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Cyclical and Russian shock

Russia is the world's biggest energy exporter, and the global economy is being hit by an energy supply shock following Russia's invasion of Ukraine. Prices are behaving in ways we have not seen in decades or maybe ever. The effects are both immediate and structurally lasting. Significant losses in Russian supply could drive inventories much lower and prices much higher.

The Russian energy shock

This is hitting the market while supply is struggling to revive following the recent cyclical trough in production and capex. Some 2-3m bl/d of Russian crude and products is expected to be lost in April with hopes that losses will not be as high thereafter. However, changes to politics, sanctions and energy are structural with lasting effects.

Demand is recovering but China is an unknown

Demand is reviving as Covid-19 lockdowns ease. China is a big unknown as its zero Covid-19 tolerance so far has left its population quite unexposed to the pandemic. Recent lockdowns affecting more than 200m people in more than 30 cities in China reflect this. Demand is, in general, adjusted lower along with higher prices. Much higher prices, rising interest rates and contracting stimulus may potentially drive the global economy into recession with contracting oil demand down the road.

High risk for high prices

We have adjusted our Brent crude oil price forecasts much higher. The market is already experiencing significant losses of supply of oil products with losses of Russian crude supply to come in April. There will be lasting effects beyond the nearest quarters. We still expect prices to peak in Q2/22 but the expected surplus in H2/22 could quickly shift to deficit, yet lower inventories and even higher prices beyond Q2.

New and old oil price forecasts (USD/bl)

	New	Old	Change
Tenor			
Q1/22	98	85	+13
Q2/22	120	85	+35
Q3/22	110	75	+35
2022	106	77.5	28.5
2023	85	60	25
2024	80	60	20

Source: SEB

Brent oil price and estimates (USD/bl)

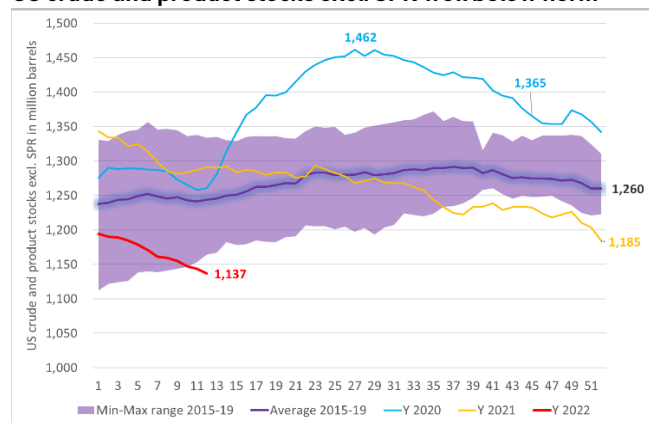


Source: SEB, Bloomberg

OECD inventories have fallen sharply and continuously since August 2020.

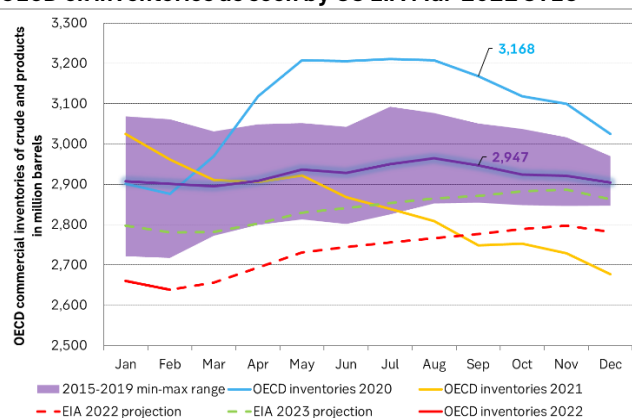
Inventories are now well below the 2015-19 average and at the lowest level since 2014. Projections by the US EIA in its March STEO report are that deficit now will turn to surplus with rising inventories going forward. The US EIA projects that the global market will run an average surplus of 0.6m bl/d from March-December 2022 and a surplus of 0.4m bl/d on average in 2023.

US crude and product stocks excl. SPR well below norm



Source: SEB, EIA, Bloomberg

OECD oil inventories as seen by US EIA Mar-2022 STEO



Source: SEB, EIA, Bloomberg

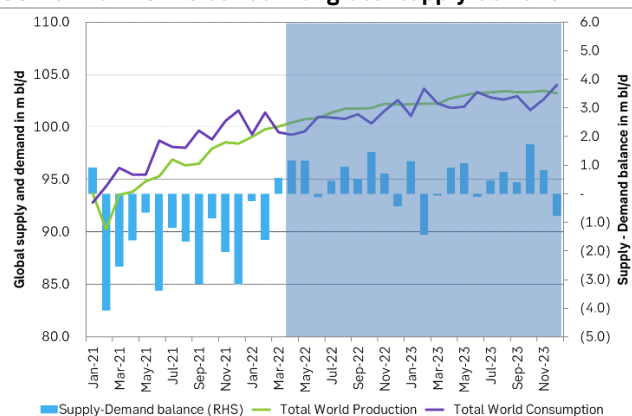
Higher inventories from here, says the US EIA. The agency argues that this is as far down as we will get in OECD commercial inventories (projected in its latest STEO report from March). The projected surplus of +0.6m bl/d for the rest of 2022 is, however, small versus the potentially huge outage and loss of supply from the world's biggest energy exporter, Russia. A turn to a running surplus and rising inventories could thus quickly be swept away and instead become a continued and significant deficit with a further sharp drawdown in OECD inventories.

OECD oil inventories as seen by US EIA in its STEO report



Source: SEB, EIA

US Mar 2022 STEO outlook for global supply-demand

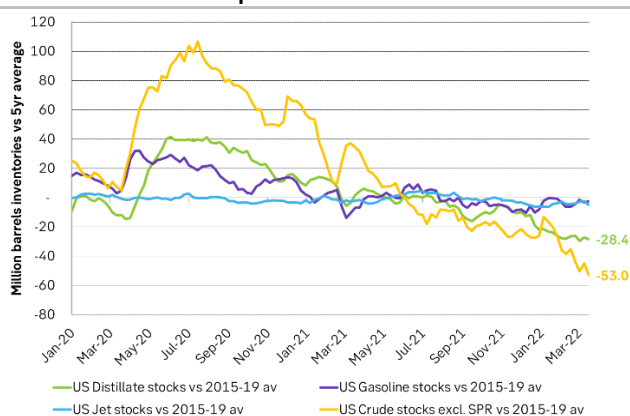


Source: SEB, Bloomberg

US and global middle distillate inventories are very low. US crude and product inventories are updated with a high frequency and are thus easy to follow. They are often a good proxy of the state of global oil inventories.

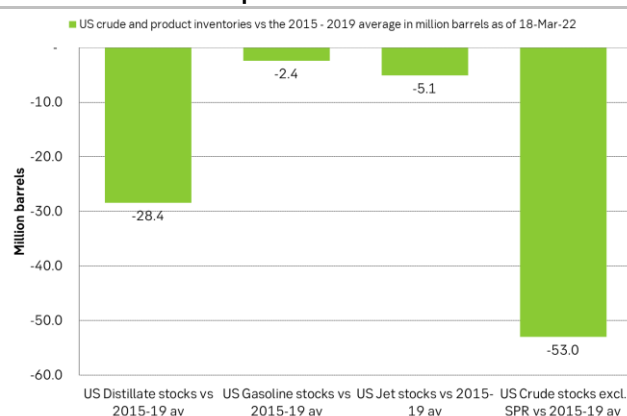
US oil inventories are now significantly below normal (2015-19) in terms of crude and are at a very low level with respect to middle distillates (diesel products). Jet fuel is a type of middle distillate product and can be added to this, thus placing mid-distillates and jet at 33.5m barrels below normal.

US crude and selected product inventories vs 2015-19



Source: SEB, Bloomberg, EIA

US crude and selected product inventories vs 2015-19

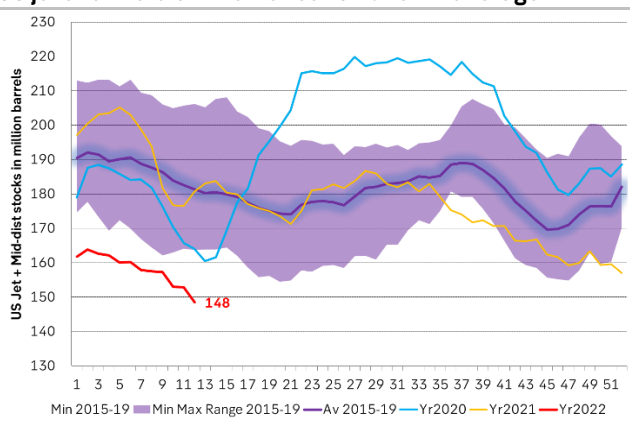


Source: SEB, Bloomberg

US gasoline inventories are fairly close to normal, while the US jet and middle distillate stocks are very low and continue to fall sharply.

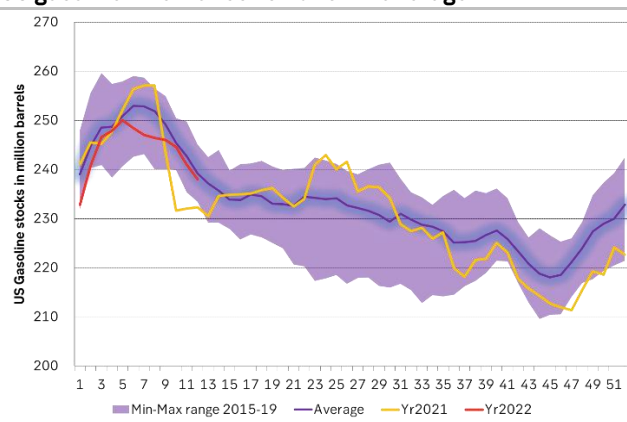
Global oil product demand was far below normal during 2020 and 2021. Demand for jet fuel was hit especially hard as aviation activity halted due to Covid-19. Overall refinery margins during these two years were poor with a huge surplus of refining capacity. A significant amount of older refining capacity has been shut down and closed for good over the past two years. As middle distillate demand now recovers along with re-openings of economies in the wake of Covid-19 lockdowns, we are suddenly in a situation where middle distillate capacity is very, very tight. The Russian/Ukrainian situation has made a problematic situation acute.

US jet and mid-dist inventories vs 2015-19 average



Source: SEB, EIA, Bloomberg

US gasoline inventories vs 2015-19 average



Source: SEB, EIA, Bloomberg

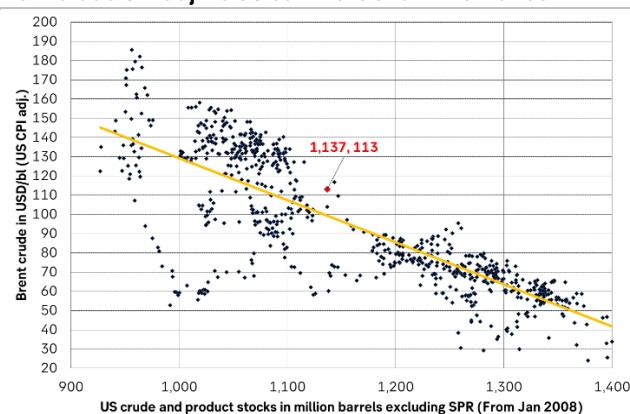
Crude oil prices have risen to the highest level since 2014. Amid the recent volatility following the invasion of Ukraine, the Brent crude oil price rose to an intraday high of USD 139.13/bl on 8 March. The current Brent price is USD 114/bl.

The USD is the yardstick by which crude oil is valued. This yardstick is now in rapid change. The US M2 money supply has increased by 50% since the start of 2019 (three years) and US inflation has jumped as a result. Using the current USD yardstick as a measure, we get higher, historical crude oil prices in today's nominal USD terms. While Brent crude moved to USD 148/bl in 2008 in money-of-the-day evaluations, that price is more like USD 190/bl when we use the current USD yardstick. The global economy managed quite well from 2011-14 with a Brent crude oil price that moved between USD 120/bl and 160/bl in today's money value. Destructive for the global economy would likely be a Brent crude oil price moving up to USD 200/bl. Brent crude will likely trade around USD 150/bl if US crude and product inventories decline by another 100m bl.

Front-month Brent crude in USD/bl. Nominal and CPI adj.

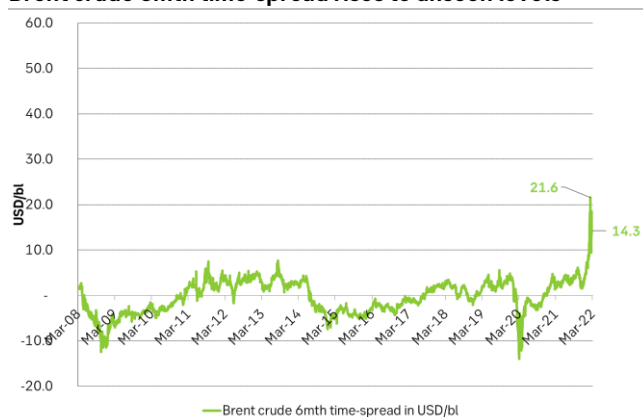


Brent crude CPI adj. vs US commercial oil inventories



Super tight and super backwardated. Tightness in oil markets is typically displayed in the backwardation of the forward crude and product curves. Following the Russian invasion of Ukraine, the six-month Brent crude oil time-spread has spiked to levels far above previous maximums in our data series. The global middle distillate market is even tighter than the crude oil market along with reviving mid-dist demand, closures of refineries and loss of Russian refined products. The six-month ARA 10ppm diesel time-spread recently rose to exceptional levels versus what we have in our data series. The world has a diesel problem, and we do not see it going away any time soon.

Brent crude 6mth time-spread rises to unseen levels

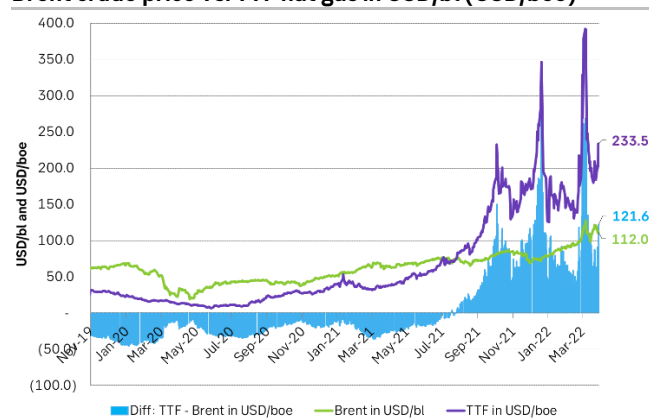


ARA 10ppm diesel 6mth time-spread to the sky

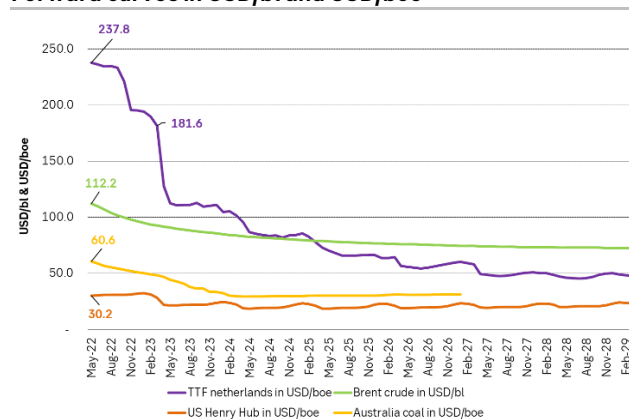


The whole energy complex is moving higher. Oil is not alone in the energy world. It exists together with natural gas, coal and all other sources of energy. Most often they move higher and lower together due to substitution and cross cost links. Oil is always the easiest to transport and use. Natural gas is today more than USD 100/boe more expensive than crude oil. This creates a natural, strong bullish pull upwards for crude oil as consumers naturally try to move away from ultra-expensive natural gas and instead consume something which is way, way cheaper: Oil.

Brent crude price vs. TTF nat gas in USD/bl (USD/boe)

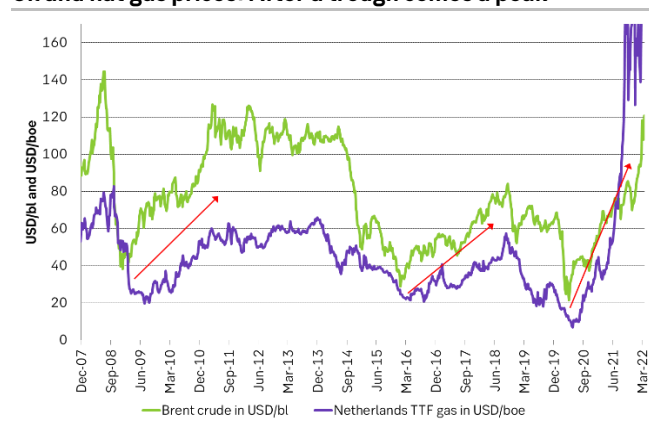


Forward curves in USD/bl and USD/boe

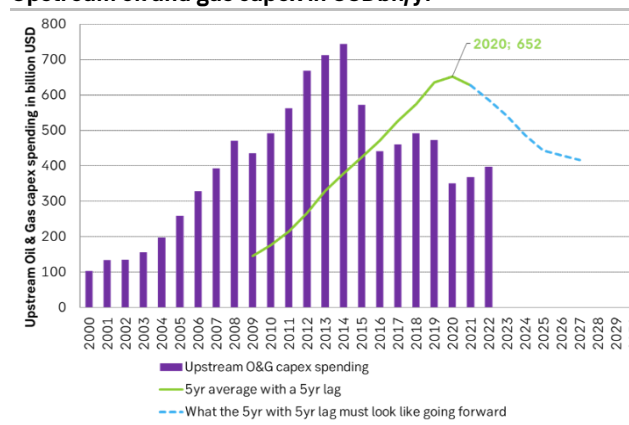


Cyclicality: From troughs to peaks. Commodities are strongly impacted by cyclicality stemming from business cycles and from commodity investment cycles. Following a trough usually comes a peak. Demand goes down, price goes down and then capex on new supply goes down. Then demand recovers, prices rise, capex then starts to pick up and eventually supply starts to expand and prices ease. We saw this in 2008/09, in early 2016 and now again following the price trough in 2020 when oil, coal and natural gas prices averaged 30%, 40% and 50% below normal for full-year 2020.

Oil and nat gas prices: After a trough comes a peak



Upstream oil and gas capex in USDbn/yr



Larger cyclicality ahead? A very big topic of discussion these days is whether we will see larger cyclicality ahead stemming from subdued capex on upstream oil and gas since the peak in 2014. Some research competitors argue strongly that this will be the case while others hold the opposite view. The invasion of Ukraine may have changed the stance in terms of price outlooks to a more bullish one for both Citi Group and Rystad Energy but that is down to a different issue than a longer-term cyclicality. Assume that on average new oil production materialises with a five-year lag following the initiation of capex. Then the rolling five-year average with a five-year lag would imply that we get weak production growth of oil in the coming five years. While widely and strongly argued, this is not a unanimously accepted truth.

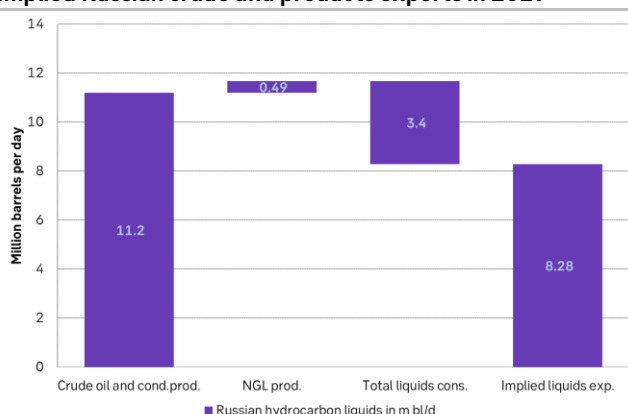
Russia is the world's biggest energy exporter, and its exports are at risk.

Russia was the biggest energy exporter in the world in 2019 according to BP yearly energy statistics. In terms of hydrocarbon liquids, it was marginally larger than Saudi Arabia in 2019 (BP implied exports). But when we add more than 4m boe/d of natural gas exports as well as coal, it is significantly larger than Saudi Arabia. Russia exported 8.3m bl/d of hydrocarbon liquids in 2019 (implied). However, following the trough in prices, production and capex in 2020/21 its net exports today are probably around 7.7m bl/d consisting of 5m bl/d of crude and 2.7m bl/d of products. Natural gas exports come on top. The lion's share of Russian energy exports normally flows to western Europe through a large web of oil and natural gas pipelines. Only a small share is piped to Asia.

Oil prices in March have moved in volatile ways we have not seen for many decades or maybe ever with ultra-large intraday moves, enormous backwardation and product to crude spreads. The reason is the importance and the magnitude of Russian energy exports, which are now at risk.

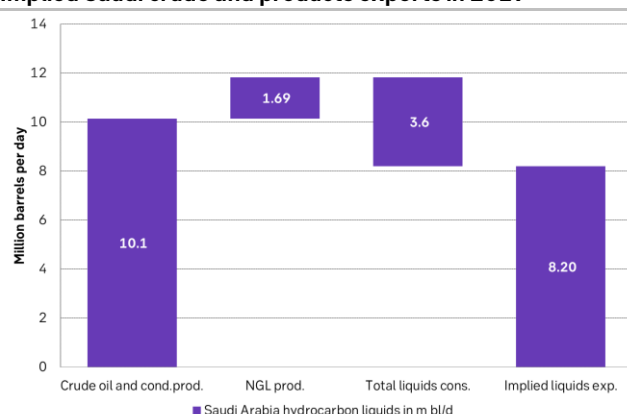
The situation is structural. Europe and the global market will lose energy supplies from Russia. Western Europe already receives 1m boe/day less of natural gas versus normal. It also normally receives a large amount of oil products from Russian refineries. Due to the ongoing "buyers strike" these oil products are no longer flowing to western Europe with the result that diesel prices have exploded to levels last seen in 2008.

Implied Russian crude and products exports in 2019



Source: SEB graph and calculations, BP yearly statistics

Implied Saudi crude and products exports in 2019



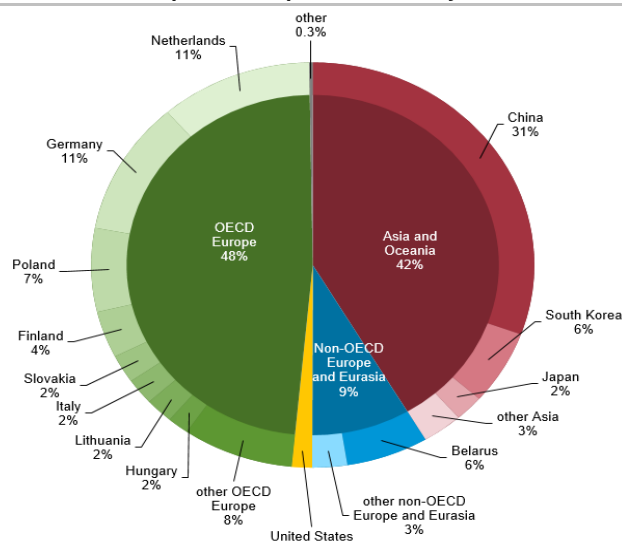
Source: SEB graph and calculations, BP yearly statistics

The issue with Russia is structural and will be a lasting problem. We do not believe the problem with Russian supply will go away any time soon. Western Europe has made its decision and is now aiming for an end to consumption of Russian energy. Russian capex on upstream oil and gas will very likely decline along with the ongoing severe sanctions from the west as well as the deep recession now hitting the Russian economy. So Russian oil and gas production one year down the road is likely going to be lower than today or at least lower than it otherwise would have been.

There will be significant reduction in offtake of natural gas, crude and oil products and not all of Russian supply will be able to flow into the global market. We already see reduced refinery run rates as well as refinery shutdowns in the southern part of Russia as a result of the current situation. Finding a buyer is not all that easy.

Not so easy to divert all Russian energy exports to Asia. OECD Europe is hugely important for Russian energy exports. Russia cannot easily re-route all of this energy to Asia, i.e. parts of Russian energy will be stranded.

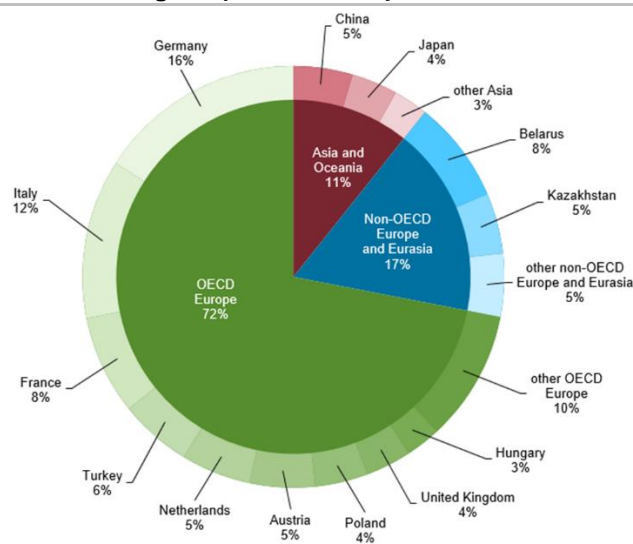
Russia crude and product exports in 2020 by destin.



Source: Graph by the U.S. Energy Information Administration, based on Russian export statistics and partner country import statistics from Global Trade Tracker

Source: EIA: <https://www.eia.gov/international/analysis/country/RUS>

Russia natural gas exports in 2020 by destination



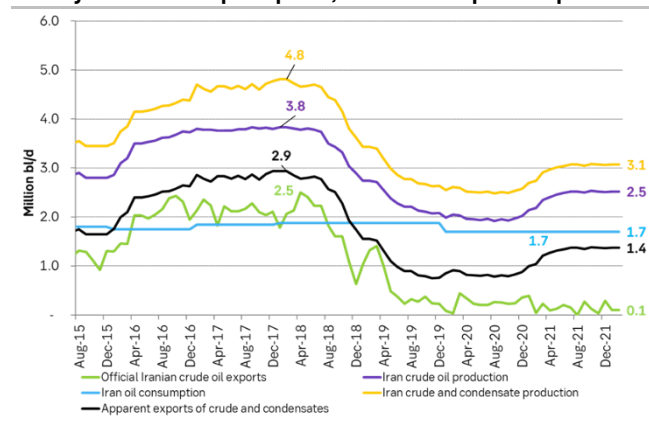
Source: Graph by the U.S. Energy Information Administration, based on Russian export statistics and partner country import statistics from Global Trade Tracker and on delivery statistics from Gazprom

Source: EIA: <https://www.eia.gov/international/analysis/country/RUS>

Can supply from Iran and Venezuela come to the rescue? “We are almost there” we hear week after week and month after month. It is very difficult to say whether the JCPOA deal will be revived or not. We are a bit sceptical and do not really dare to hope that it will succeed. The fact that it may be repealed again by the next US president makes it very difficult. We believe Iran has good reason to be concerned about this possibility. Donald Trump scrapped the JCPOA deal, which the US previously had signed under President Obama. Depending on the outcome of the next presidential election, there is a risk that it will be thrown out yet again.

The OECD countries are of course hoping that one might succeed in reviving the JCPOA deal as well as getting some resolution versus Venezuela as this could give great relief to the currently strained global oil market. However, if we did get additional volumes from Iran and Venezuela back in the market in the magnitude of maybe 2m bl/d, then altogether it would probably only open the door for explicit energy sanctions towards Russia and comparable losses in supply there. So net, net it likely would not lead to a more well supplied market.

Iran hydrocarbon liquids prod., cons. and implied exp.

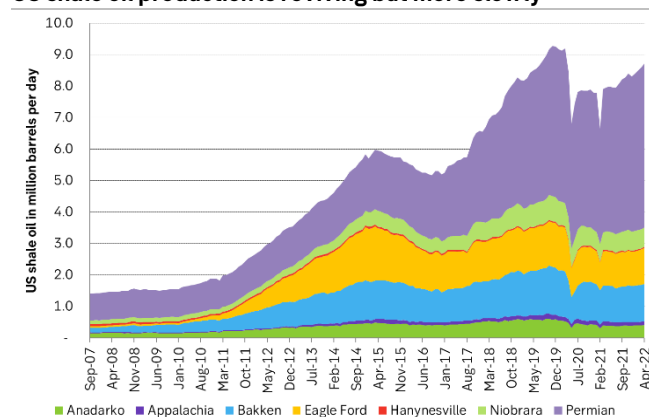


Venezuela crude oil production

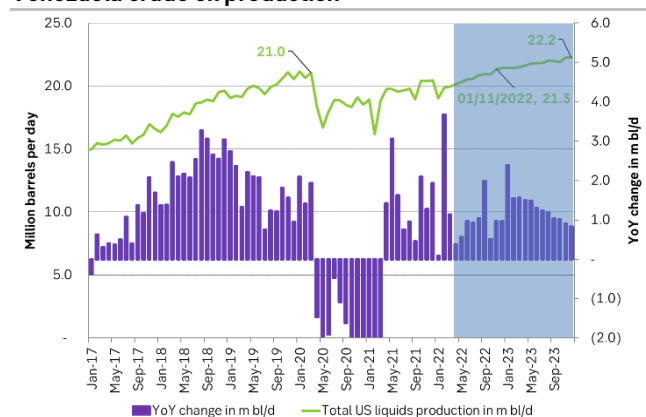


US oil is production is heading higher but at a slower pace. A lot of capital destruction over the past decade led to a widespread consolidation of the US shale oil space over the last 2-3 years. The crash in oil prices in the spring has also changed the attitude among producers. Production is growing, but capex is much more controlled and investors do not want to aim for anything more than measured growth. Even if producers wanted to, they would not be able to grow faster due to a lack of skilled labour and limited access to materials and parts due to global bottleneck issues they say. On a Q4-to-Q4 basis, the US will have a liquids growth of 0.8m b/d and 0.9m b/d YoY in 2022E and 2023E, according to estimates by the US EIA.

US shale oil production is reviving but more slowly

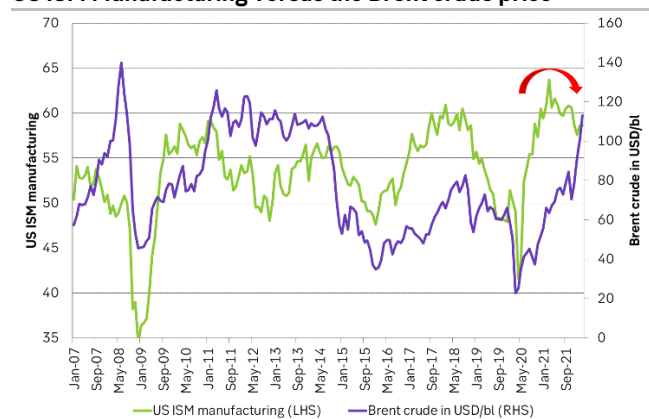


Venezuela crude oil production



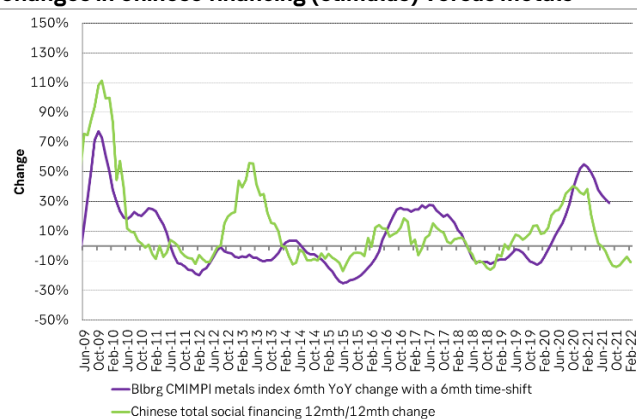
Could a cooling business cycle put an end to the crude oil price rally? The global economy has a period of massive stimulus behind it. This is now fading and contracting. Interest rates are moving higher and consumers are getting hit by rapidly rising energy bills. The Chinese housing market is cooling and is likely to do so for at least another 6 months. The US ISM manufacturing index seems to have topped out. The German forward-looking Zew index is almost as low as it was in March 2020 when Covid-19 hit the global economy.

US ISM Manufacturing versus the Brent crude price



Source: SEB, Bloomberg, EIA

Changes in Chinese financing (stimulus) versus metals



Source: SEB, Bloomberg

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