly, with little effect on US Energy corps

Energy corporations in the US are less affected by the crisis and there has been little underperformance for US dollar energy credits in both investment grade and high yield. The ICE BofA USD HY Energy index (which accounts for 14% of the overall non-financial HY index) has actually outperformed slightly, mainly on the back of the higher energy prices as most US oil names are not exposed to Russia. Since Barack Obama's days in the White House, the US has been trying to reduce reliance on the Middle East and other regions, resulting in more production from a number of domestic oil producers, notably with shale oil and gas products. Therefore, these US corps are much less affected by supply issues from Russia and are just benefitting from the rise in oil prices.

Outperformance of US HY Energy



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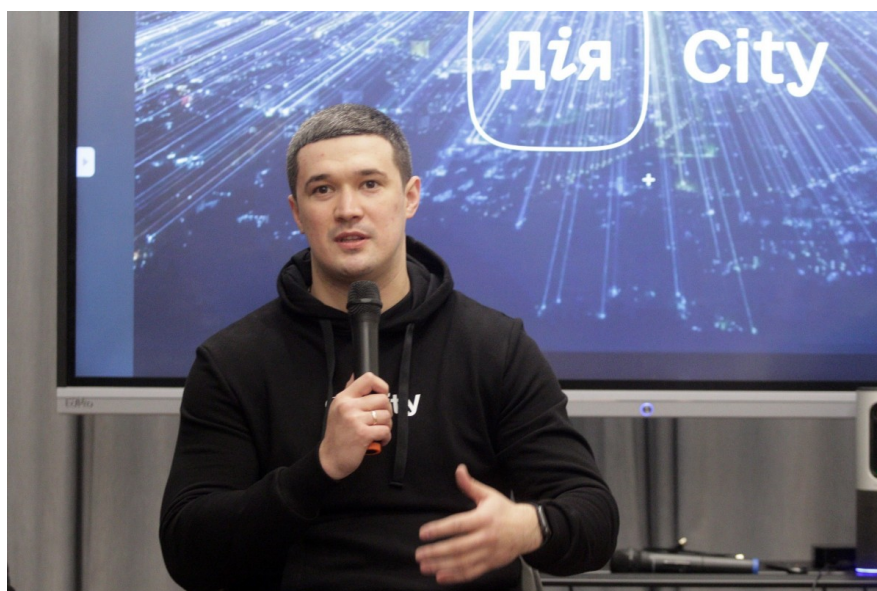
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Concerns that cryptocurrencies are a sanctions-busting tool seem exaggerated, for now

Crypto providers have to apply the global sanctions regime against Russia like any other business. We don't see cryptocurrency as a major sanction evasion route today, though this could change in the future



Ukraine's Vice President, Mykhailo Fedorov, at an IT conference in Kyiv in December

Crypto companies are already required to enforce sanctions

Over the past week, we've seen the Ukrainian Vice Prime Minister, Mykhailo Fedorov, calling for a ban on crypto trading by all Russian-held wallet addresses. ECB president Christine Lagarde has called for a quick adoption of the EU's "Market in Crypto Assets" regulatory proposal. And EU finance ministers have been discussing the risk of sanctions evasion via crypto assets. Is all the attention for crypto assets in the context of sanctions enforcement justified?

To start with, like any other legal entity, crypto-asset service providers (or CASPs, in EU parlance) are obliged to apply sanctions. They have to freeze assets and bar transactions from sanctioned people and entities. Indeed several large crypto exchanges have indicated they are doing so.

National supervisors in, for example, the EU, UK and US are tasked with monitoring compliance, and you can read an example of that [here](#).

So far, financial sanctions have been targeted. While the [breadth and depth of sanctions are far-reaching](#) (in particular the freeze of the Russian Central Bank's reserves), no blanket ban has been issued on transactions with Russia. Cross-border payments, while severely curtailed, are still allowed under Western sanctions. [Not all Russian banks](#) are excluded from Swift, the global payment messaging service, at this stage. Sanctions certainly have severe repercussions impacting all Russians. Yet the point here is: thus far, Western policymakers have made the choice for sanctions not to apply fully across the board. From this perspective, as much as we understand the Ukrainian government having called for it, denying all Russians access to crypto services would not appear to be in line with the chosen sanctions approach so far.

That said, sanctions may change and some companies in other sectors did decide to (temporarily) halt business altogether with Russia. In addition, restrictions imposed by Russian authorities to limit capital outflows are another major hurdle to cross-border transactions by both businesses and private individuals.

The traceability of crypto transactions should not be underestimated

A different worry, discussed by EU finance ministers last week, is whether cryptocurrency is a significant loophole to evade sanctions and whether additional measures would be needed. Yet EU-based crypto companies are already subject to EU sanction law. While EU crypto asset regulation would be welcome for other reasons (we'll return to the topic of the EU's Markets in Crypto Assets Regulation in the near future), we struggle to see how accelerating crypto regulation in the EU would help sanctions enforcement.

We struggle to see how accelerating crypto regulation in the EU would help sanctions enforcement

An entirely different matter is how to handle crypto service providers that are based in jurisdictions with less advanced crypto asset regulation. An inherently global digital ecosystem like crypto requires a coordinated global approach to regulation and supervision, establishing e.g. minimum standards and basic information exchange among supervisors. This was already on the [Financial Stability Board's agenda](#).

Yet even if CASPs in far-away jurisdictions turned a blind eye to sanctioned persons transacting on their platform, chances are that these transactions will, either in real-time or after the fact, be noticed. The same applies if intermediaries are avoided altogether by transacting using "self-hosted" wallets. As on-chain forensic research has become more advanced over the years, it is becoming progressively more difficult to hide on the blockchain which is keeping a perfect history of transactions for all to see. Coins can, with some effort, be traced back to the very last "satoshi", bitcoin's smallest unit. Recent reports of ransomware money being recaptured, and arrests made for crypto exchange hacks made years ago, attest to this progress. Hence we severely doubt whether cryptocurrency would allow a sanctioned person to transfer large sums of money in or

out of Russia without it being noticed and responded to.

In the end, cryptocurrency markets may be a way for Russians to evade Western sanctions and/or Russian restrictions. But there are other ways too. Financial flows can, to a limited degree, be diverted to China and other jurisdictions that have not joined Western sanctions. Cash and gold could be carried across the border physically. From this perspective, imposing a generic ban on all Russians transacting on crypto exchanges seems inconsistent with sanction policies chosen in other areas.

Yet things are moving fast. Several western companies have made announcements of business closures that appear to go beyond what those sanctions require. Western sanctions themselves and their goals may evolve over time. Meanwhile, Russian countermeasures curtail the room for cross-border transactions too. So while the role of cryptocurrency in facilitating sanction evasion may appear limited today, that could change in the future.

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What China's 'Two Sessions' mean for the climate and commodities

China's biggest political event of the year, the 'Two Sessions', highlighted the need to enhance energy security - a new priority that will come at the expense of the energy transition in the short term. But the shift to renewables remains a key goal for the long term



Energy security in the spotlight

Food and energy security featured prominently in China's 'Two Sessions' as the Russia-Ukraine war exacerbates concern over inflation and supply chain pressures.

On energy security, the government announced plans to accelerate the exploration and production of oil, gas, and minerals. In the near term, we will likely see China increasing purchases of crucial commodities from global markets in order to ensure adequate supply in the event of further disruptions. Therefore, the tighter global supply dynamics we are currently seeing, combined with potential Chinese stock building, suggest that commodity prices will remain well supported in the short term.

With energy security now a higher priority, the government has not set limits on energy consumption per GDP or coal production, signalling its intention to ensure flexibility in the event of a severe energy shortage.

Yet China is still doubling down on renewable energy. The Two Sessions highlighted the progress

that was made in reducing pollution last year, with the average concentration of fine particulate matter in big cities dropping by 9.1% while the capacity of renewable energy power generation exceeded 1 billion kilowatts.

And clean energy continues to be a key element of China's energy policies. For example, it was confirmed that its wind and solar power programme will grow to at least 450 gigawatts in size, larger than most countries' total power fleets. And the Ministry of Finance has said it will provide funding for new clean energy projects.

Clean energy continues to be a key element of China's energy policies.

Plans mentioned during the Two Sessions include the construction of large-scale wind and solar bases and improvements to the grid's ability to absorb renewable energy power generation. Green energy will be measured by total carbon emissions and intensity. The government work report also emphasised improving pollution control in important rivers, lakes and bays, and to continue to control and prevent soil pollution, as well as strengthening the treatment of solid waste and new pollutants in 2022. It also plans to replace clean coal with other clean power sources to save energy and reduce carbon emissions.

Still, China didn't provide an update on its energy and climate-related targets during the Two Sessions. Premier Li Keqiang only mentioned that China would "take orderly steps" towards its goal of realising peak emissions by 2030 and carbon neutrality by 2060, while sticking to the Action Plan for Reaching Carbon Dioxide Peak Before 2030 released last year prior to COP26. The current targets are as follows:

	2025	2030
Percentage of non-fossil fuel consumption	20%	25%
Energy consumption per unit of GDP	Reduce by 13.5%	
CO2 emissions per unit of GDP (CO2 intensity of GDP)	Reduce by 18% compared to 2020	Reduce by 65% compared to 2005
Wind and solar capacity		1,200 GW

Are the targets achievable?

According to [estimates](#) from the International Energy Agency (IEA) and Carbon Action Tracker, China is on track to meet its 2030 peak emissions target and could even achieve this goal in the mid-2020s with current policies. Carbon neutrality is also within reach. The analysis sends a positive signal but could also indicate that the country's targets are not very aggressive and that the policy being set is actually only keeping China on track to achieve the minimum targets. This means that China will likely continue to face pressure from the international community to strengthen climate goals, especially after it joined a last-minute intervention at COP26 to change the wording of the conference's declaration from phasing *out* coal to phasing it *down*.

To attain the announced pledges, significantly higher spending will be required. The IEA forecasts that China's annual investment will need to climb to \$640 billion in 2030 and \$900 billion in

2060. These investments will add around two percentage points to GDP every year, and should also lead to higher quality growth in the long term.

Climate investments will add around two percentage points to GDP every year, and should also lead to higher quality growth in the long term.

The challenge is more on green financing. As many economies have set their own CO2 emission targets, the supply of green bonds and green loans is increasing. To keep up with the genuine definition of “green”, issuers and borrowers must show that they can achieve the green targets. This should crowd out the poor quality green finance but will take time.

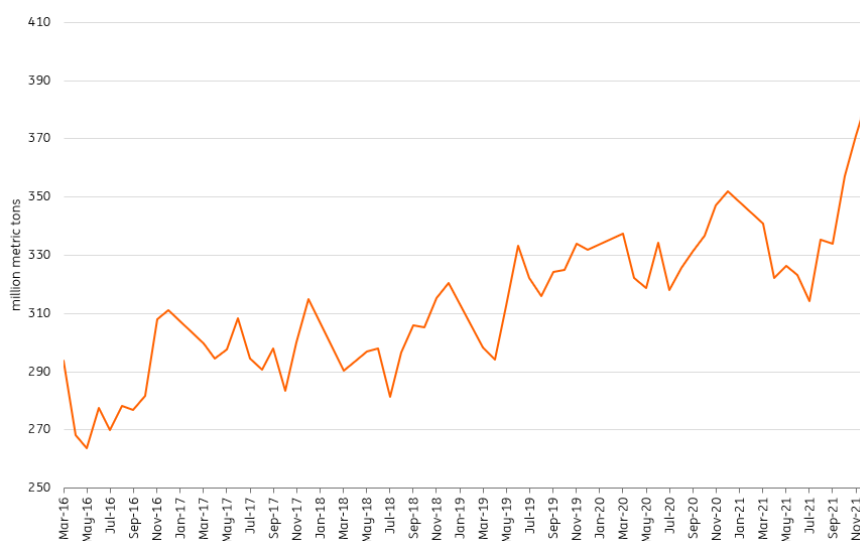
Another challenge is that a shortage of semiconductors could delay the manufacturing of wind and solar energy infrastructure and a more energy-efficient grid. We expect that these shortage issues could be resolved in 2024 when big semiconductor producers have completed their new plants.

[Good COP, Bad COP: Separating heat from light at the climate summit](#)

Still, more coal than clean energy

Last year highlighted the difficulties in managing the pace of the energy transition. This is evident with the ongoing energy crisis we are seeing in Europe, while China had its own issues with energy supply last year. The Chinese government had to take quick action to boost domestic coal output in order to end an energy crisis. In 2021, domestic coal output in China hit a record 4.07b tonnes, up almost 17% year-on-year.

China's coal production



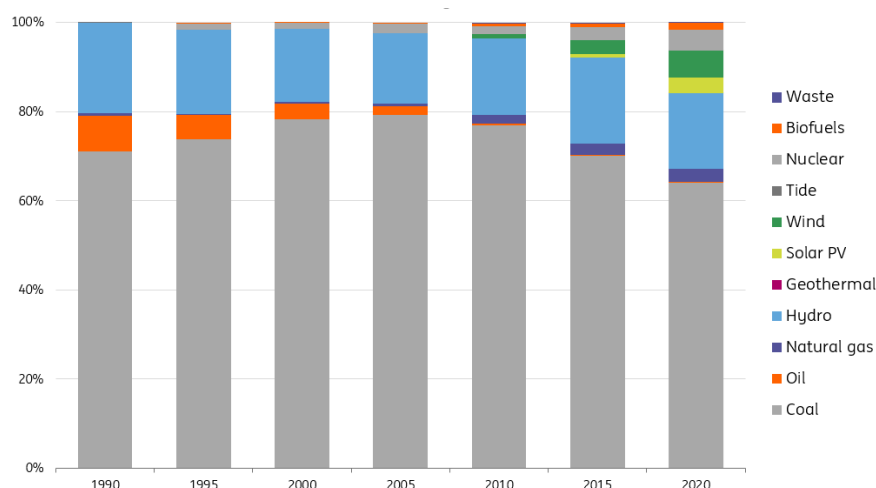
Source: Bloomberg New Energy Finance, China National Bureau of Statistics

Given the concerns over energy supply this year and the resulting strength in global energy prices, we are likely to continue to see coal output growing this year. China's NDRC has already said that it will boost coal production in 2022 as well as increase coal reserve capacity. This approach appears to confirm that China will take a more orderly approach when it comes to finding a balance between ensuring energy security and limiting carbon emissions. This could potentially also mean that natural gas will play a more important role in the transition for the power sector. Up until now, natural gas has played a fairly limited role in the power mix.

Coal looks set to remain dominant in China in the short to medium term

With no hard targets and rising energy security concerns, coal looks set to remain dominant in the country in the short to medium term. Coal accounted for more than 60% of the country's electricity generation mix in 2020, and the IEA estimates a similar contribution in 2024. Nevertheless, annual coal capacity additions are projected to decrease in the next few years, resulting in a slow greening of the power mix.

China's electricity generation by source



Source: International Energy Agency

Demand for metals from infrastructure

China is once again turning to infrastructure spending to stimulate the economy in 2022. However, the focus of investment will be narrower than in the past, with less rampant investment in speculative and unsustainable projects.

China is once again turning to infrastructure spending to stimulate the economy in 2022.

Officials have discussed plans for both old and new infrastructure projects, which should boost demand for metals to varying extents. Traditionally, zinc is largely exposed to old infrastructure though this has become less clear cut. Still, the metal's use in galvanised steel should continue to benefit from old infrastructure projects. Copper, on the other hand, is set to benefit from new infrastructure power projects such as Ultra High Voltage electric grids and the charging infrastructure for electric vehicles, with both areas continuing to see substantial growth. The UHV projects also mean more consumption of aluminium and steel. Other projects such as railway, gas and oil pipeline projects could see increasing demand for stainless steel or special alloys.

While the construction of infrastructure should boost demand for metals in China this year, overall demand growth could vary depending on the individual exposure of metals to different sectors.

Impact on commodity prices

With geopolitical events forcing China to rethink the pace of its energy transition right now, coal is likely to remain a key fuel for the foreseeable future. In addition, the potential for natural gas to play a larger role as a transitory fuel would be supportive for global gas markets. However, the bulk of electricity generation growth in the years ahead is still expected to come from renewables. The expected growth of renewables in the power mix will be supportive predominantly for metals, given that these projects are generally metal intensive. Growth in renewables will also increase the need for storage solutions and so provide a boost to demand for battery metals. This trend suggests that metal prices will remain well supported, not just by the renewables push in China, but by the global push to reduce carbon emissions. The positive demand backdrop comes at a time when the supply side is looking tight, particularly given the potential disruptions we could see in key metals from Russia in the near term.

A stronger price environment does have the potential to slow the pace of energy transition. However, higher raw material prices/scarcity of supply would likely push industries to look for alternative solutions. This is evident in the battery sector, where there is a real drive to develop battery chemistries that rely less on scarce metals, for example, using batteries that do not use cobalt and nickel. This is already evident in the Chinese electric vehicle market, where lithium-ion phosphate batteries are a popular choice. This stands in contrast to some other markets where lithium nickel manganese cobalt batteries are more heavily used. Whether strong metal prices in the future delay the energy transition will also depend on government policy. A well-functioning carbon market should ensure that we continue to see a shift away from fossil fuels towards renewables. China last year launched its carbon trading market.

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Russia-Ukraine conflict: What it means for grain and oilseed markets

The sad events we are seeing in Ukraine have brought the issue of food security to centre stage. Disruptions to supply chains along with self-sanctioning has pushed grain prices to multi-year highs. Given the importance of Russia and Ukraine to grain markets, uncertainty over the supply outlook means prices will remain elevated and volatile



The importance of Russia and Ukraine to agri markets

You do not need to look much beyond the recent price trends in grain and oilseed markets to know the importance of Russia and Ukraine to global markets. CBOT wheat has rallied by more than 70% this year, with prices breaking above US\$13/bu and trading to its highest levels since 2008. Corn has also seen strength, rallying almost 30% this year and taking it to levels last seen back in 2013. Finally, soybeans have rallied by more than 25%, breaking above US\$17/bu at one stage – levels not seen since 2012. Admittedly, the strength in soybeans would be largely due to crop downgrades in South America, but there will also be support from a tight palm oil market, as well as concerns over sunflower oil supply from Ukraine and to a lesser extent Russia.

The ongoing uncertainty suggests that grains and oilseed markets will continue to price in a significant risk premium. Lost export supply from Ukraine and Russia would tighten up global wheat and corn balances significantly, and as a result change the outlook for at least the next

season.

Russia & Ukraine- powerhouses when it comes to grains

Ukraine is a significant producer of grains. In 2021/22 it is estimated to produce 42mt of corn according to the USDA, and expectations were for exports to total 33.5mt. This would have left Ukraine making up around 17% of global export supply and taking the spot as the world’s fourth largest corn exporter.

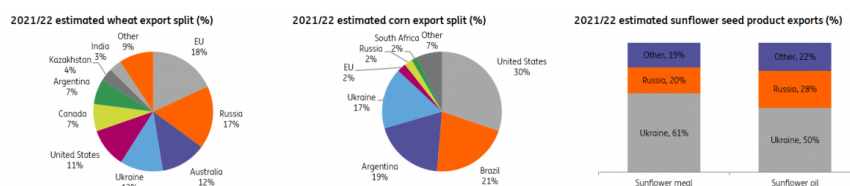
Similarly, when it comes to wheat, Ukraine is also a large producer. The USDA estimated it to produce 33mt in 2021/22, whilst exports were expected to total 24mt. This would have left Ukraine as the third largest exporter, holding a share of almost 12% in the global export market.

Moving away from grains and focusing on oilseeds, Ukraine is the largest sunflower seed producer, with the USDA estimating 2021/22 output of 17.5mt, which accounts for more than 30% of global output. It also has a large domestic crushing industry, of which sizeable volumes of both sunflower meal and oil are exported.

In 2021/22 Russia is estimated to have produced 75.5mt of wheat, although has produced in excess of 85mt in recent years. Exports are estimated to total around 35mt this season, which would leave Russia as the largest exporting country, holding almost 17% of global export supply. As for corn, Russia is a less dominant supplier. Domestic output was estimated to total around 15mt in 2021/22, whilst exports were expected to finish the season at 4.5mt.

Russia is also the second largest sunflower seed producer, making up 27% of global output. Like Ukraine, most of this will be processed domestically, and any exports are in the form of oil and meal.

Russia and Ukraine are large exporters of grain and sunflower seed products



Source: USDA, ING Research

The Ukrainian impact

The concerns over Ukraine will be largely related to domestic production as well as disruptions to export flows. Ukrainian ports are shut, and according to Ukraine's Maritime Administration will likely remain shut until the conflict ends. Although even once the conflict eases, there may still be some hesitancy by shipowners to dock at these Black Sea ports, whilst insurers may also be reluctant to provide the necessary insurance.

According to the latest data from the Ukrainian Agricultural ministry, cumulative wheat exports in the 2021/22 season stood at 17.96mt as of the 23 February. It is safe to assume that this number has not increased significantly since then. Given that exports were expected to total 24mt this

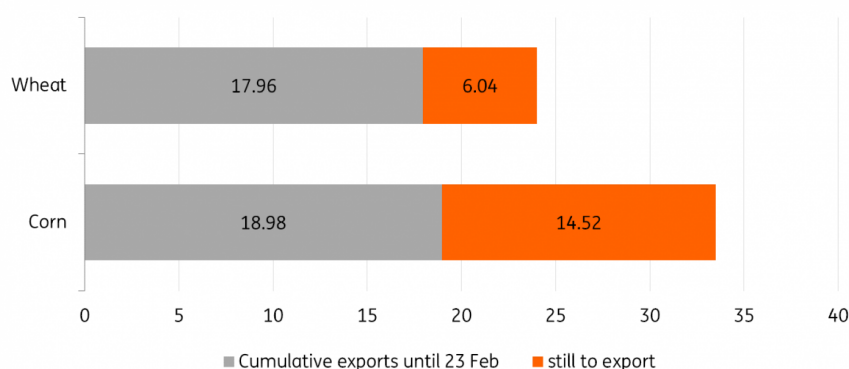
season, Ukraine still has about 25% to be exported between now and the end of June. This will be difficult given the ongoing conflict.

In addition, 2022 winter wheat is in the ground, and the ongoing conflict could very well disrupt husbandry and the application of necessary fertilizers. Therefore, assuming the conflict ends before the 2022/23 harvest starts in July, we could still see lower yields impacting output next season. In addition, if the conflict persists, there is the potential that not all area will be harvested for the upcoming season.

As for Ukrainian corn, there is still a sizeable amount of the 2021/22 crop to be exported. According to government data, Ukraine had exported 18.98mt of corn as of the 23 February. Like wheat, it is unlikely that this has increased much since then. Given that exports were expected to total 33.5mt this season, there is still about 43% to be shipped before the end of June. There is a risk that a large share of this will not make it to market.

The supply risk for corn potentially runs into the next season as well. Spring planting season is just around the corner, and if the current conflict continues into late spring, it is difficult not to see a large downward impact on corn plantings for the 2022/23 season. Sunflower seed faces the same risks as corn for the 2022/23 crop, with planting potentially delayed and significantly lower.

Ukraine still has a sizeable amount of grains from 2021/22 to export (m tonnes)



Source: Ukraine Agriculture Ministry, USDA, ING Research

The Russian impact

The issue with Russia which is concerning markets is the self-sanctioning we are seeing with Russian commodities. The risk of additional sanctions against Russia appears to have made buyers reluctant to commit to Russian supply. There is also likely an element of reputational risk at the moment for some buyers. In addition, banks are less willing to finance the trade in Russian commodities, which will further weigh on Russian supply making its way onto the global market.

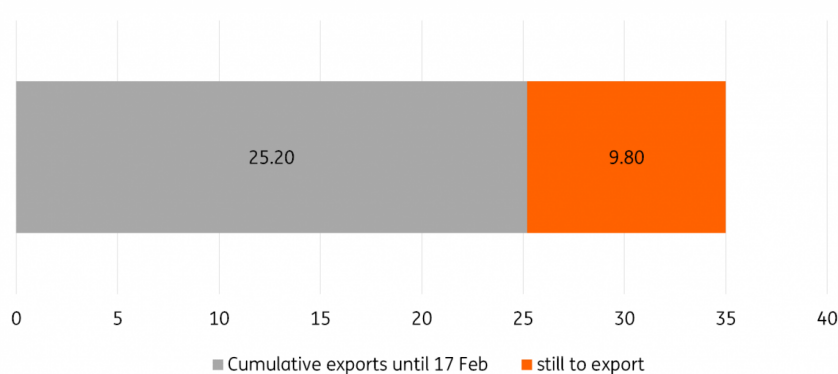
It is more difficult to assess the degree and as a result the impact of self-sanctioning. We are seeing it across commodities, where trade is taking a hit. However, when it comes to food, one does need to think about food security. So, whilst we may see a demand shock in the short term for Russian grain, it may not be sustainable, as key consuming nations will start to get increasingly worried about food inflation and the potential unrest this could cause. We just need to look back to

the Arab Spring to see the impact of rising food prices. In addition, it would be unlikely that food would be included in sanctions, if we were to see further rounds of broader sanctions.

The latest available government data shows that Russia exported 25.2mt of wheat in the 2021/22 season through until 17 February, which leaves about 28% of the crop to still export this season, assuming an export number of 35mt for the full season. Russian shipments since the war will be holding up better than Ukrainian shipments, however given the self-sanctioning the pace has likely slowed.

Looking further ahead, if Russian commodities continue to be self-sanctioned, we could start to see farmers reacting by reducing area. For winter wheat it would be too late, however for spring wheat and corn there is the potential that the ongoing uncertainty leads to reduced plantings.

Self-sanctioning of Russian commodities likely to slow pace of 2021/22 wheat exports (m tonnes)



Source: Russian Federal Service for veterinary and Phytosanitary Surveillance, USDA, ING Research

Changing trade flows and the potential for substitution

The supply disruptions have raised concerns over food security. We will likely see stronger buying from key consumers to ensure adequate supply if these disruptions persist. Already, China has ordered its appropriate agencies to ensure sufficient supply amid the current uncertainty. Key importers in the Middle East and North Africa will likely also want to ensure they are sitting on adequate inventories, wanting to avoid a repeat of the Arab Spring that we saw at the beginning of the last decade.

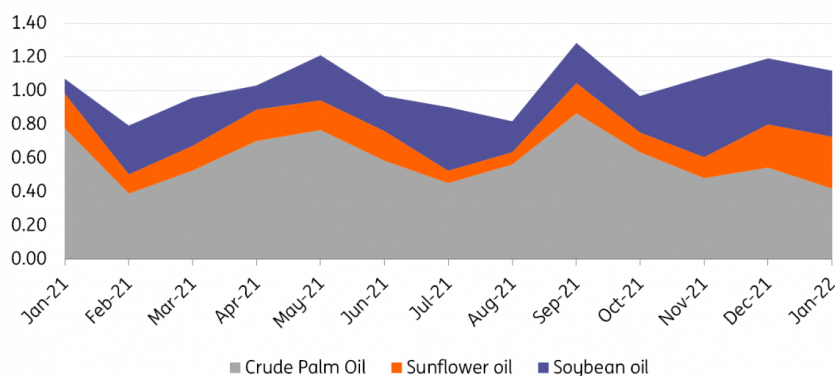
This will push buyers to look at other origins in order to ensure supply. Historically, China has been a large buyer of Ukrainian corn. China imported 8.2mt from Ukraine in 2021, which was about 30% of total Chinese imports. We are likely to see China turning increasingly to the US to make up for any shortfalls, much like we have seen in the last couple of years.

As for wheat, China has already made adjustments by lifting all restrictions on Russian wheat. Previously Russian imports were restricted due to phytosanitary concerns. China will likely be a home for a range of other Russian commodities, given that China is unlikely to follow any Western sanctions.

The vegetable oil market could potentially see increased substitution if disruptions persist. Although the issues with Ukrainian and Russian supply are coming at a time when there is already

tightness in some of the other markets including palm oil. As a result, we could see more substitution towards soybean oil, which again would be positive for soybean crushers and ultimately soybean prices. This is a trend that we have already seen recently from the world's largest vegetable oil importer, India, due to tightness in the palm oil market. This trend is likely to strengthen given the potential disruptions from Ukraine and Russia in sunflower oil now.

India vegetable oil imports could see even more of a move towards soybean oil (m tonnes)



Source: Solvent Extractors' Association of India, ING Research

Expect strong spring plantings from the US

Given that grains and soybeans are trading at multi-year highs, we would expect to see strong plantings from US farmers over the spring, leaving the potential for an increase in US spring wheat, corn and soybean area. This was already expected for all wheat and soybean area prior to the Russia-Ukraine conflict. But given latest developments we could see corn compete more aggressively for area. Although, farmers will take into consideration the higher input costs seen, particularly for fertilizer, when finalizing their planting intentions. The USDA will release its prospective planting report at the end of March which will shed more light on what farmers may do.

If we see a prolonged disruption in supply from Ukraine and Russia, increased plantings from other producing countries may help, but clearly will not offset the full potential losses from these Black Sea producers. Under such a scenario, global balances will tighten, providing support to prices. However, for now expect markets to remain volatile.

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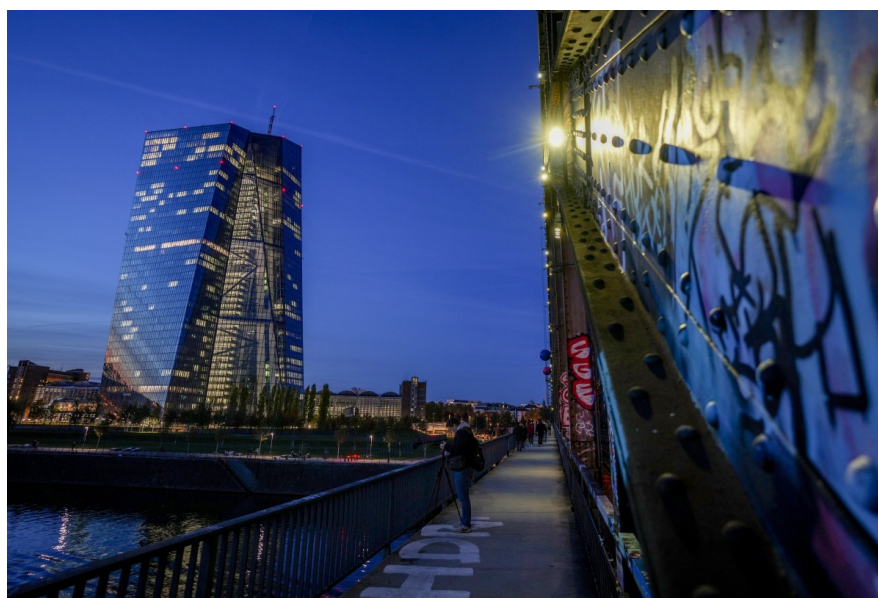
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Snap | 10 March 2022

ECB continues with normalisation, keeping maximum optionality

Moving on with tapering and keeping the door wide open for a rate hike before year-end, while ensuring maximum flexibility. Today's ECB announcements were a clear tribute to the past approach of "we never pre-commit"



Source: Shutterstock

European Central Bank, Frankfurt, Germany

The European Central Bank has put a very gradual normalisation of monetary policy in place. A normalisation which is faster than the last announcement at the December meeting but slower than some market participants had expected after the February meeting. Here is what the ECB decided today:

- Confirmation of the end of the Pandemic Emergency Purchase Programme (PEPP) by the end of March.
- Confirmation of an increase in the Asset Purchase Programme (APP) to €40bn per month in April, from €20bn currently.
- A reduction of purchases under the Asset Purchase Programme to €30bn in May and to €20bn in June.
- A de facto end of net asset purchases in the third quarter, at least "if the incoming data support the expectation that the medium-term inflation outlook will not weaken even after

- the end of our net asset purchases”.
- The downward bias to policy rates was dropped.
 - The wording that policy rates could increase “shortly after” the end of net asset purchases was replaced by “some time after”.
 - The option to extend the Targeted Long-Term Refinancing Operations (TLTROs) was kept open.

Admittedly, the end of net asset purchases in the third quarter is still somewhat conditional on economic developments and not cast in stone as the ECB also remarked that net asset purchases could still be extended or increased if inflation projections fall below 2%.

Increasing risk of stagflation but not the ECB's base case, yet

Compared with the latest adjustments to its monetary policy tools in December, this is a slightly more hawkish outcome. Back in December, the rotation from PEPP to APP would have lasted until October. Today's decision has brought forward the €20bn per month purchases by four months. But compared with the comments made at and shortly after the ECB's February meeting, today's decisions are less hawkish than some market participants had expected. The reason for the change of heart is clear: the war in Ukraine has strongly increased the risk of stagflation in the eurozone. Extremely high energy and commodity prices, potential energy supply disruptions, weaker trade, new supply chain disruptions and a high degree of uncertainty for both companies and consumers have changed the eurozone's economic prospects in only a few days.

In the ECB's own economic assessment, such a stagflation risk has already been reflected. With risks to the economic outlook now tilted to the downside and risks to the inflation outlook tilted to the upside, the ECB has joined “team stagflation”, at least for the shorter term. That said, a stagflation scenario is not yet built into the ECB staff projections' base case, with GDP growth expected to come in at 3.7% in 2022, 2.8% in 2023 and 1.6% in 2024. Inflation is expected to come in 5.1% in 2022, 2.1% in 2023 and 1.9% in 2024. To make these inflation developments less painful, ECB President Christine Lagarde also presented core inflation forecasts, coming in at 2.6%, 1.8% and 1.9% over the next three years. Surprisingly, Lagarde said that the Governing Council “sees it as increasingly likely that inflation will stabilise at its two per cent target over the medium term”.

Continued normalisation with maximum optionality

All of this means that the ECB is moving on with a very gradual normalisation of monetary policy, keeping maximum flexibility in all directions. This is definitely the best the ECB can do with the ongoing war in Ukraine and extremely high uncertainty. Looking ahead, today's decisions keep the door wide open to a first rate hike before the end of the year. There is very little to nothing the ECB can do to stop the high and possibly even accelerating inflation at the current juncture, and the prospect of stagflation will further complicate the ECB's life and any outright tightening of monetary policy. However, remember that tapering and even returning negative deposit rates back to zero in a central bank's world does not equate to tightening.

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US inflation at a 40-year high and the only way is up

Consumer price inflation hit a new 40 year high and will soon get close to 9% as businesses' surging commodity and labour costs get passed onto consumers. The Russia/Ukraine situation creates uncertainty, but the US economy has strong momentum and looks resilient. We look for six 25bp fed funds rate hikes this year



Shoppers at a mall in New Jersey

7.9% US inflation rate
February

US CPI hits 7.9%

The US consumer price index rose 0.8%MoM in February, which leaves the annual rate of inflation at 7.9%, a new 40 year high. Food rose 1%MoM and energy was up 3.5%MoM so stripping this out this gives core inflation of 0.5%MoM/6.4%YoY. All this is exactly in line with market expectations.

US annual inflation rates over the past 40 years (YoY%)



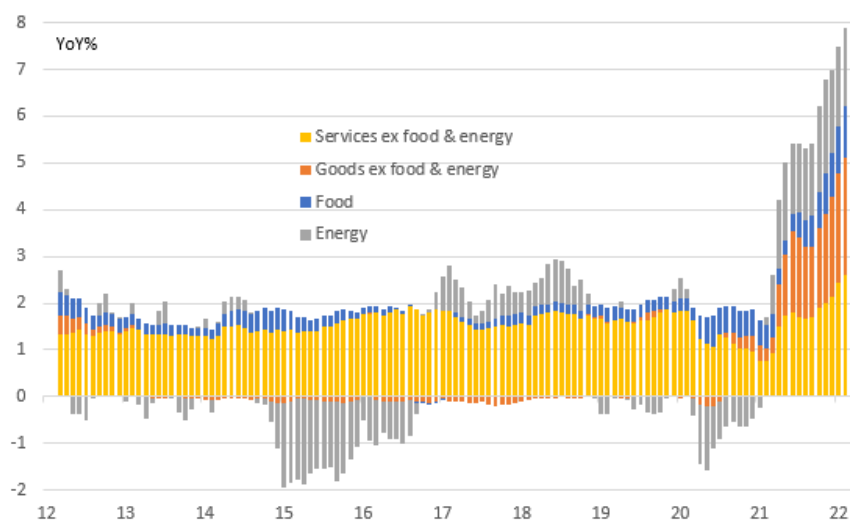
Source: Macrobond, ING

Inflation caused by strong demand and supply constraints

The details show broad-based price pressures with housing shelter costs up 0.5%MoM, recreation and clothing both up 0.7%MoM with “other goods & services” up 1.1%MoM. Once again education (0.0%MoM) and medical care (0.2%) were on the softer end of the range, but this month they were joined by new vehicle prices (+0.3%) and used vehicles (-0.2%). These transport components have been a key factor pushing annual inflation higher since the pandemic struck and the annual rates of 12.4% and 41.2% are still huge, but it could hint that some improvements in supply chains are starting to take the heat out of the market.

While supply chains strains and labour shortages are a key story behind inflation, we also have to remember that strong stimulus supported demand is also a reason. As the chart below shows, goods price inflation is incredibly strong and the fact retail sales are currently 24% higher than they were in February 2020 underscores that point.

Contributions to headline annual inflation (YoY%)

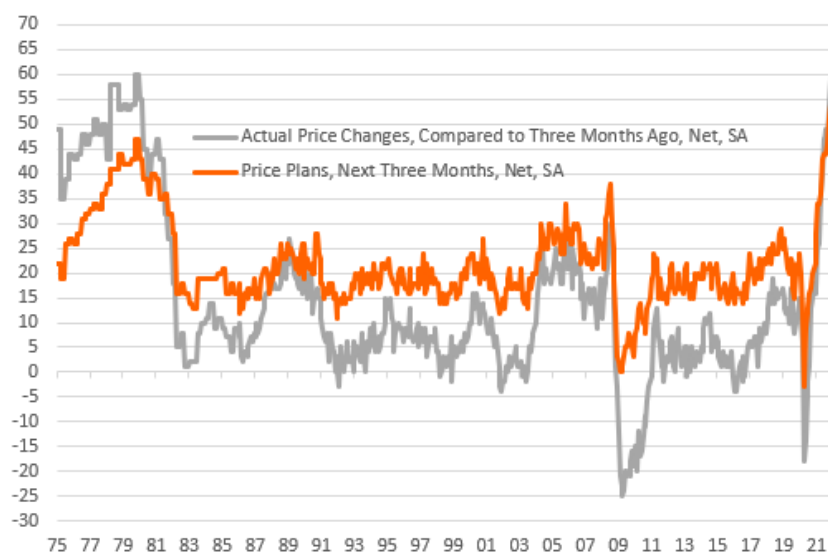


Source: Macrobond, ING

Corporate pricing power is huge

In this strong demand environment, corporate pricing power is at multi-decade highs so cost increases that businesses are experiencing can be passed onto customers. The chart below shows that the National Federation of Independent Businesses reported the broadest range of companies are raising their prices – a net 68% hiked them last month and we remain close to the record for the proportion of companies expecting to raise them further in the coming three months. Inflation is going to remain way above 2% throughout the year.

NFIB survey shows the broadest range of companies are able to raise their prices



Source: Macrobond, ING

Inflation rapidly heading towards 9%

In the near term, inflation will head even higher. The surge in gasoline prices to \$4.25/gallon from the February average of \$3.50 will be enough to push headline inflation above 8.5% in March. Additionally, the rising cost of labour and agricultural and metal commodities will inevitably translate into higher input costs for businesses. In a strong corporate pricing environment as highlighted by the NFIB chart, it will get passed onto consumers in the coming months so we cannot rule out inflation hitting 9%.

This will erode spending power and is likely to translate into weaker consumer activity than otherwise would have been the case. Nonetheless, the economy does have strong momentum and is creating jobs in significant numbers. Given there are more than 1.7 vacancies for every unemployed person in America, corporates are clearly desperate to hire and are prepared to raise wages to get workers so incomes will continue to grow.

Six rate hikes for 2022 despite Russia

In this environment, the Fed has clearly indicated they will raise the fed funds rate 25bp next week with a series of rate rises likely despite the uncertainty caused by Russia's invasion of Ukraine. We wouldn't be surprised to see maybe two FOMC members vote for 50bp. It is obviously difficult to

call how the geopolitical backdrop will evolve, but our central case is for five additional 25bp rate hikes this year, taking the fed funds range to 1.5-1.75% by year-end.

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