Brazil Macro | September 2022

Commodities

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INDEX

1. Overview
2. Agriculture
3. Energy
4. Metals

SUMMARY

Low inventories for most raw materials, coupled with idiosyncratic factors (e.g., adverse weather, past underinvestment, high cost of production) continue to support commodity prices. The sanctions resulting from the war in Eastern Europe add to these global supply disruptions, affecting key commodities (especially grains and energy). Global macro headwinds (higher interest rates, slowing economic activity) could hinder demand for raw materials and help balance the markets, in our view. Since our last scenario revision, we have slightly upgraded our aggregate commodity forecast for YE2022 based on supply elements (lower agricultural yield and a worsening energy crisis in Europe), but we still look for a gradual softening in global material costs in the coming years.

For **farm** commodities, hot and dry weather — from the U.S. to Europe and China — has reduced crop yields in the Northern Hemisphere. In the U.S., crop condition data and surveys have shown that the problem of heat-damaged corn fields is worse than expected. In Europe, the worst drought in 500 years has taken a toll on corn, soybean, and sunflower summer crop yields. And in China, a record-breaking heatwave prompted local authorities to take measures to ensure that crops will survive the summer. Meanwhile, Brazil is set for a record harvest this year (in cereals, vegetables, and oilseeds), which could help the global food supply. Indeed, China has been increasing its soybean imports ahead of seasonal peak demand. With stock-use ratios poised to remain at historically low levels, we continue to forecast higher grain prices for year-end. For next year, we expect prices to slowly recede, assuming no additional weather-related shocks.

SUMMARY

In **energy**, oil prices plunged both on concerns that tighter monetary policies globally will lead to a worldwide slowdown in activity (and fuel demand) and on worries about the new lockdowns that have been imposed in China, as the country sticks with its “zero COVID” policy. Nevertheless, oil stockpiles across the globe continue to dwindle, with some key economies tapping their emergency/strategic reserves (the U.S. continues to do so, having released 180 million barrels since March). Moreover, the energy crisis in Europe has worsened at the margin (though the EU met its gas storage target two months ahead of target), and OPEC+ signaled that it may cut output if oil prices slump. We believe supply constraints will start to drive price formation again in the coming months as the use of strategic U.S. reserves is interrupted, as China proceeds with its economic reopening (i.e., increasing mobility), and as the shortage of natural gas in Europe prompts a switch to oil derivatives. Our forecast for Brent is USD115/bbl for YE2022 and USD95/bbl for YE2023.

In **metals**, inventories remain worryingly low, but the entire complex took a hit from renewed Chinese lockdowns, the ongoing crisis in the construction sector in China, and a weaker global demand outlook. While lasting longer than expected, we expect the current lockdowns in China to be eased gradually. Smelters in Europe and China have been cutting production capacity owing to the financial strain caused by high energy costs (aggravated by extreme weather conditions). Looking ahead, we forecast a rebound in metals once the global economic reopening is on a better footing, as the Chinese government adds stimulus and eases COVID restrictions.

OVERVIEW

01

A Short-term Rebound, Before a Gradual Slowdown

- Since our last scenario revision, we have slightly upgraded our aggregate commodity forecast for YE2022 based on supply elements (lower agricultural yield and a worsening energy crisis in Europe), but we still look for a gradual softening in global material costs in the coming years.

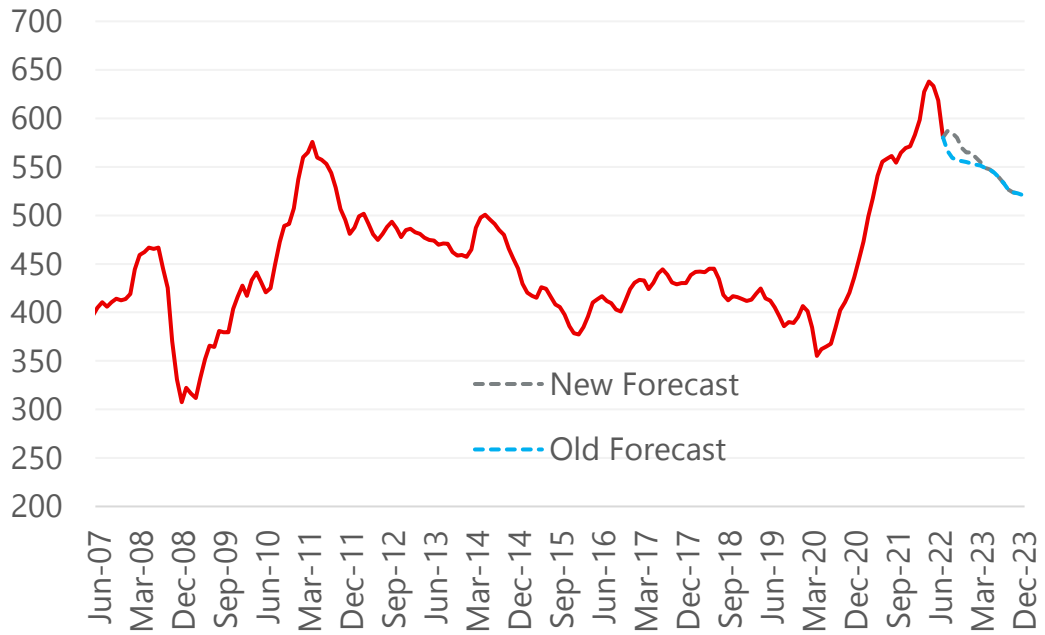
Our Forecasts for CRB Index – End of Period

YE	2019	2020	2021	2022e	2023e
CRB Food	331	355	483	570 ↑	464 →
CRB Energy	1647	1161	1521	1900 ↑	1809 →
CRB Metal	749	887	1259	1165 ↓	1107 →
CRB	401	444	571	572 ↑	521 →

YE YoY	2019	2020	2021	2022e	2023e
CRB Food	1%	7%	36%	18%	-19%
CRB Energy	2%	-30%	31%	25%	-5%
CRB Metal	-11%	18%	42%	-7%	-5%
CRB	-3%	11%	29%	0%	-9%

Sources: Bloomberg, Santander.

Our Forecasts for CRB Index – Monthly Averages



Sources: Bloomberg, Santander.

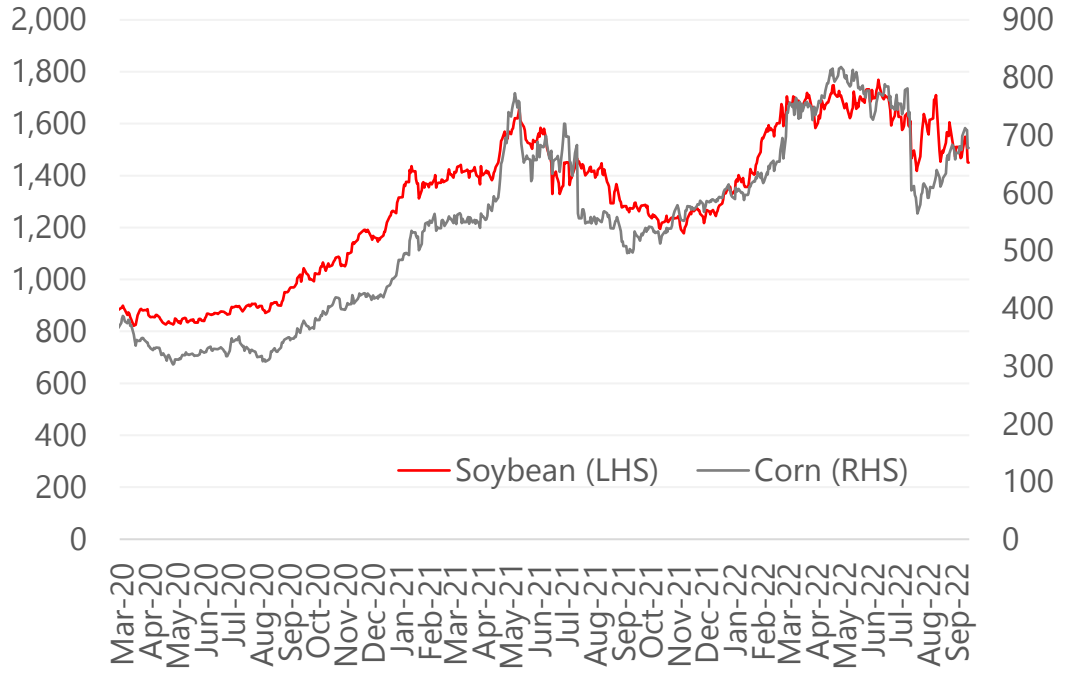
AGRICULTURE

02

Low Stocks Fueled By Weather And Geopolitical Shock

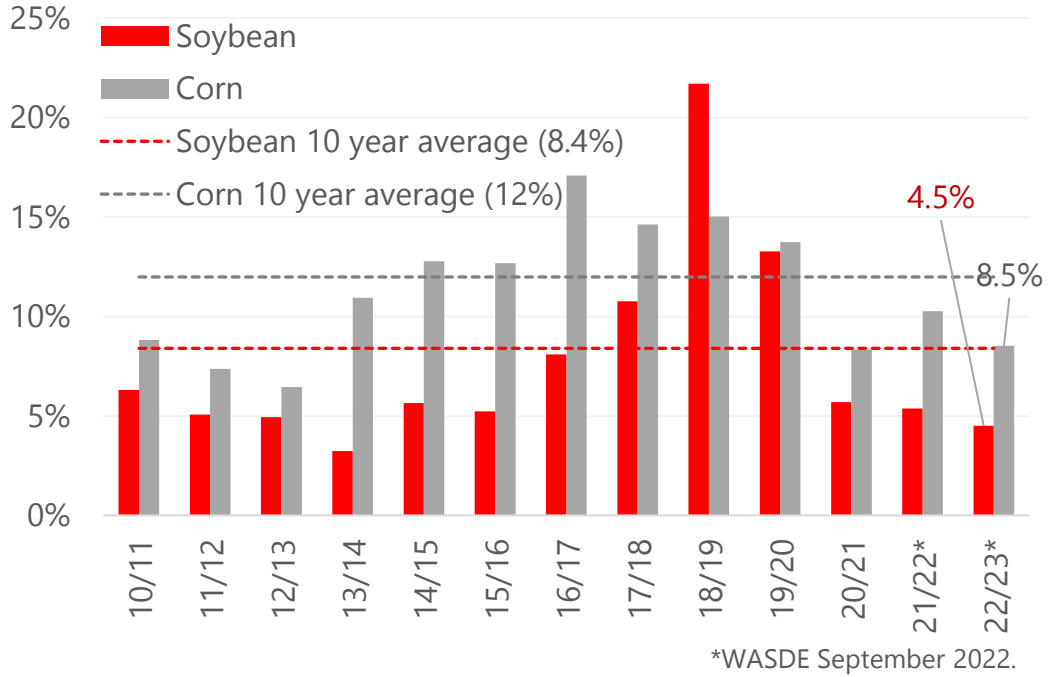
- Low stock-to-use ratio of grains in the US point to a tight market. Adverse weather (heatwave in US and in Europe) have been reducing crop yields in the north hemisphere.
- On the other hand, the global macro backdrop has been dragging commodities prices down owing to fears of a recession.

Chicago Board of Trade - Grains (USD cents)



Sources: Bloomberg, Santander.

US: Stock-to-Use Ratio in Grains (%)



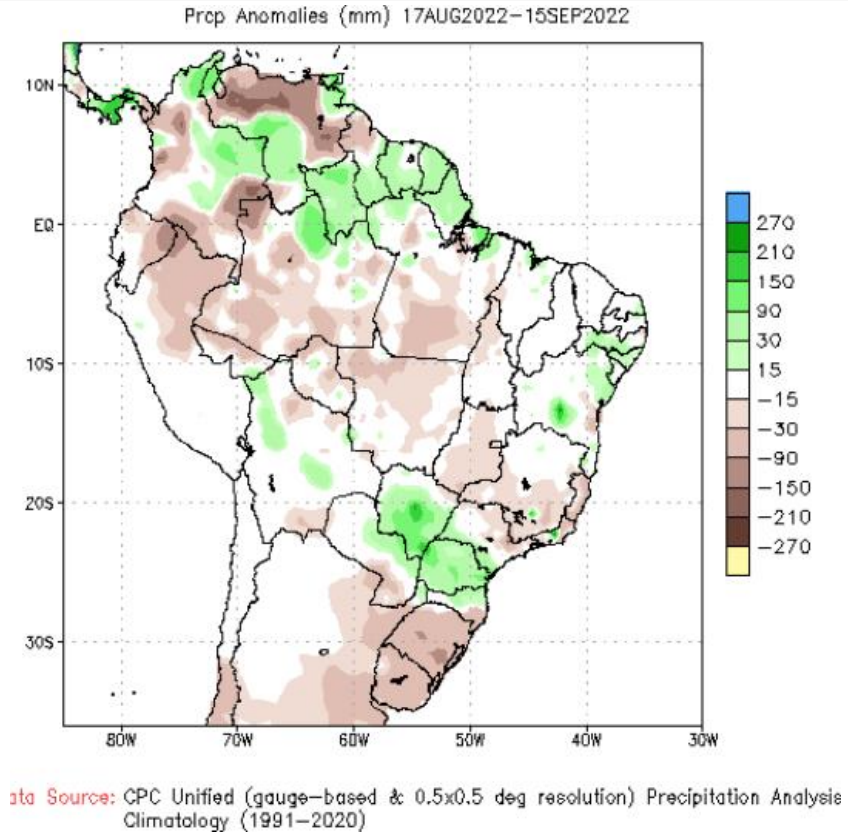
*WASDE September 2022.

Sources: USDA, Santander.

Low Stocks Fueled By Weather And Geopolitical Shock

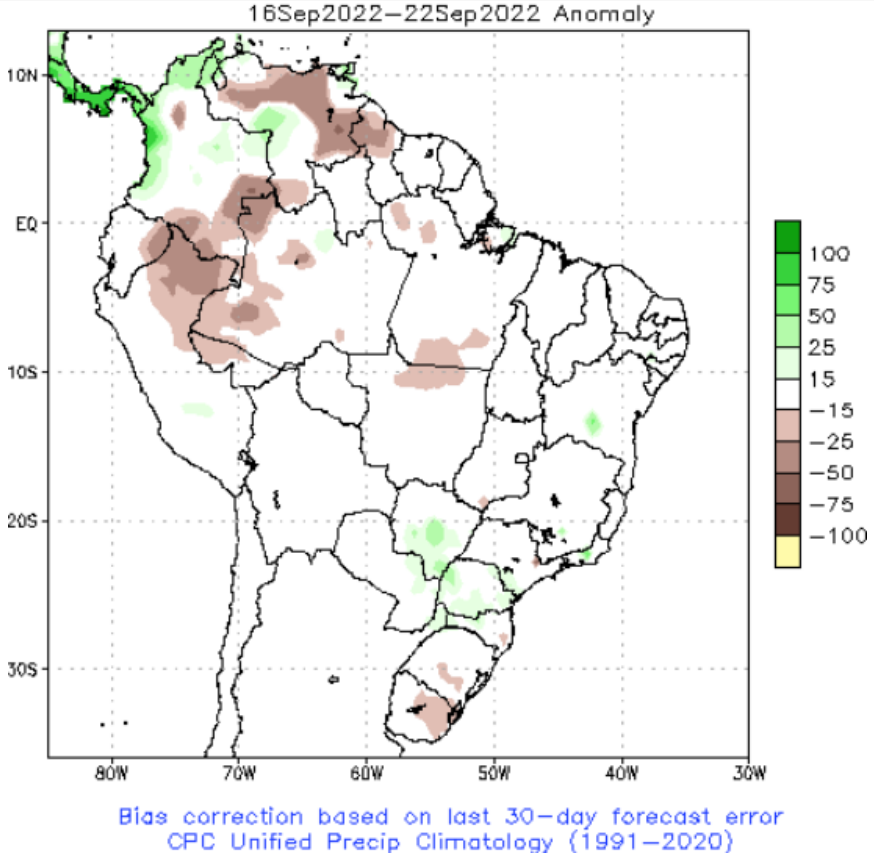
- “Safrinha” corn is set for a record output, around 87 mmt (+43% last years output), as weather has been significantly more favorable than the previous marketing year.
- Brazil has been importing a record amount of fertilizers, which will likely lead to an increase in planted area.

Precipitation (30-day anomaly)



Sources: NOAA, Santander.

GFS Precipitation Forecasts (7-day anomaly)



Sources: NOAA, Santander.

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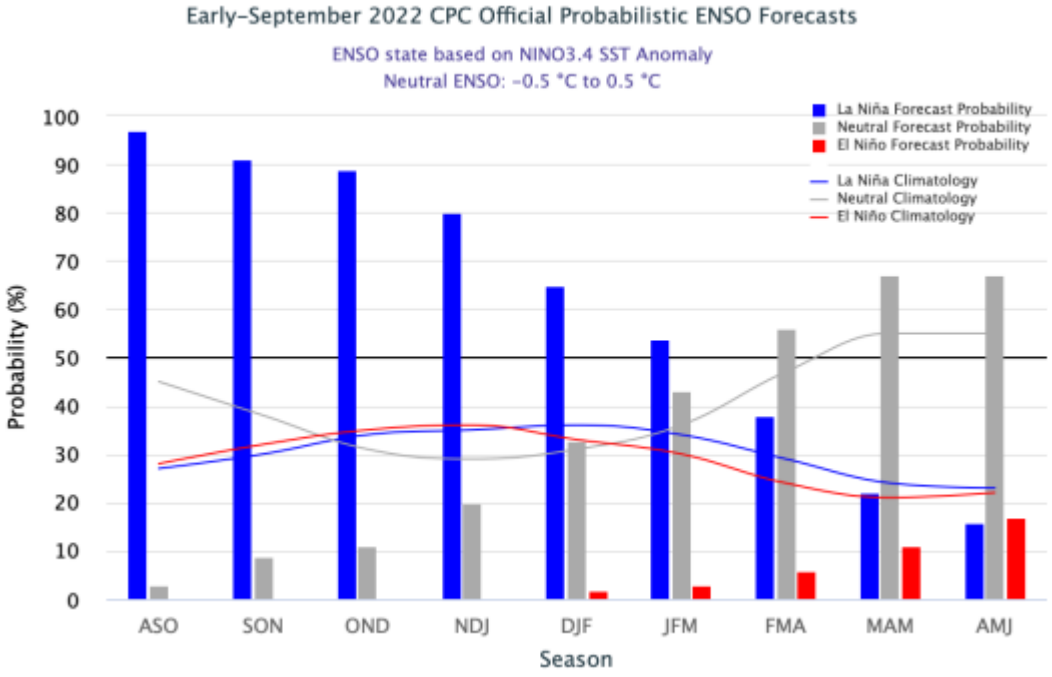
Low Stocks Fueled By Weather And Geopolitical Shock

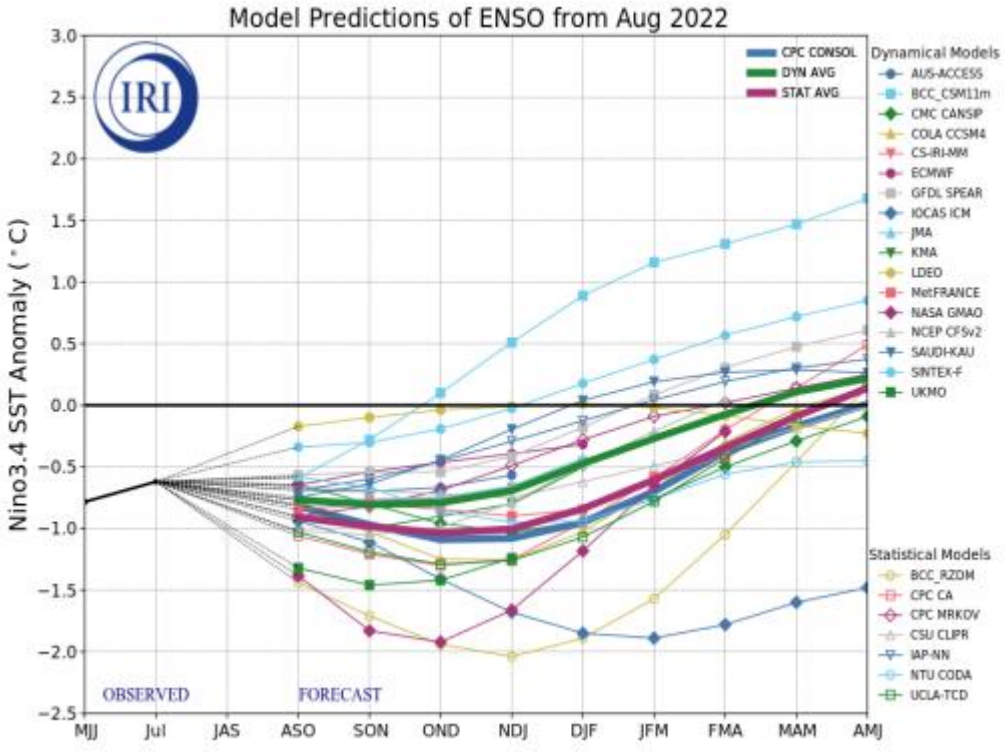
- According to NOAA forecast, chances of La Niña gradually decrease through the Northern Hemisphere fall and winter, with ENSO-neutral favored beginning in February-April 2023. It will be the third year running, imparting risks for the upcoming season.

La Niña Outlook – CPC/IRI PROBABILISTIC
First half of September



Sources: NOAA, Santander.

La Niña – Model Prediction

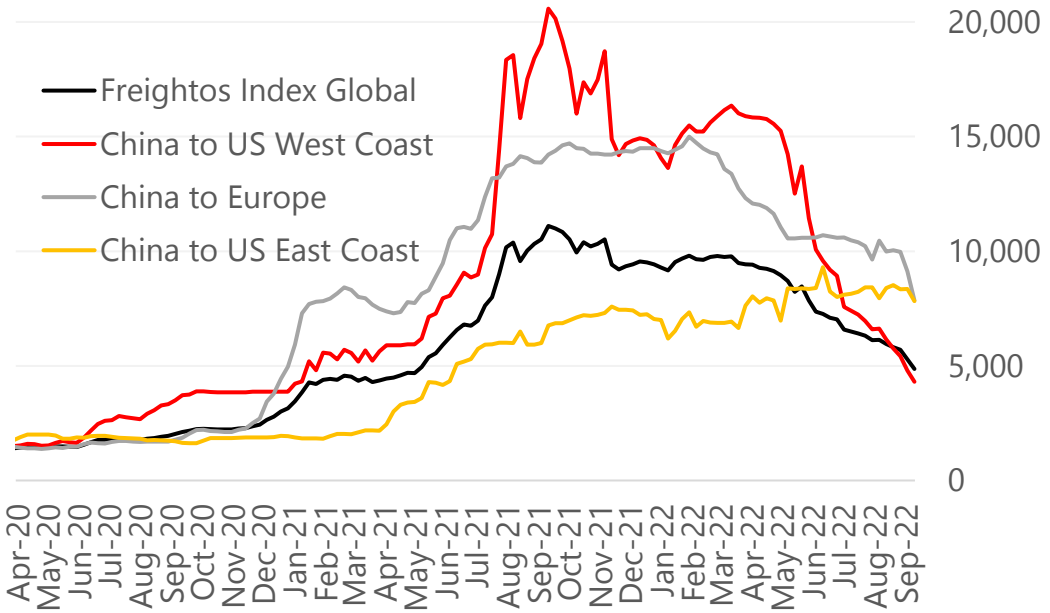


Sources: NOAA, Santander.

Low Stocks Fueled By Weather And Geopolitical Shock

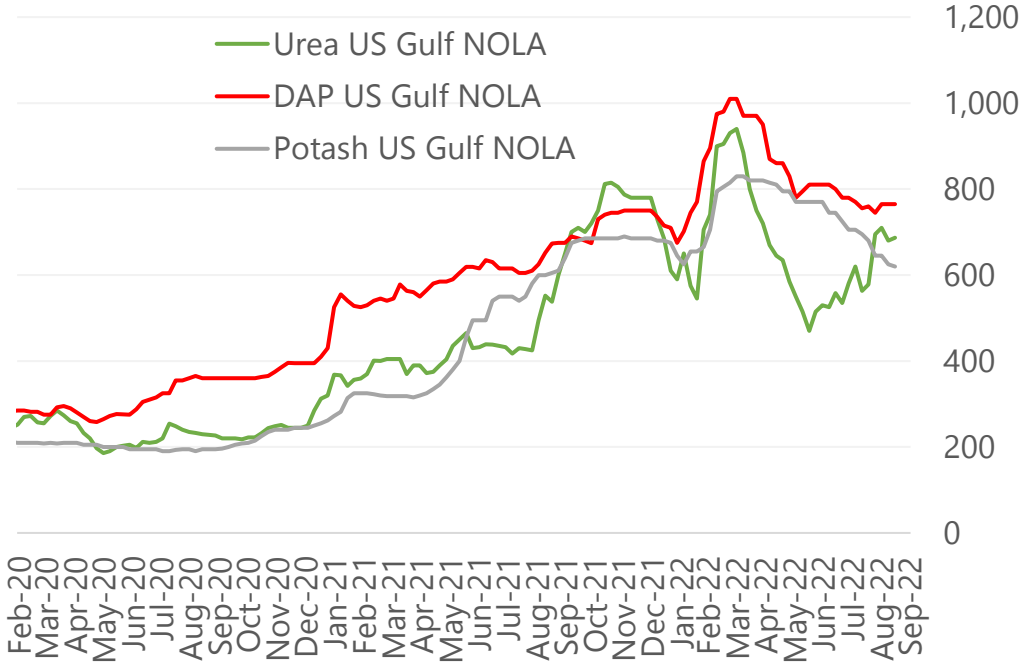
- Freight costs continue to trend down, a positive news for global supply chain.
- As for prices of material inputs (ammonia, nitrogen, nitrates, phosphates and potash) for the fertilizer market rose significantly since 2020. Following some respite in early 2022, at the margin prices have been steady as producers face soaring costs (mainly due to natural gas).

Freight Costs Index



Sources: Bloomberg, Santander.

Fertilizers prices (USD/t)

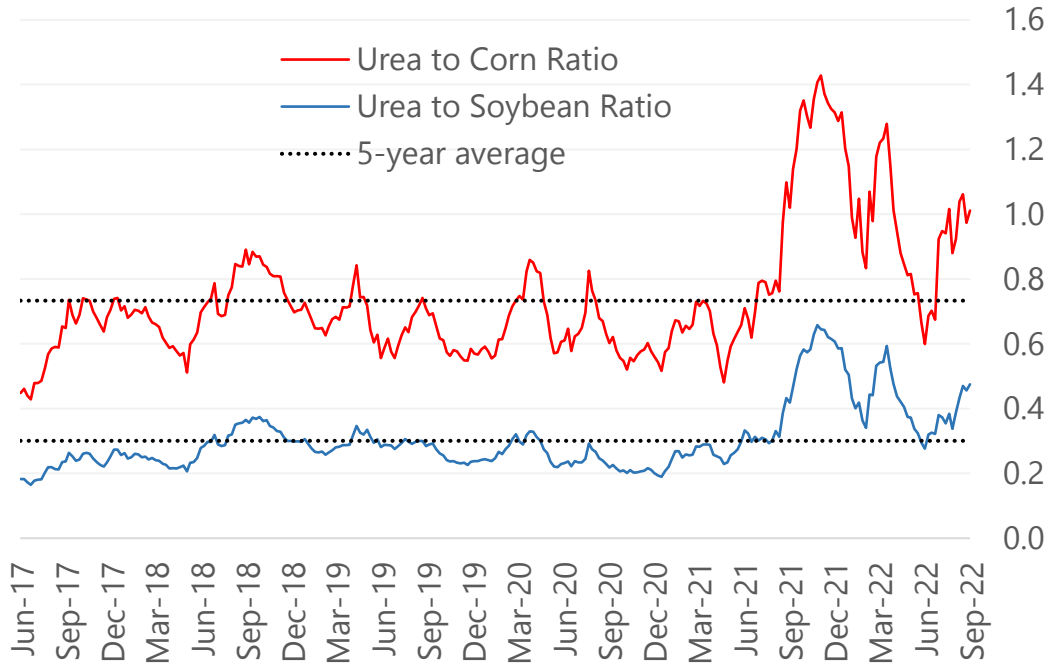


Sources: Bloomberg, Santander.

Low Stocks Fueled By Weather And Geopolitical Shock

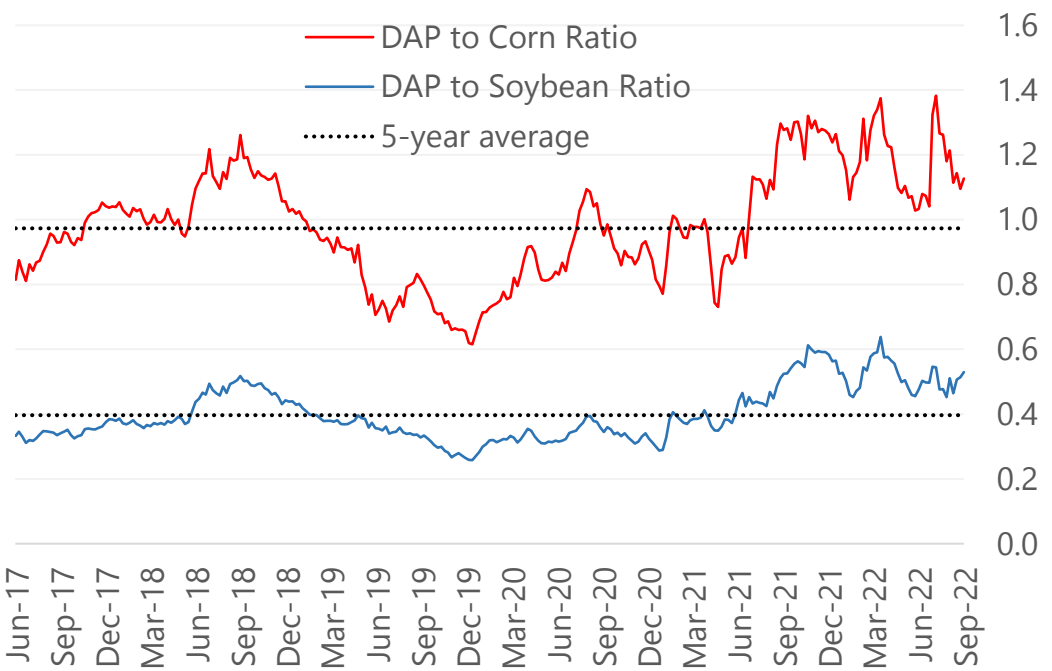
- Fertilizer-to-grain price ratios (both urea and DAP to corn and soybeans), an important affordability metric, has plunged in the 2Q22, allowing producers to purchase the input.

Fertilizer Affordability - Urea



Sources: Bloomberg, Santander.

Fertilizer Affordability - DAP

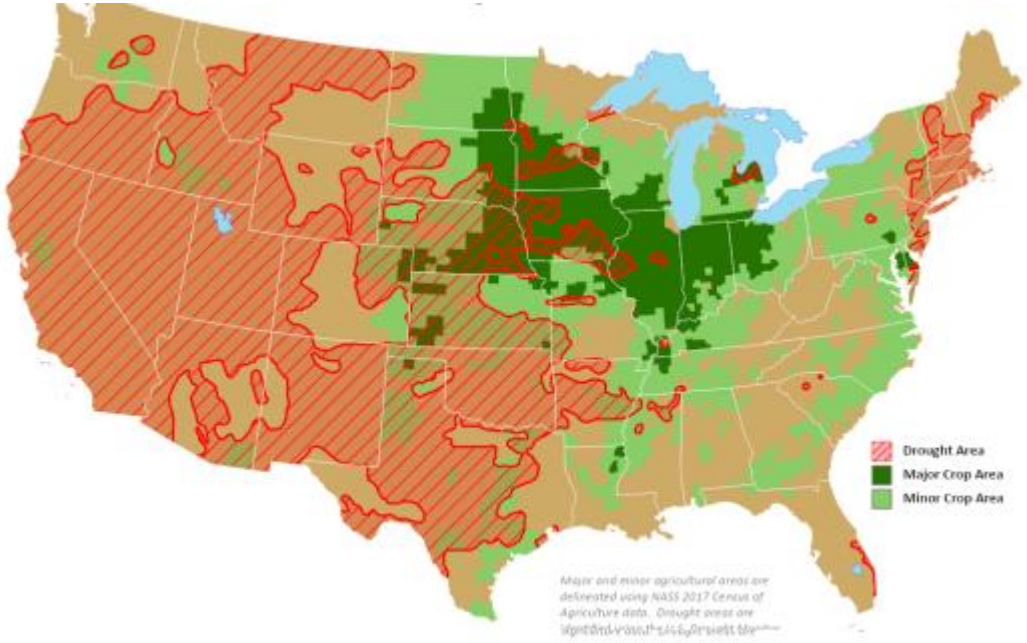


Sources: Bloomberg, Santander.

Low Stocks Fueled By Weather And Geopolitical Shock

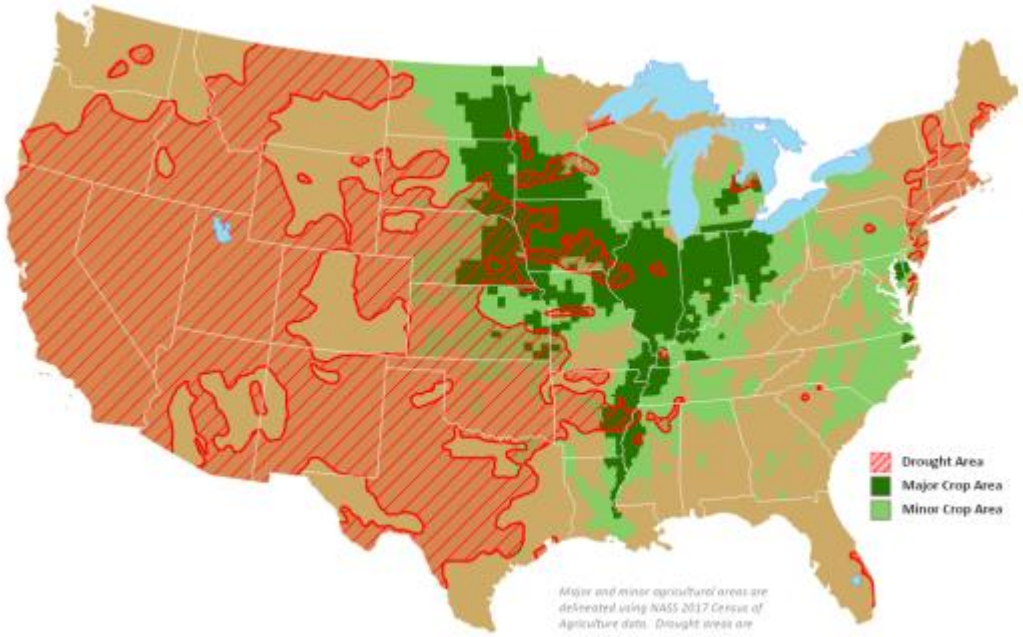
- Approximately 30% (up from 29% from our last Chartbook) of corn production is within an area experiencing drought; for soybean, 23% (down from 26%).

U.S. Corn Areas in Drought
September 13, 2022



Sources: USDA, Santander.

U.S. Soybean Areas in Drought
September 13, 2022

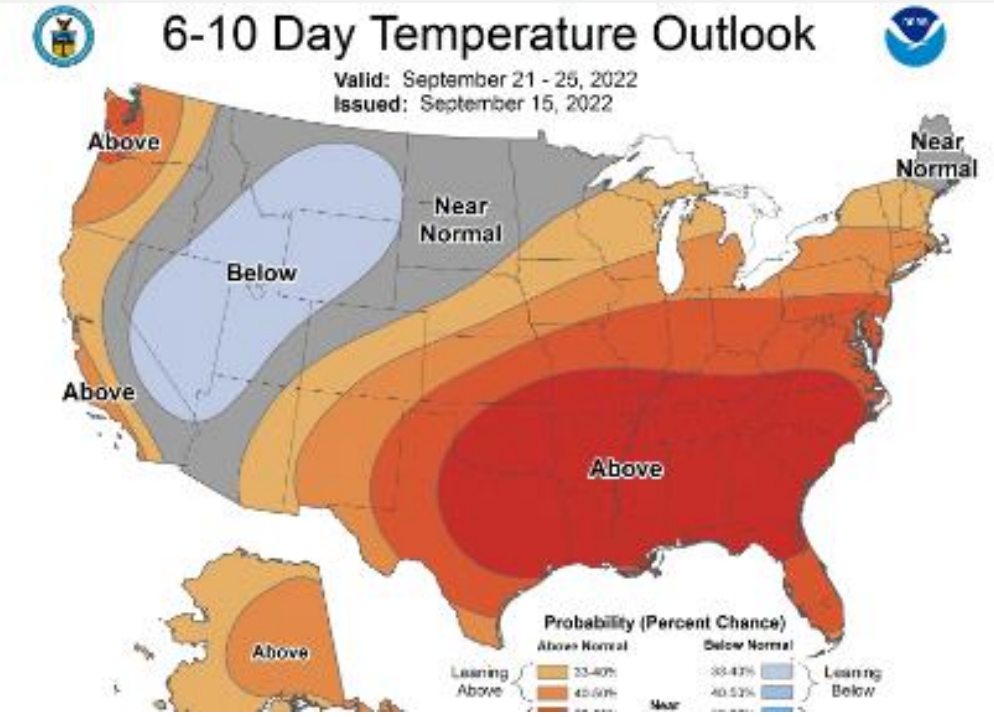


Sources: USDA, Santander.

Low Stocks Fueled By Weather And Geopolitical Shock

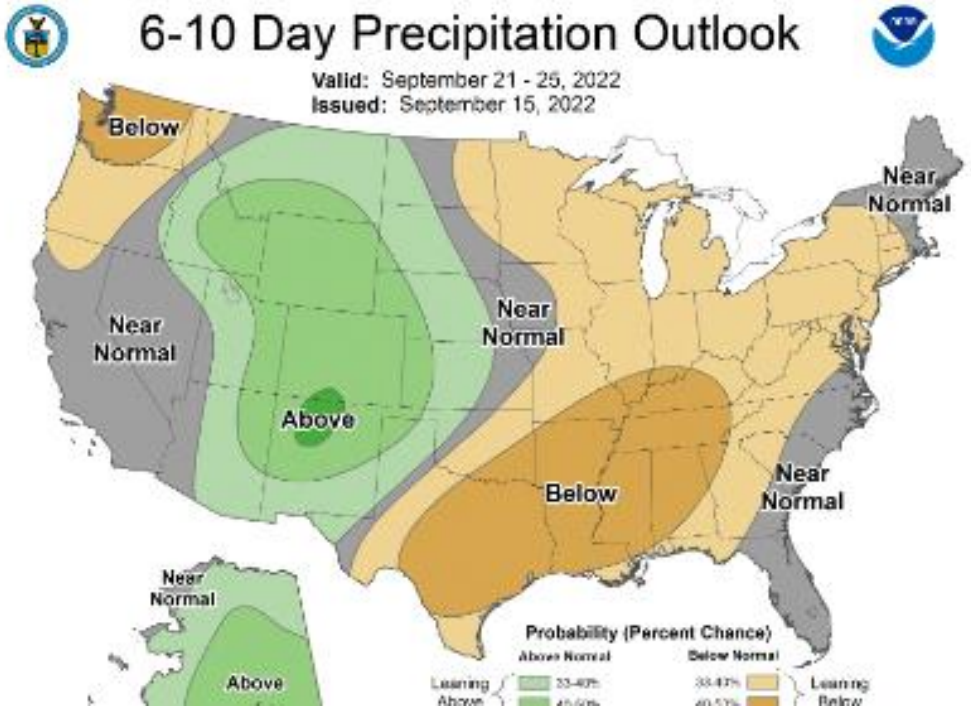
- Following a hot and dry summer that hindered crop yield in the Corn Belt, temperature and precipitation outlook have eased a bit.

U.S. Temperature Outlook



Sources: NOAA, Santander.

U.S. Precipitation Outlook



Sources: NOAA, Santander.

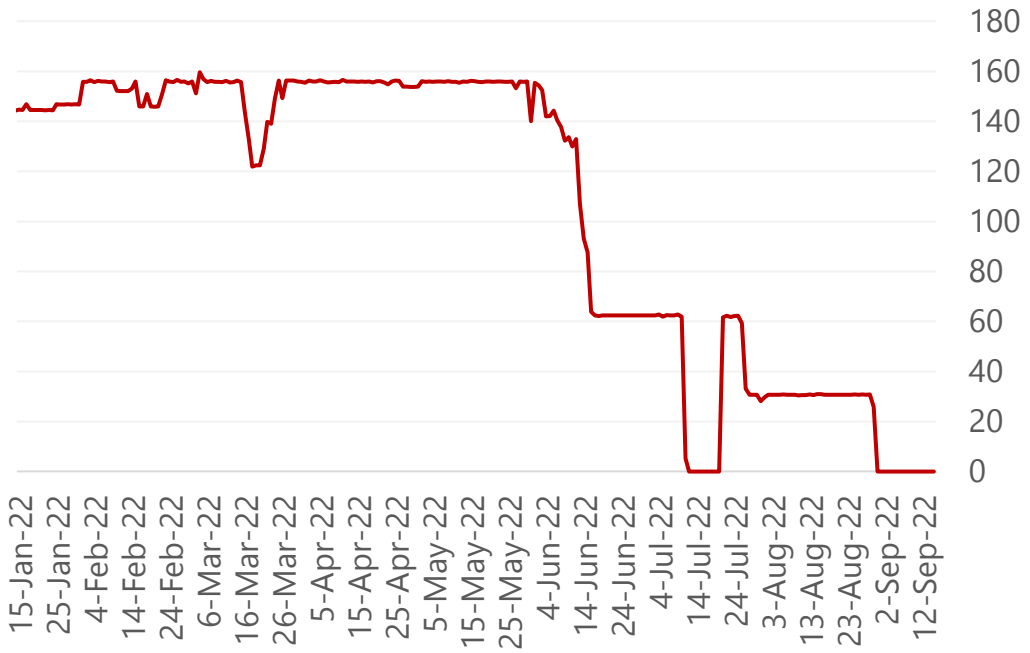
ENERGY

03

Natural Gas in Europe Soars As Russia Cuts Supply

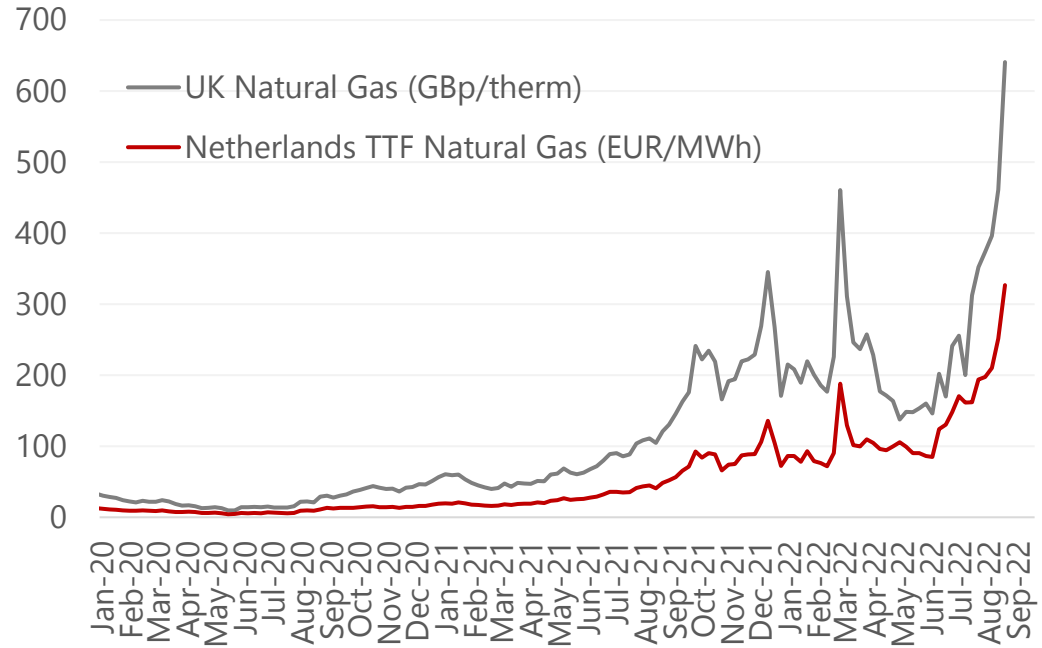
- Deliveries through the Nord Stream 1 have been completely halted. Still, EU gas storage met the 80% target two months earlier than planned.
- As a result, natural gas prices in Europe are rising consistently, a risk for some energy intensive industries such as the metal, and gas intensive such as the fertilizer.

Gas Flow from Russia to Northwestern Europe (MCM/d)



Sources: Bloomberg, Santander.

Europe Natural Gas



Sources: Bloomberg, Santander.

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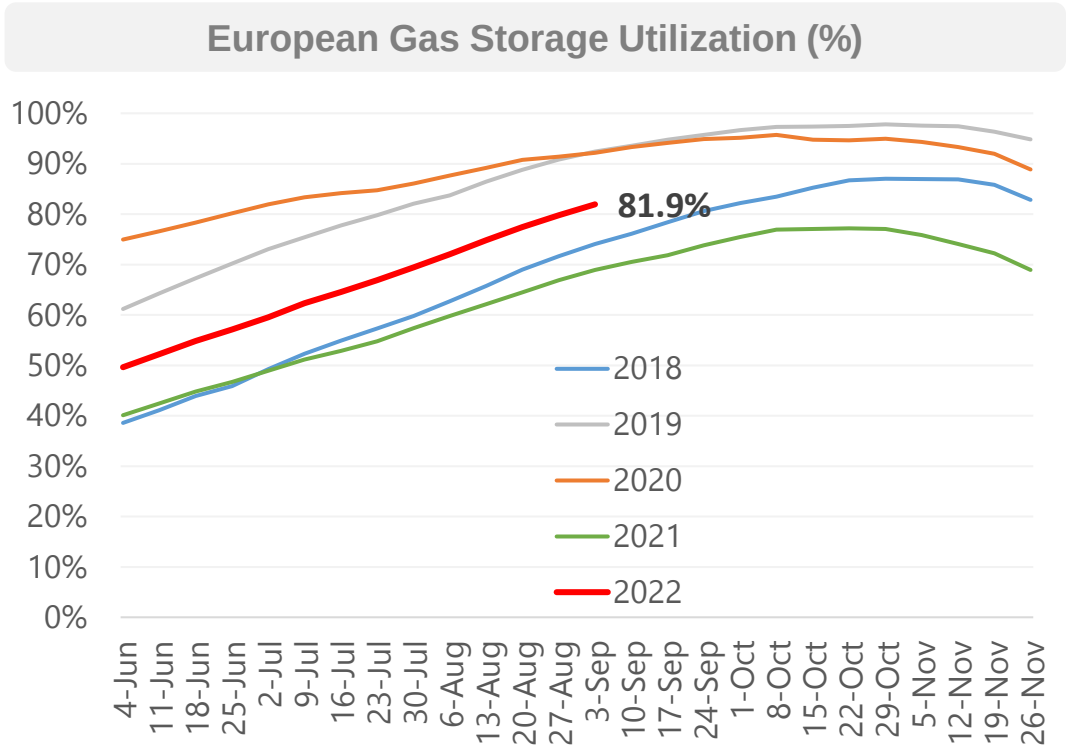
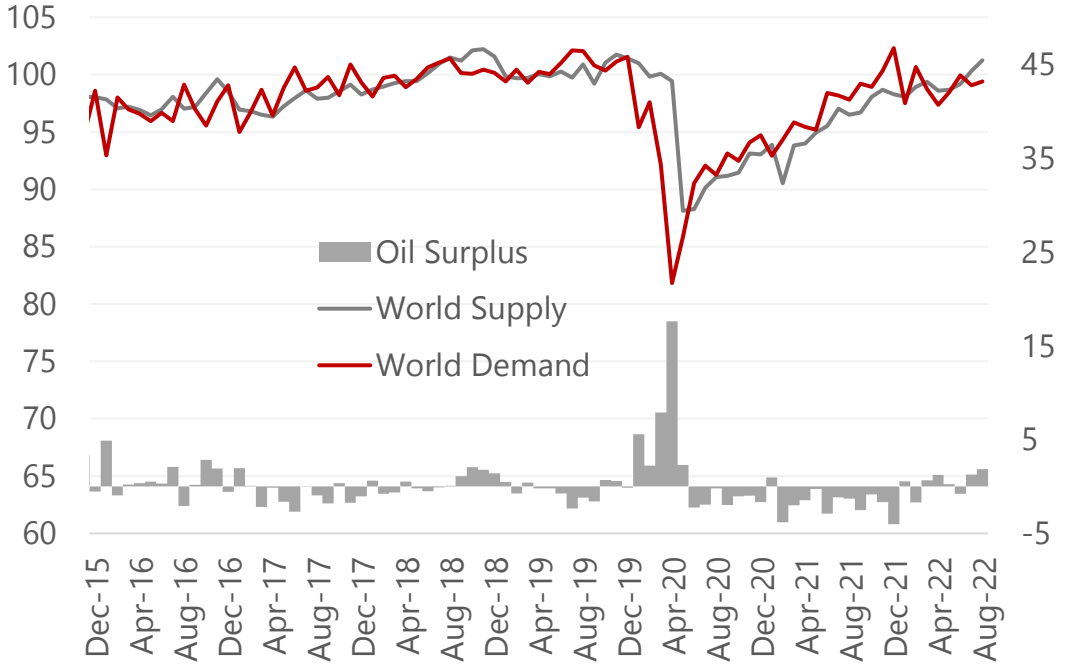


Sources: Bloomberg, Santander.

Geopolitical Shock Adds Volatility to a Constrained Market

- As the economy recovers from the coronavirus pandemic and majors oil producers fall short of output, the global oil balance of supply and demand has been consistently running on deficit, though at the margin the gap has been narrowing.
- US crude inventories is already below 2011-2015 levels when Brent crude oil stayed above $100/bbl, with strategic reserves drawing down.

World Oil Supply x Demand (mbd)



Sources: Bloomberg, Santander.

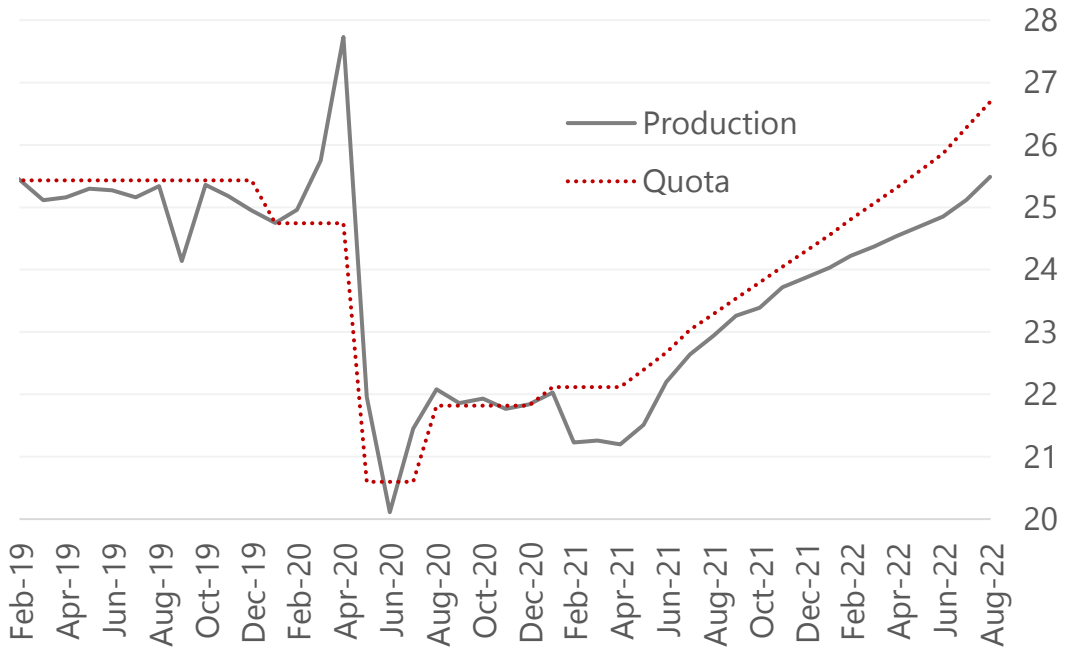
U.S. Total Oil Crude Stocks (million barrels)

Sources: Bloomberg, Santander.

Geopolitical Shock Adds Volatility to a Constrained Market

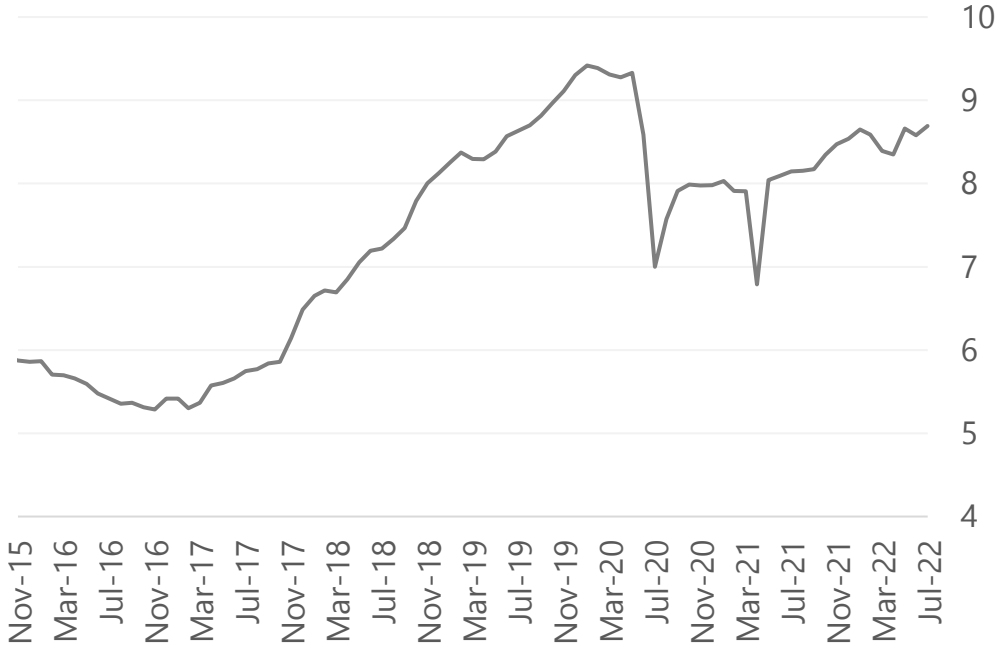
- The organization has been gradually increasing its production quota on a monthly basis. However, it has been failing to meet its target due to production shortfalls in several members, owing to low investments before and during the pandemic.
- US oil production is currently at 12.1 million barrels, still 7% down the pre-pandemic level. This discipline – to prioritize investor's return rather than output growth - has so far proved resilient to higher oil prices.

OPEC Production (members with quota) (mbd)



Sources: Bloomberg, Santander.

US Shale Production (mbd)

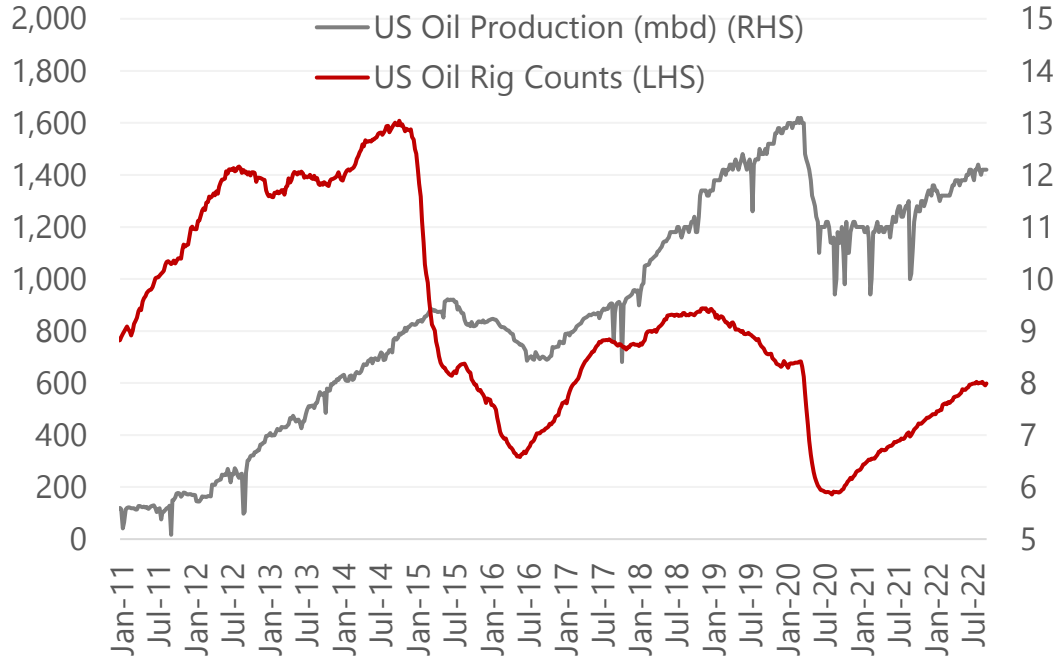


Sources: Bloomberg, Santander.

Geopolitical Shock Adds Volatility to a Constrained Market

- Rig counts in the US are increasing, but are still below pre-pandemic levels.
- Following the Russian invasion of Ukraine, Brent oil reached $130/bbl, and it is now within the $90-$95 range. Risks are skewed to the upside, in our view.

US Oil Production



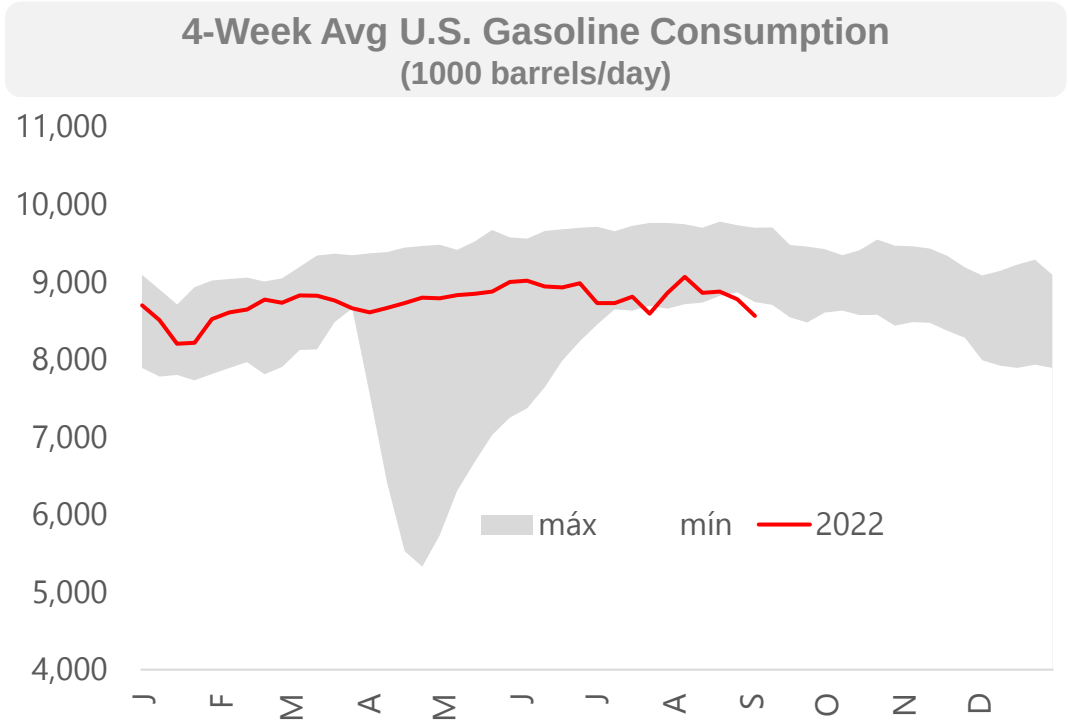
Sources: Bloomberg, Santander.

Brent Crude Oil (USD/bbl)

Sources: Bloomberg, Santander.

Gasoline Demand In U.S. Drops Below Pandemic Levels

- Despite falling pump prices, American are driving less than in the summer of 2020, the year of the pandemic.
- Most likely, historic inflation is constraining consumer budget.

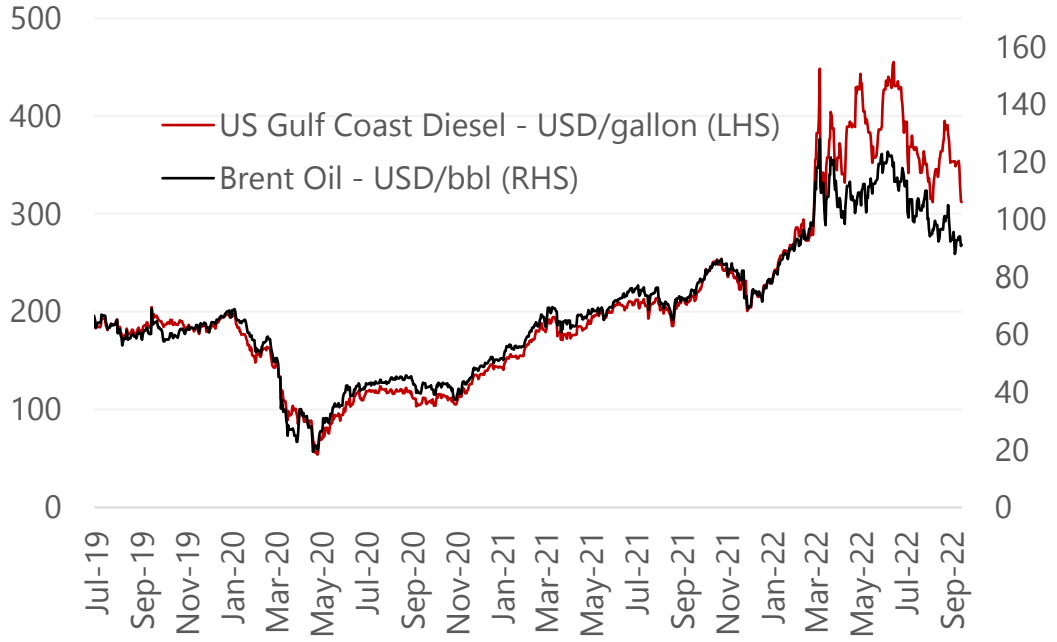


Sources: Bloomberg, Santander.

Diesel Shortage Looms Over Brazil, But Risks Have Decreased

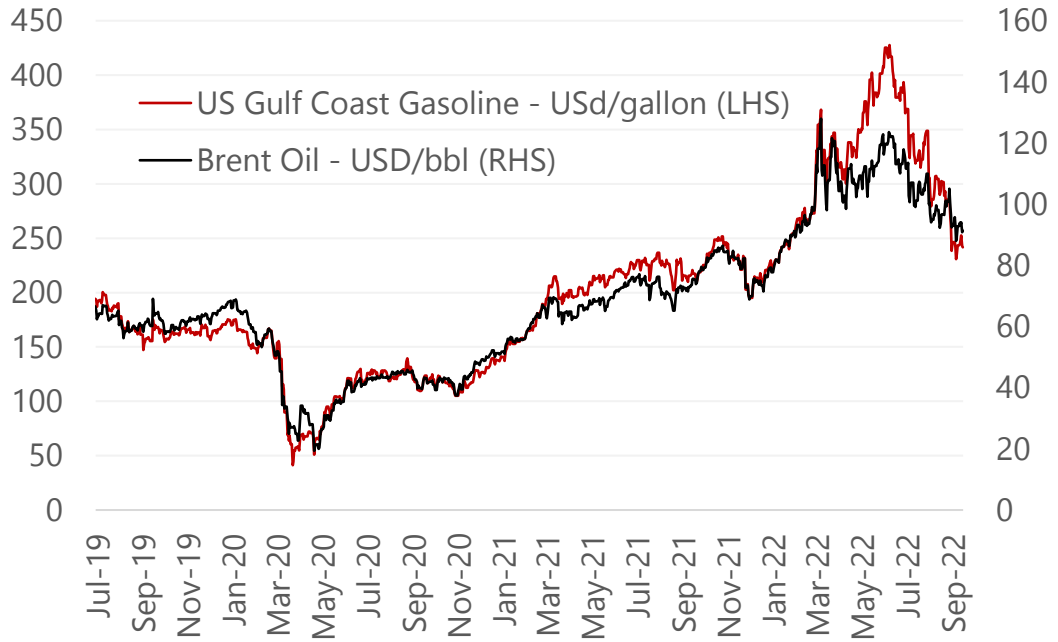
- Brazil imports nearly 30% of its domestic demand for diesel, of which 80% comes from the U.S. Gulf Coast.
- The gap between oil products (diesel and gasoline) and oil has narrowed recently, though for diesel it is still detached in historical terms. A peak of diesel demand is expect in Brazil in 3Q22 on the back of grains exports.

Oil and Refined Products Price Gap - Diesel



Sources: Bloomberg, Santander.

Oil and Refined Products Price Gap - Gasoline



Sources: Bloomberg, Santander.

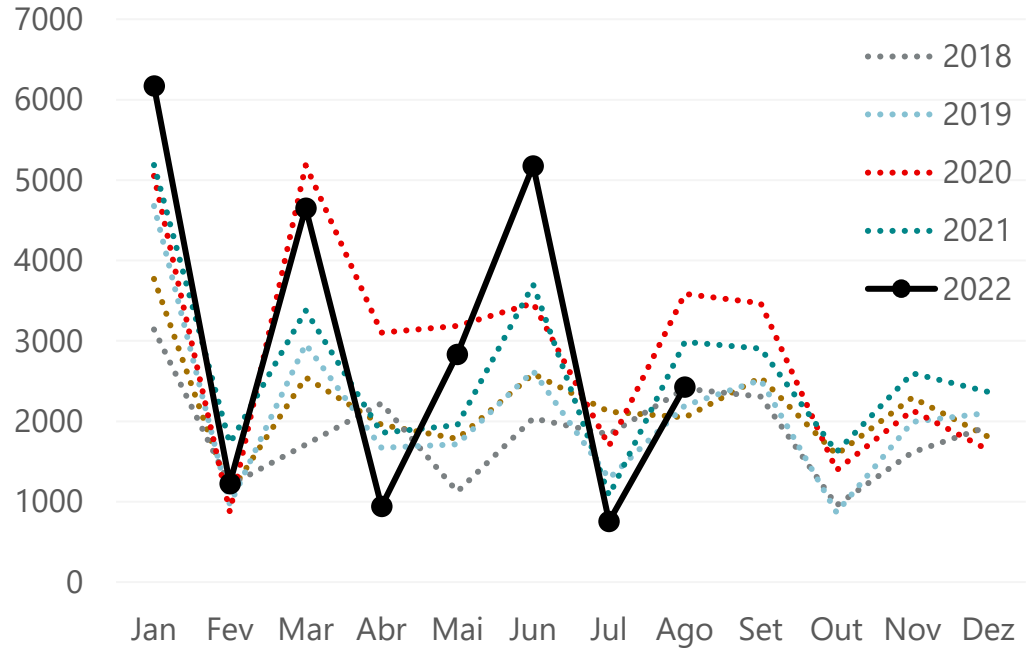
METALS

04

China Will Keep Adding Stimulus To Support Growth

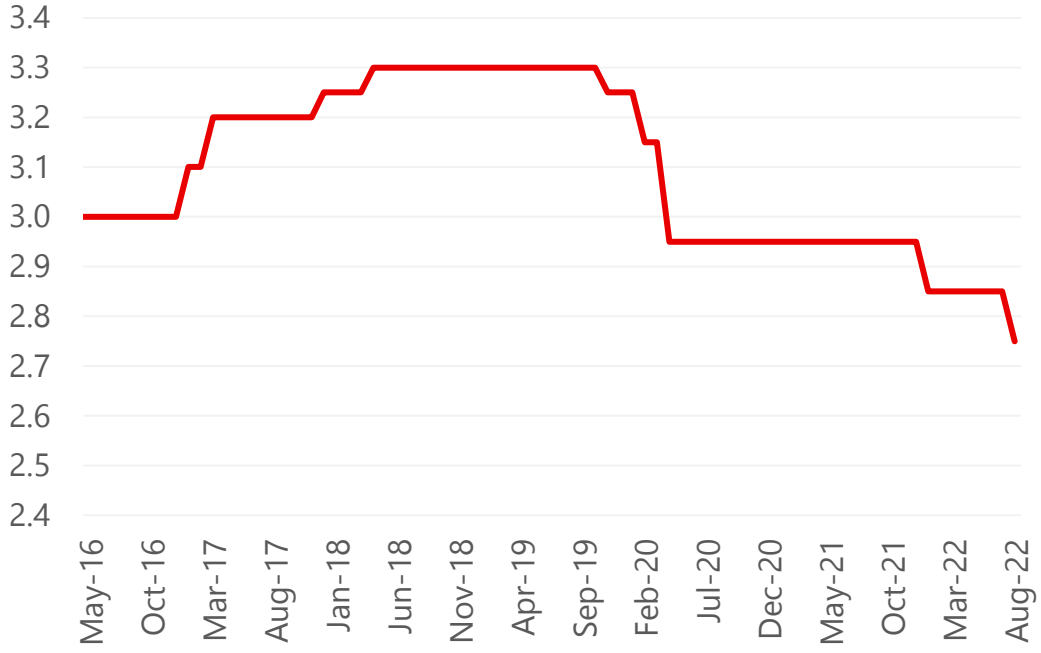
- Assuming that the economy reopens in June, and that there are not new lockdowns in the months ahead, the economy should benefit from strong momentum once the government add stimuli, a tailwind for industrial metals.
- Recently, mortgage boycotts have been spreading in China, which could deepen the real state crisis in the country. However, rumors that a bailout fund would be created to help troubled developers provided some support for metal prices, particularly iron ore.

Aggregate Financing (CNY Billions)



Sources: PBOC, Santander

1 Year Medium Term Lending Facility (%)



Sources: Bloomberg, Santander

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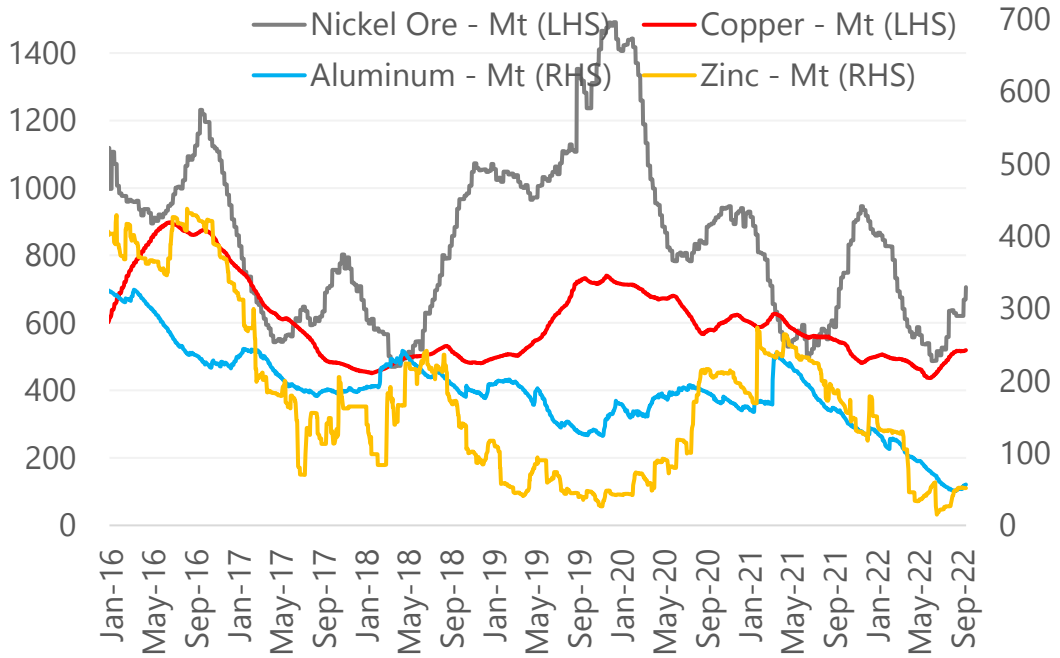
Sources: PBOC, Santander

Several Metals Facing Low Stocks and High Production Costs

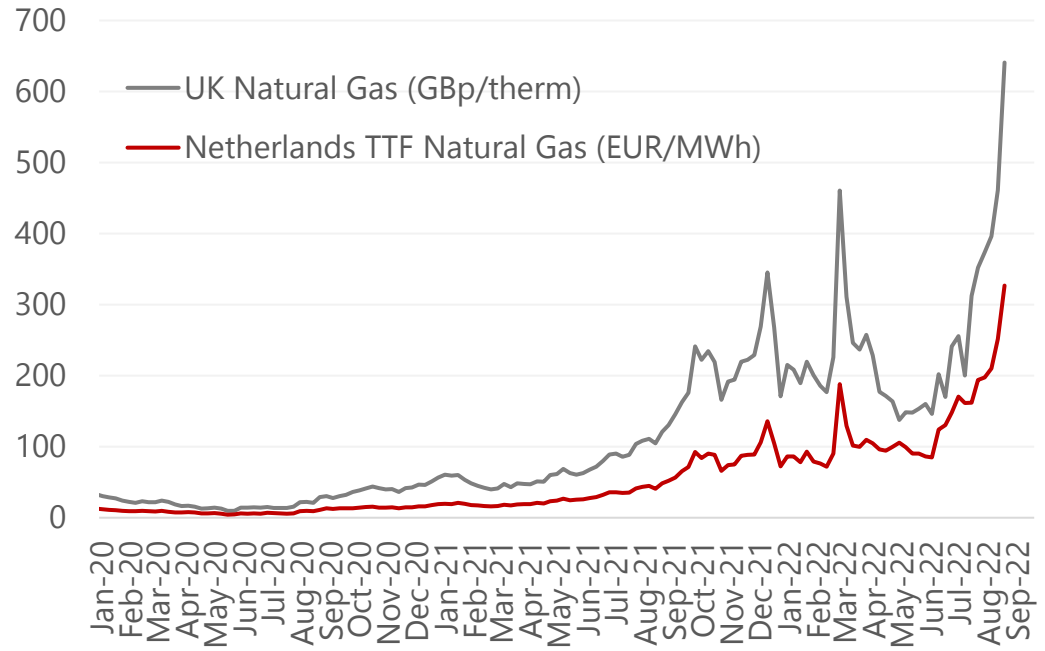
- From London to Shanghai warehouses, some metals have inventory levels at multi-year lows.
- The power crunch in China and Europe send prices up, raising concerns about supply shortage in industrial metals. The geopolitical shock adds to this already tight scenario.

Base Metals Inventories



Sources: Bloomberg, Santander.

Europe Natural Gas



Sources: Bloomberg, Santander.

Thank you.

Our purpose is to help people and businesses prosper.

Our culture is based on believing that everything we do should be:

Simple Personal Fair

Santander

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