Brazil Macro | October 2022

Commodities

Felipe Kotinda
felipe.kotinda@santander.com.br

INDEX

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

SUMMARY

While supply issues – such as low inventories, underinvestment, geopolitical conflict – continue to support prices at high levels (compared to pre-pandemic), we acknowledge that markets have priced in a slowdown in global economic growth and, consequently, a worse demand for raw materials, in a backdrop of rising global interest rates. Prospects of a persistently strong USD have also impacted commodity prices of late. With fuel consumption in the U.S. running below expectations, and with lockdowns in China showing no signs of easing (dampening urban mobility in the world's second largest economy), we revised down our Brent price forecast by US$15/bbl to US$100/bbl for YE2022. In our view, given the implementation issues regarding the recent cut in OPEC+ production quota, we see this move of the cartel more as a limit in the downside risk than an additional fuel for further price gains. We maintain our US$95/bbl forecast for YE2023. As an upshot, we have slightly downgraded our aggregate commodity indexes forecast for YE2022. We still look for a gradual drop in global material costs in the coming years, as global demand softens, and aggregate supply gradually catches up.

OVERVIEW

01

Commodities: Pricing In A Global Slowdown

- While supply issues continue to support prices at high levels (compared to pre-pandemic), we acknowledge that **markets have priced in a slowdown in global economic growth** and, consequently, a worse demand for raw materials.
- We revised down our Brent price forecast by US$15/bbl to US$100/bbl for YE2022. As a result, **we have slightly downgraded our aggregate commodity indexes forecast for YE2022**. We still look for a gradual drop in global material costs in the coming years, as global demand softens, and aggregate supply gradually catches up.

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	1830 ⬇	1809 ➡
CRB Metal	749	887	1259	1165 ➡	1107 ➡
CRB	401	444	571	555 ⬇	521 ➡

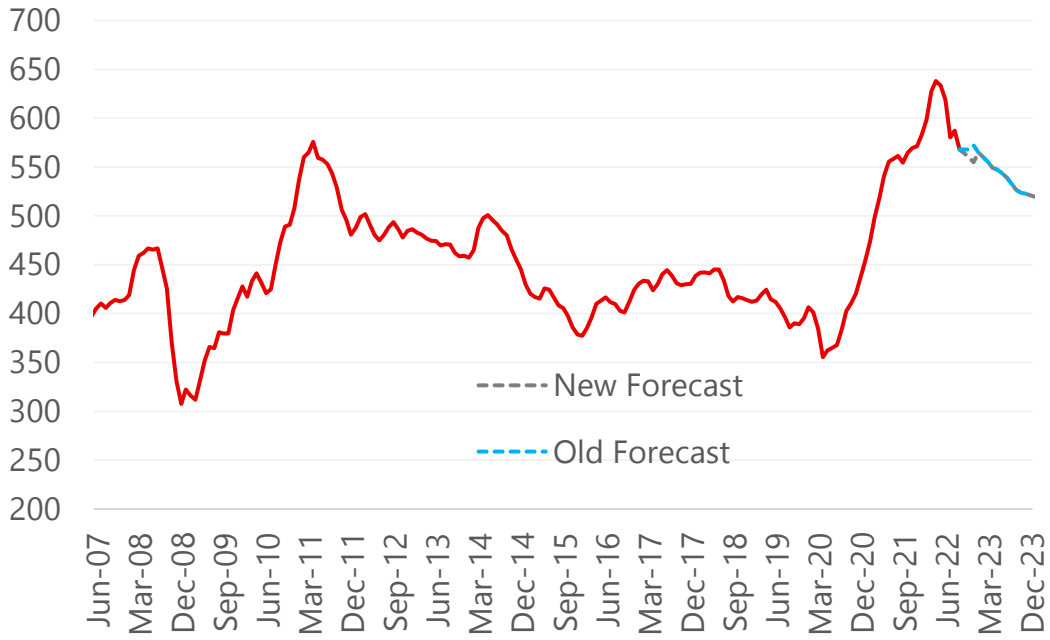
YE YoY	2019	2020	2021	2022e	2023e
CRB Food	1%	7%	36%	18%	-19%
CRB Energy	2%	-30%	31%	20%	-1%
CRB Metal	-11%	18%	42%	-7%	-5%
CRB	-3%	11%	29%	-3%	-6%

	Iron Ore	Soybean	Corn	Brent
YTD*	-23%	5%	18%	27%

*October 13, 2022.

Sources: Bloomberg, Santander.

Our Forecasts for CRB Index – Monthly Averages



Sources: Bloomberg, Santander.

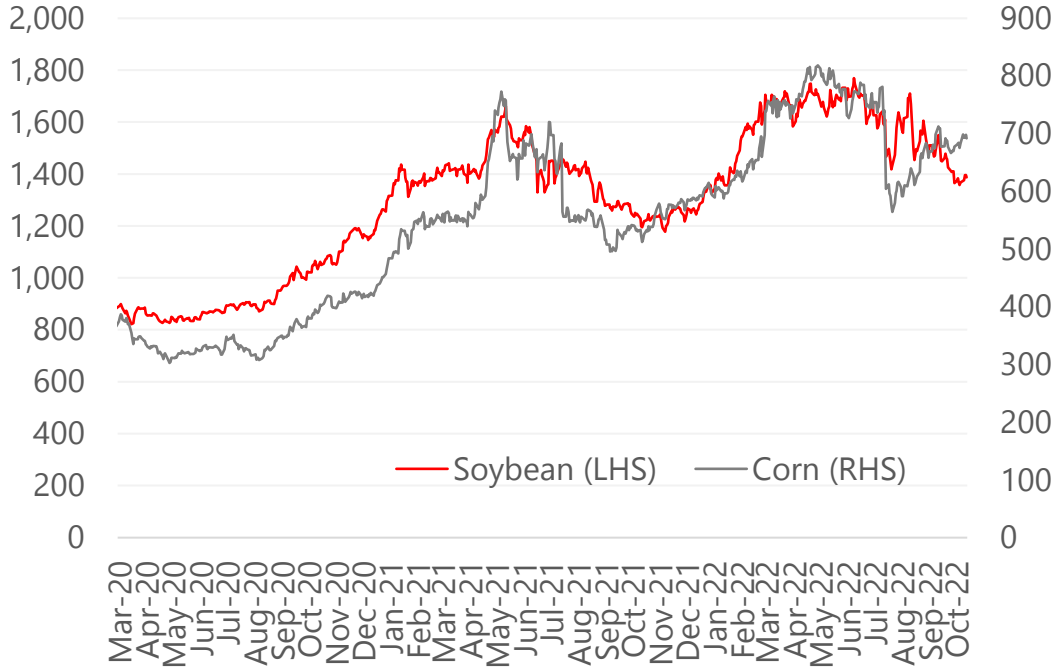
AGRICULTURE

02

Low Stocks Fueled By Weather And Geopolitical Shock

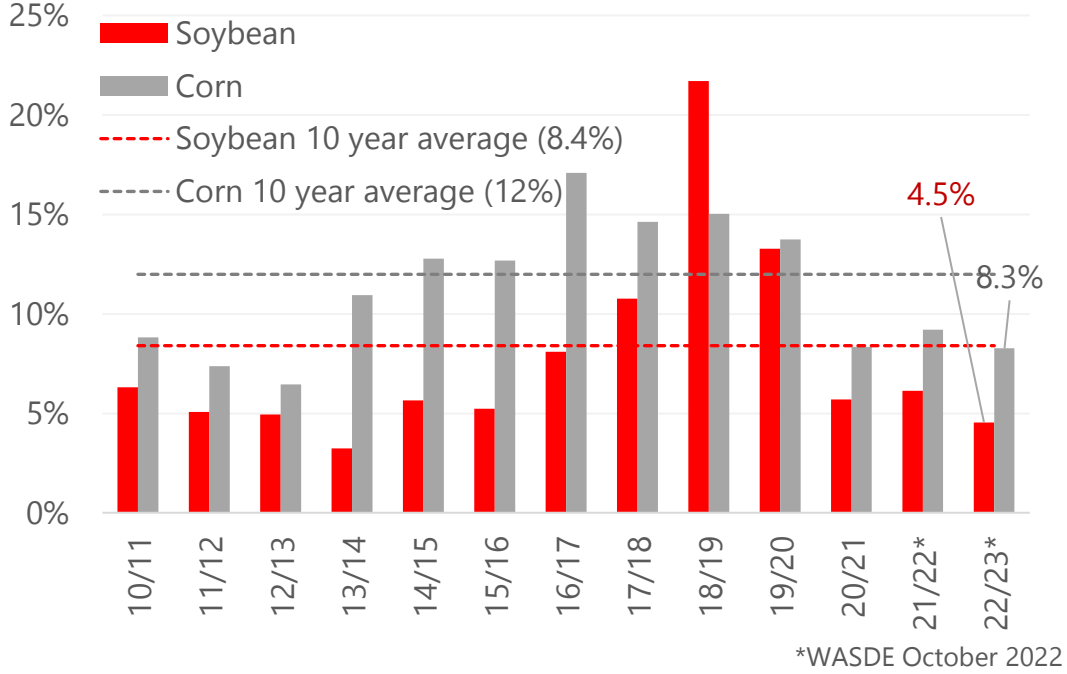
- Grain market in still tight as stock-to-use ratios are low. Adverse weather (heatwave in US and in Europe) reduced crop yields in the north hemisphere.
- On the other hand, the global macro backdrop has been dragging commodities prices down owing to fears of a recession, and the dollar strength has reduced the appeal of American grains as it makes them more expensive for foreign buyers.

Chicago Board of Trade - Grains (USD cents)



Sources: Bloomberg, Santander.

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

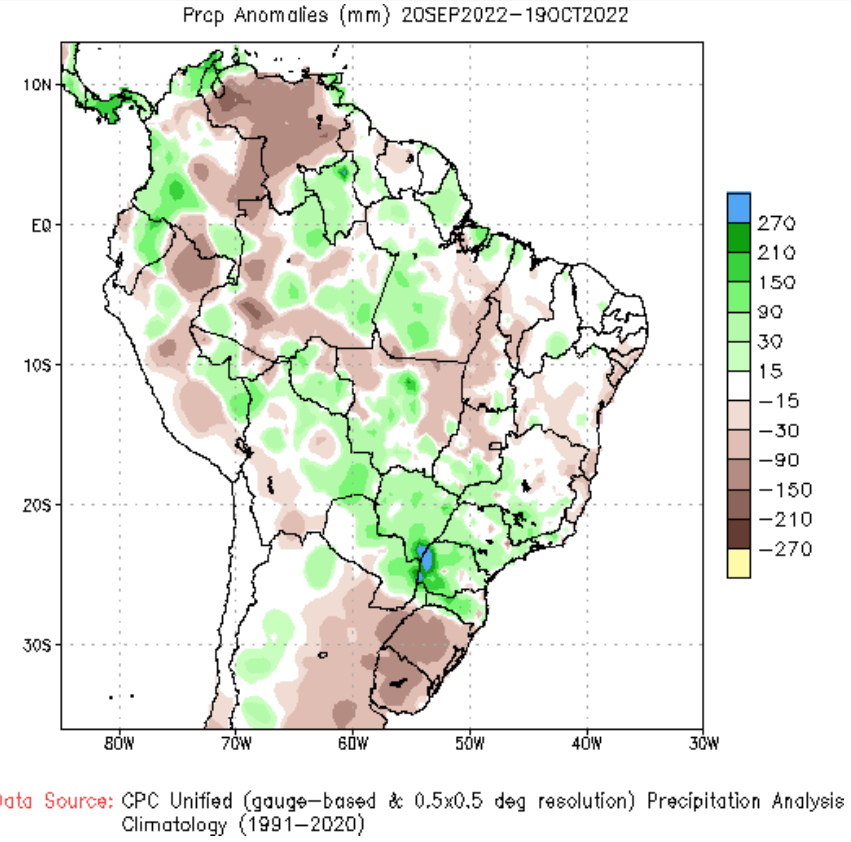


Sources: USDA, Santander.

Low Stocks Fueled By Weather And Geopolitical Shock

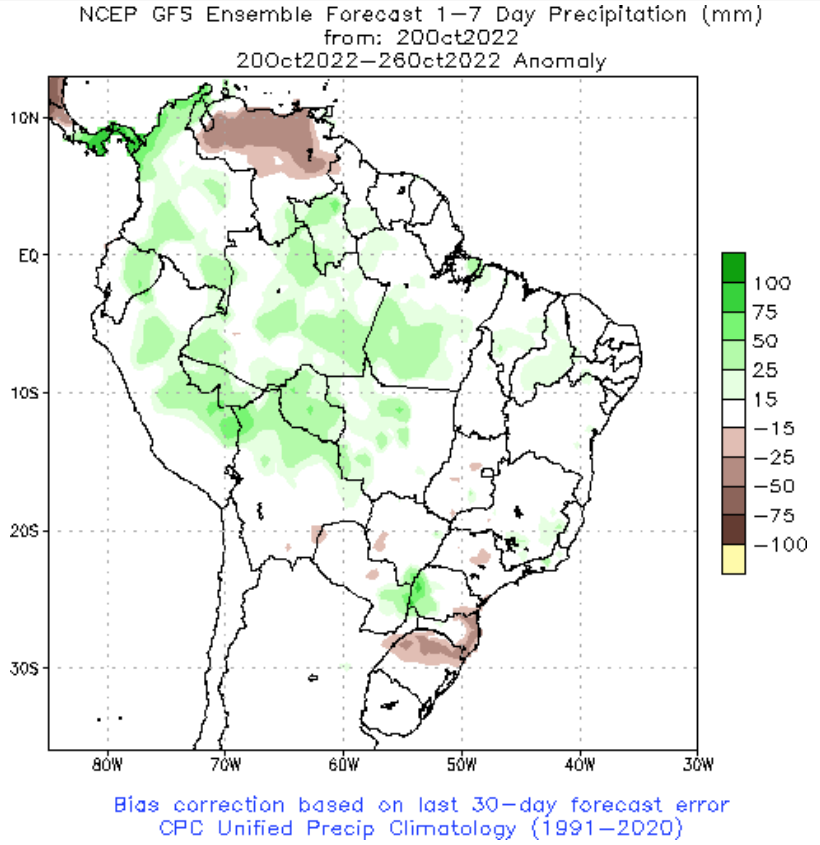
- In Brazil, weather has been significantly more favorable than the previous marketing year. Still, drought has been preventing corn planting in Argentina.
- Brazil has been importing a record amount of fertilizers, which will likely lead to an increase in planted area.

Precipitation (30-day anomaly)



Sources: NOAA, Santander.

GFS Precipitation Forecasts (7-day anomaly)

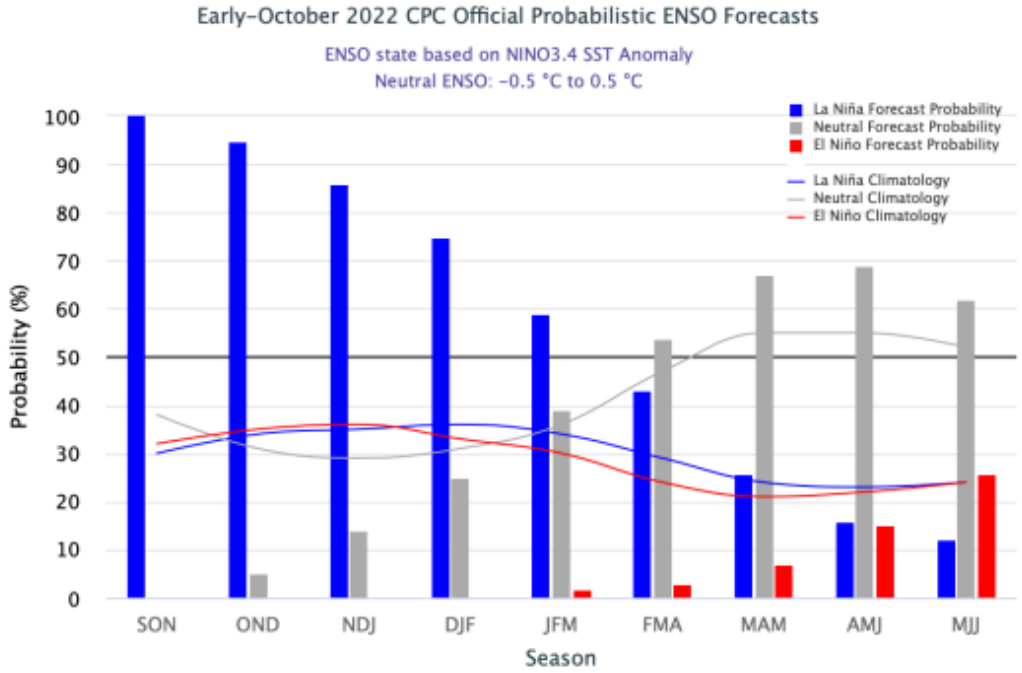


Sources: NOAA, Santander.

Low Stocks Fueled By Weather And Geopolitical Shock

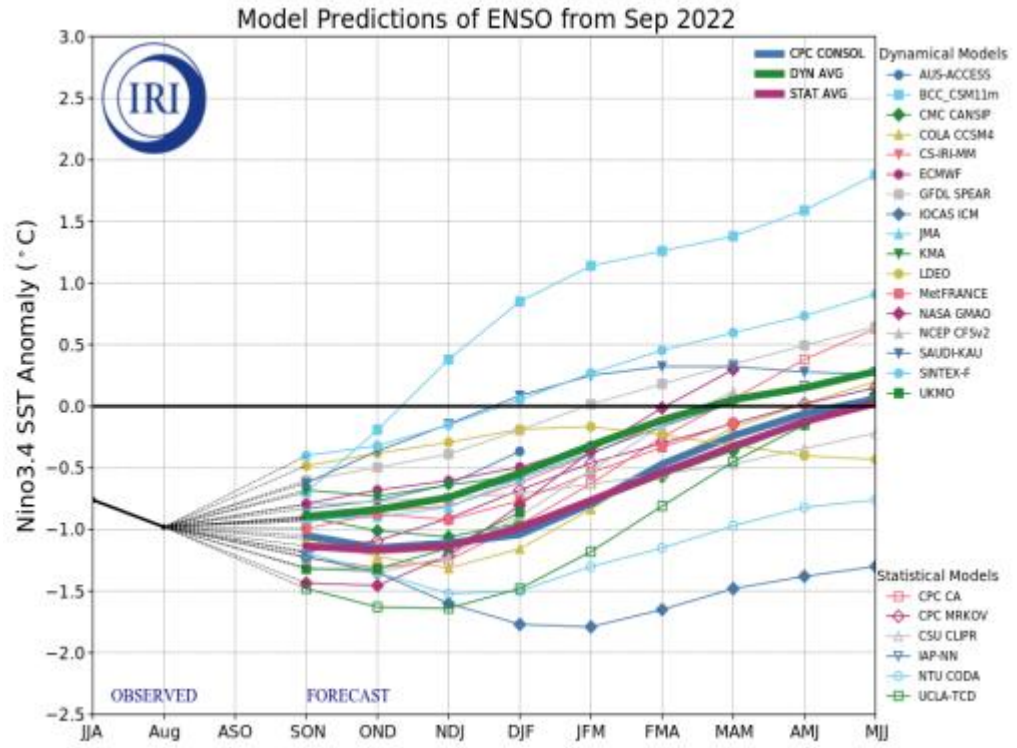
- According to NOAA forecast, chances of La Niña gradually decrease through the Northern Hemisphere fall and winter, with ENSO-neutral favored beginning in February-April 2023. It will be the third year running, imparting risks for the upcoming season.

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



Sources: NOAA, Santander.

La Niña – Model Prediction

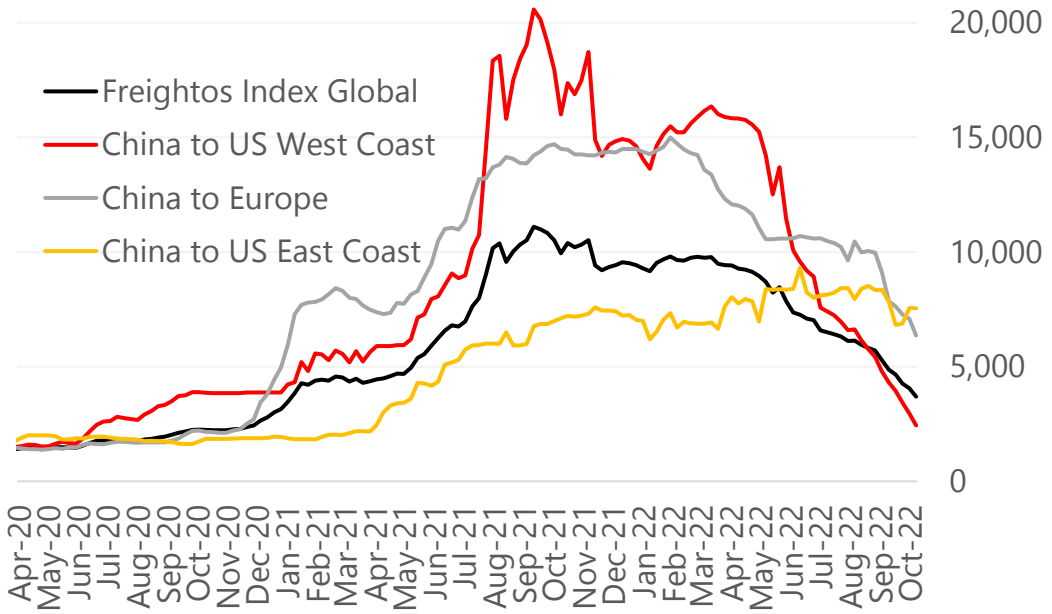


Sources: NOAA, Santander.

Low Stocks Fueled By Weather And Geopolitical Shock

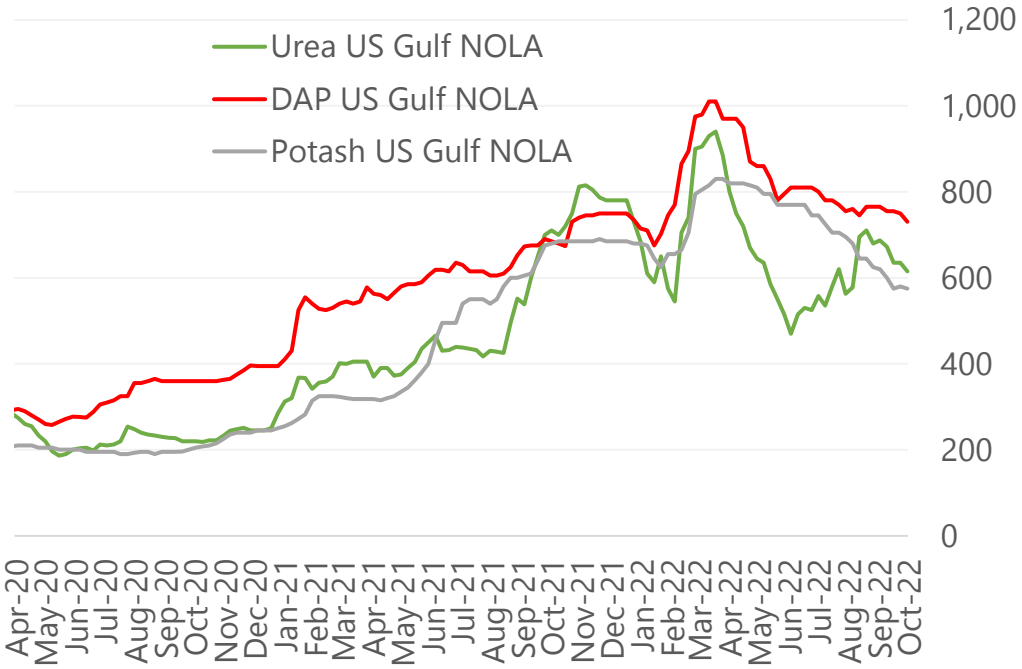
- Freight costs continue to trend down, a positive news for global supply chain.
- As for prices of material inputs (ammonia, nitrogen, nitrates, phosphates and potash) for the fertilizer market rose significantly since 2020. Following some respite in early 2022, at the margin prices have been slowly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

Freight Costs Index



Sources: Bloomberg, Santander.

Fertilizers prices (USD/t)

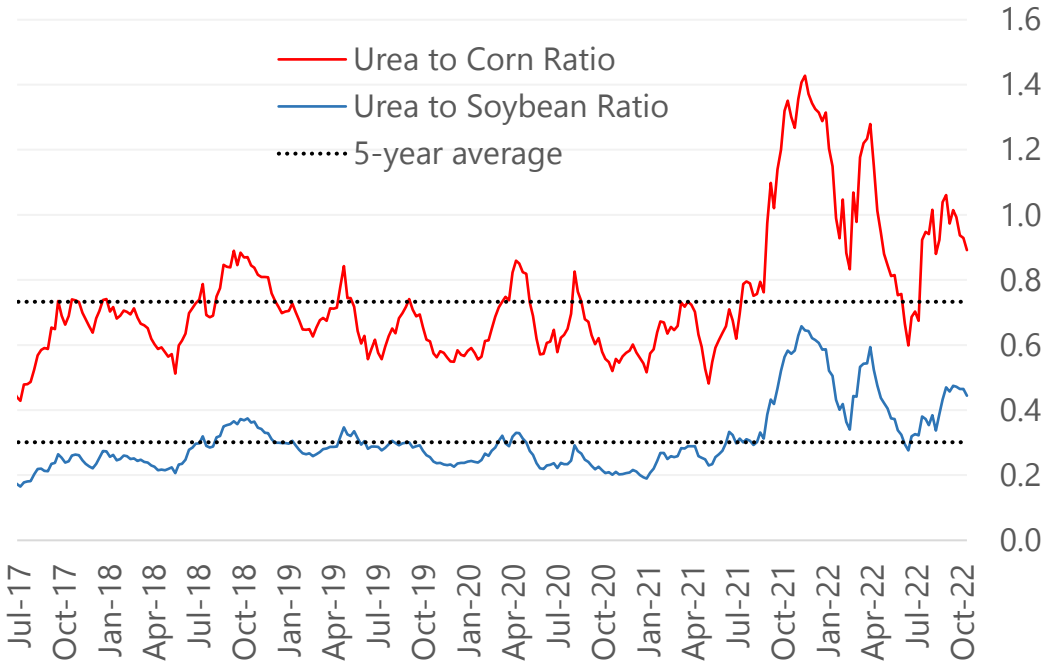


Sources: Bloomberg, Santander.

Low Stocks Fueled By Weather And Geopolitical Shock

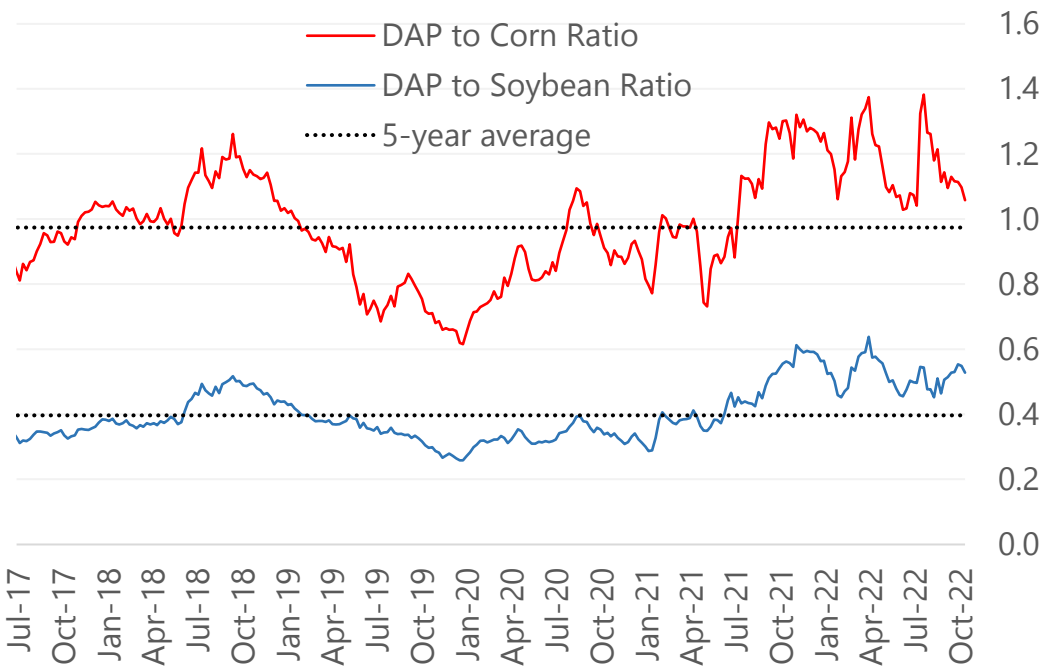
- Fertilizer-to-grain price ratios (both urea and DAP to corn and soybeans), an important affordability metric, has plunged in the 2Q22, allowing producers to purchase the input.

Fertilizer Affordability - Urea



Sources: Bloomberg, Santander.

Fertilizer Affordability - DAP

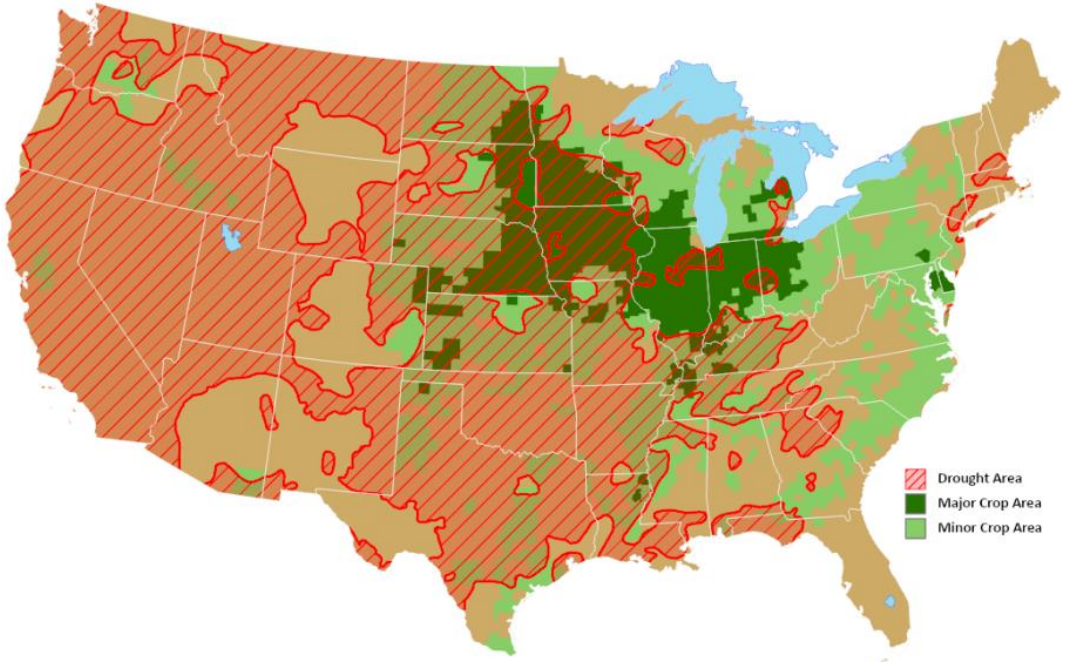


Sources: Bloomberg, Santander.

Low Stocks Fueled By Weather And Geopolitical Shock

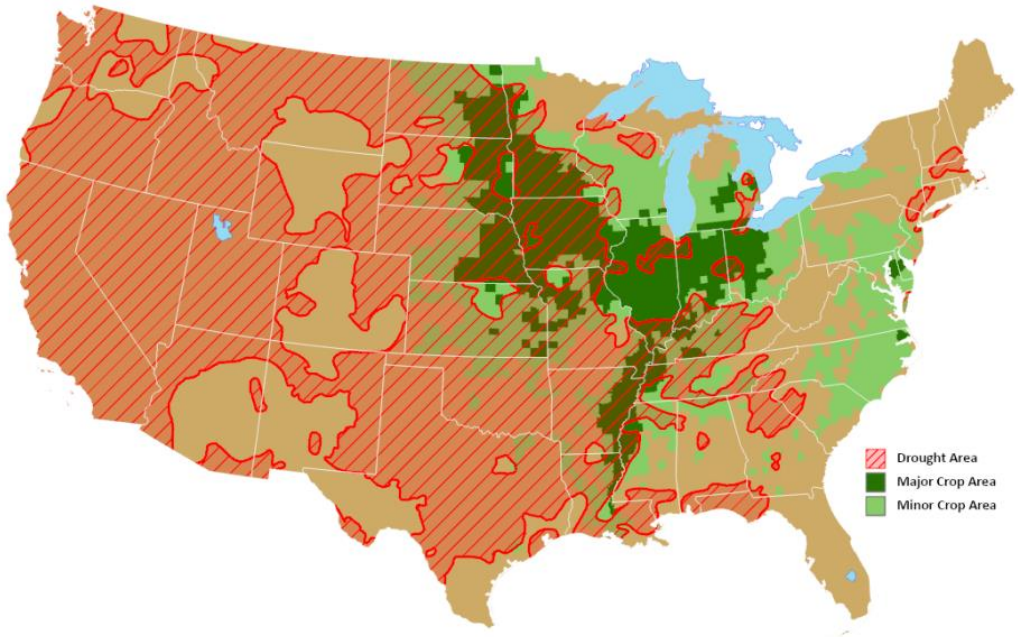
- Approximately 62% (up from 30% from our last Chartbook) of corn production is within an area experiencing drought; for soybean, 61% (down from 23%).

U.S. Corn Areas in Drought
October 18, 2022



Sources: USDA, Santander.

U.S. Soybean Areas in Drought
October 18, 2022

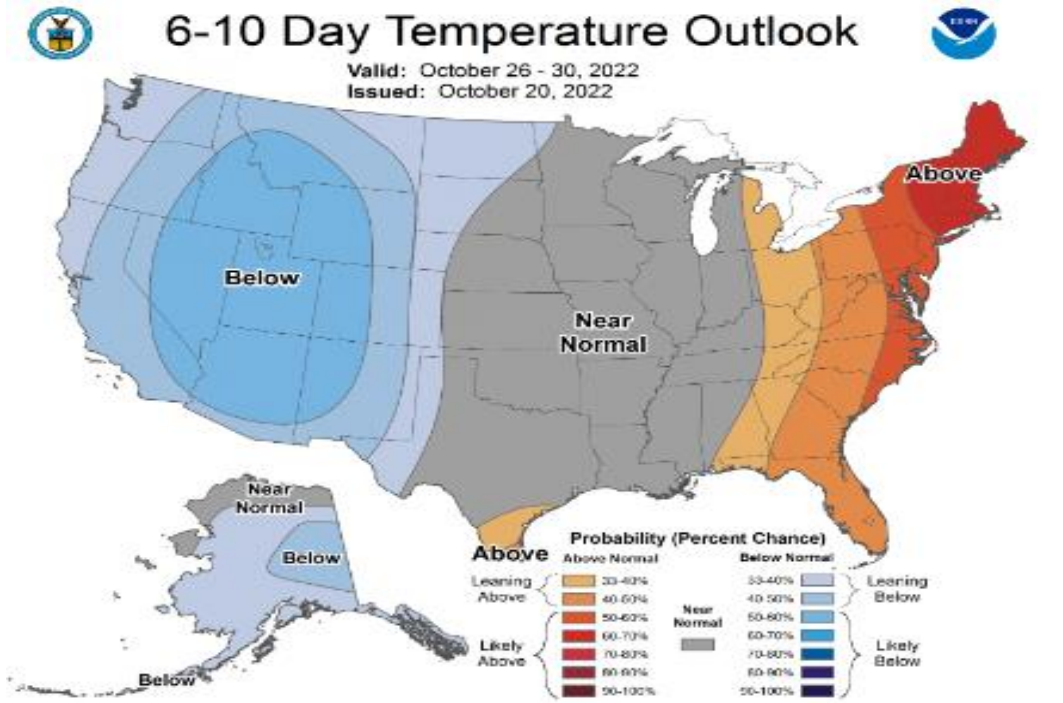


Sources: USDA, Santander.

Low Stocks Fueled By Weather And Geopolitical Shock

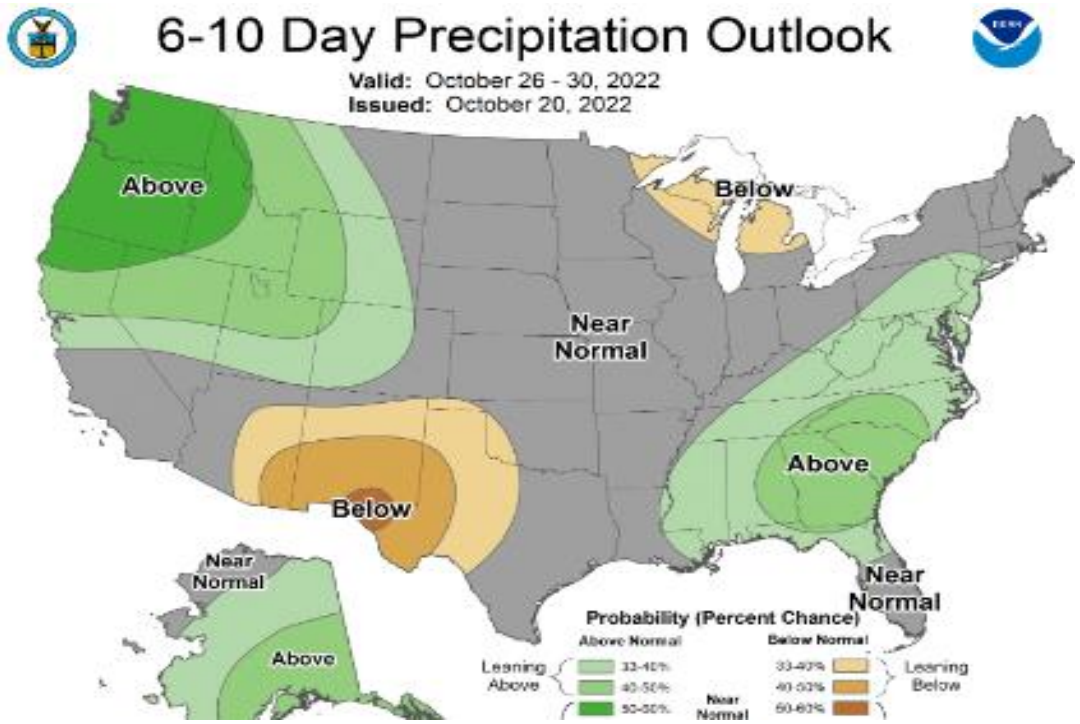
- Following a hot and dry summer that hindered crop yield in the Corn Belt, temperature and precipitation outlook have eased.

U.S. Temperature Outlook



Sources: NOAA, Santander.

U.S. Precipitation Outlook



Sources: NOAA, Santander.

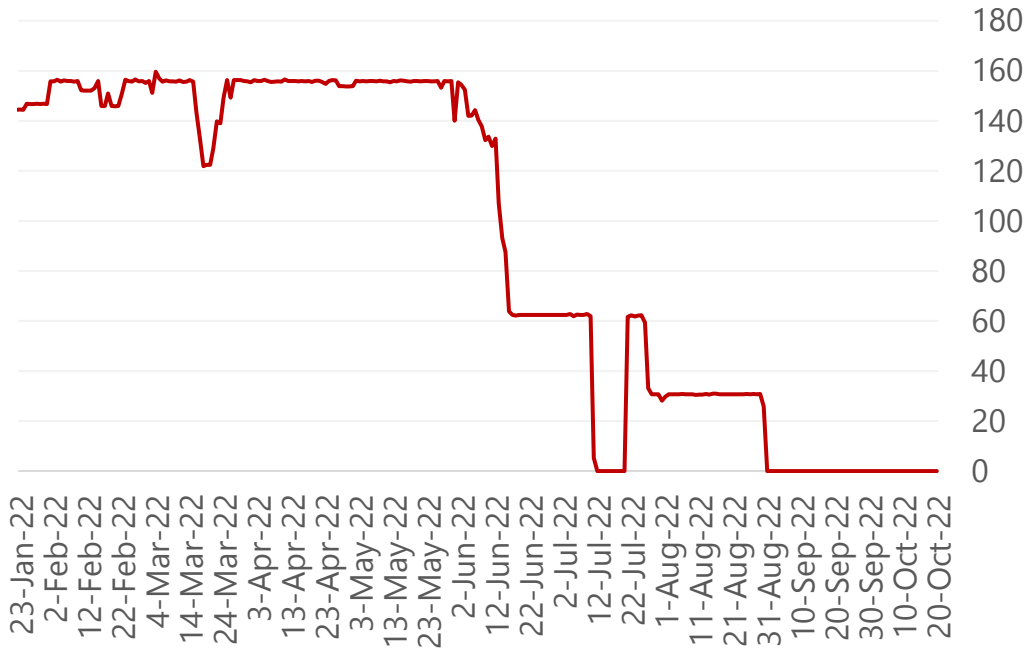
ENERGY

03

Natural Gas in Europe Recede Following Demand Destruction and LNG Imports

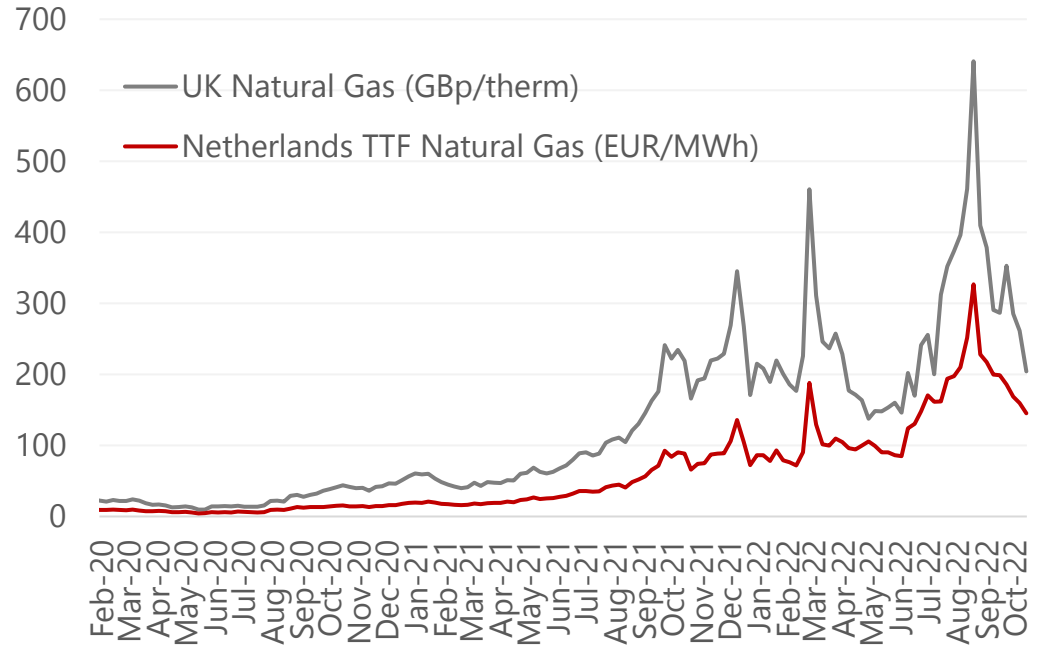
- Deliveries through the Nord Stream 1 have been completely halted. Demand destruction (especially in energy-intensive sectors) along with high LNG imports have contributed to the build of EU gas storage, now at 92%.

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



Sources: Bloomberg, Santander.

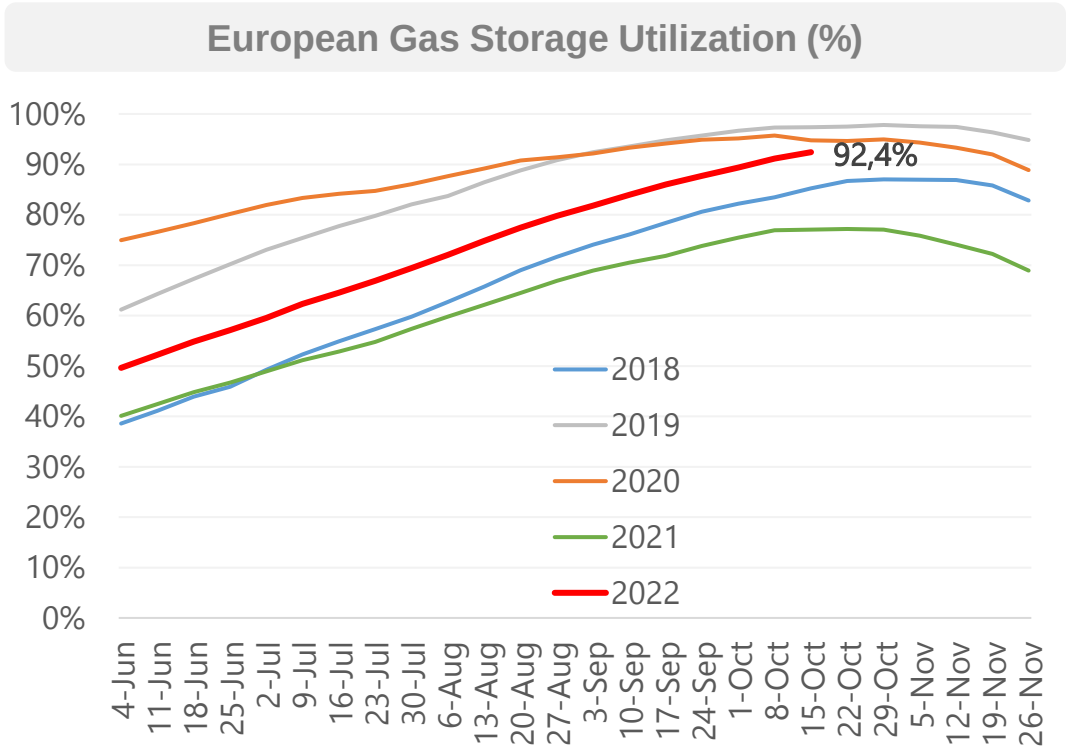
Europe Natural Gas



Sources: Bloomberg, Santander.

Natural Gas in Europe Recede Following Demand Destruction and LNG Imports

- Deliveries through the Nord Stream 1 have been completely halted. Demand destruction (especially in energy-intensive sectors) along with high LNG imports have contributed to the build of EU gas storage, now at 92%.

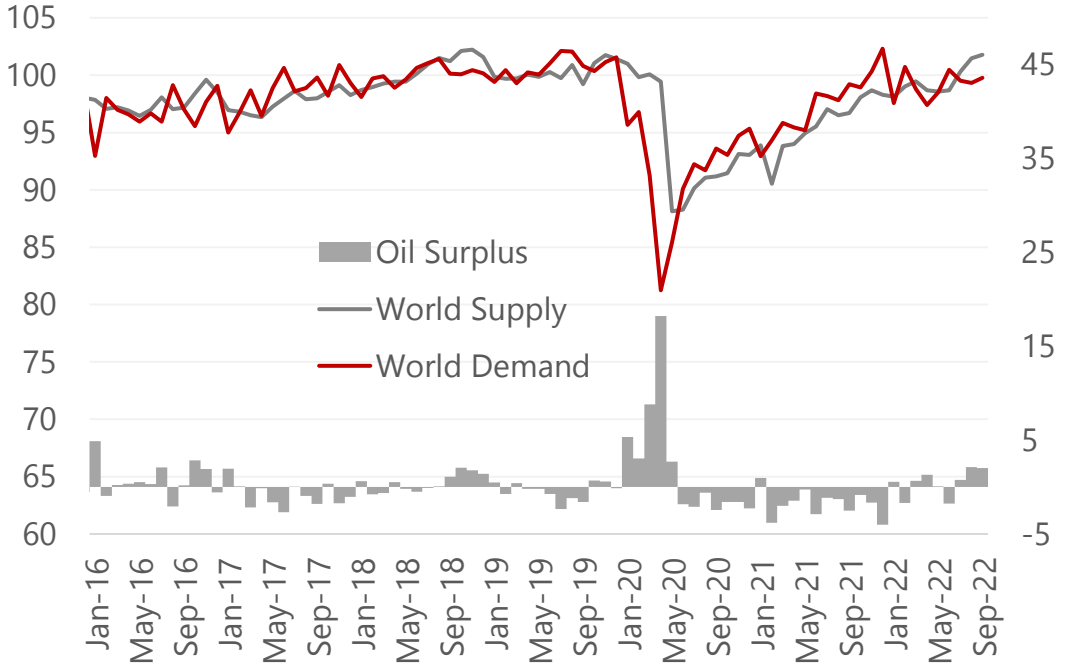


Sources: Bloomberg, Santander.

Geopolitical Shock Adds Volatility to a Constrained Market

- The global oil balance of supply and demand has been consistently running on deficit, though at the margin it has reversed.
- US crude inventories is below 2011-2015 levels when Brent crude oil stayed above $100/bbl, with strategic reserves drawing down (recently another 15 million tranch was announced).

World Oil Supply x Demand (mbd)



Sources: Bloomberg, Santander.

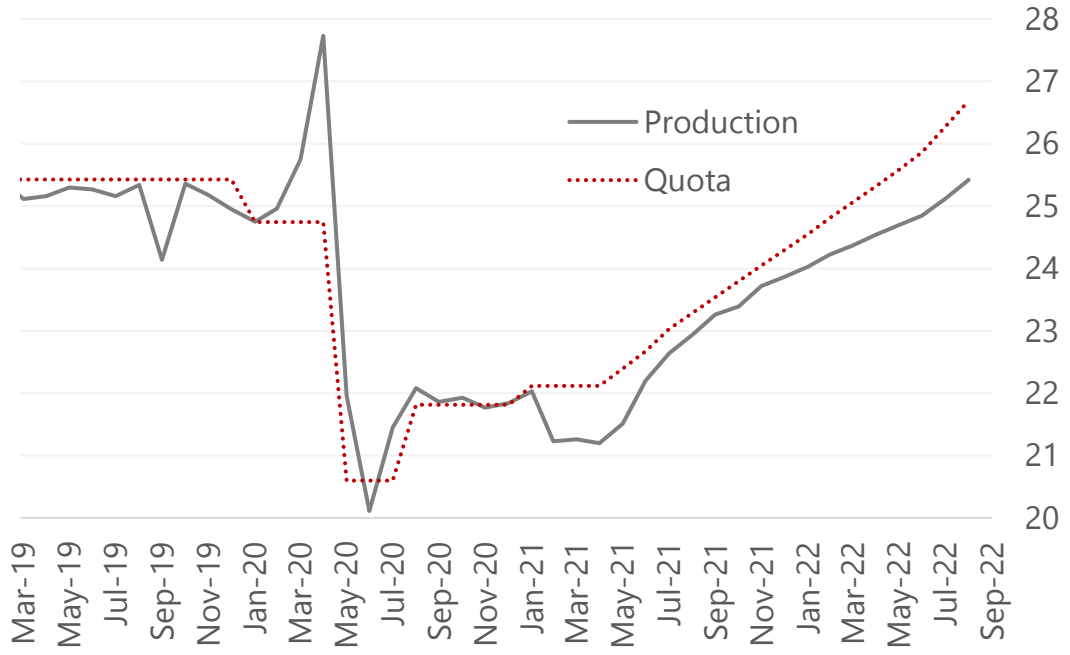
U.S. Total Oil Crude Stocks (million barrels)

Sources: Bloomberg, Santander.

Geopolitical Shock Adds Volatility to a Constrained Market

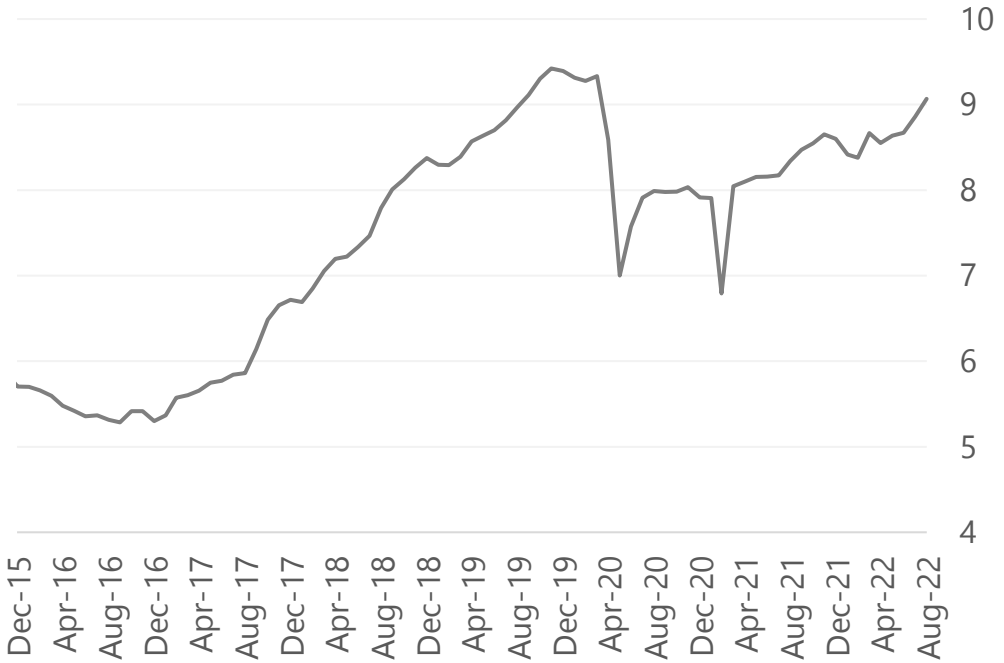
- The organization has been gradually increasing its production quota on a monthly basis. However, it has been failing to meet its target due to production shortfalls in several members, owing to low investments before and during the pandemic.
- US oil production is currently at 12.1 million barrels, 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)

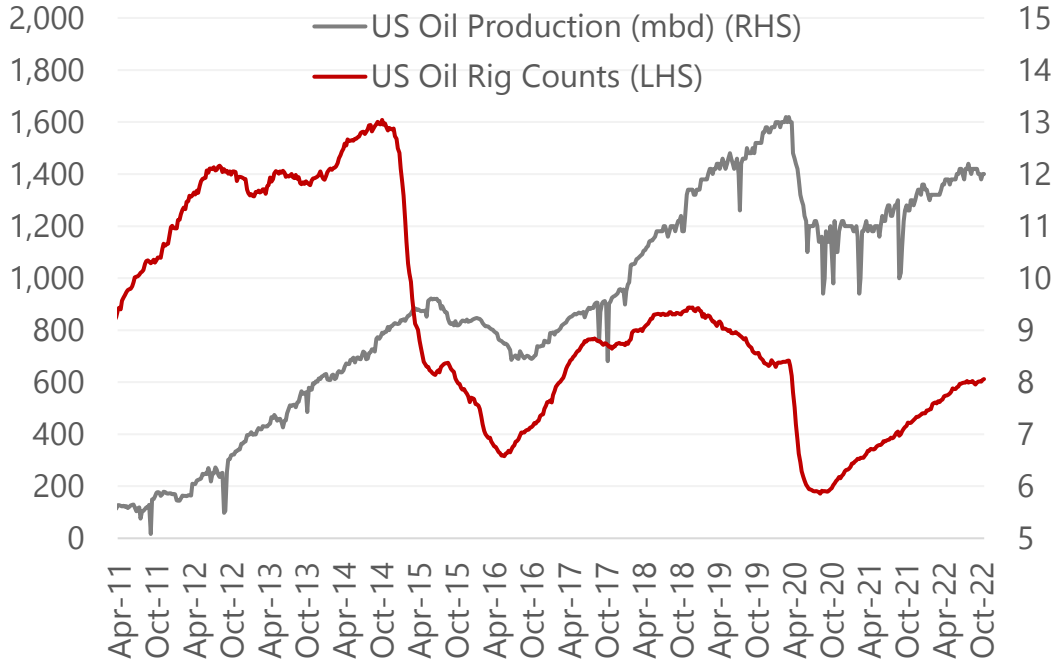


Sources: Bloomberg, Santander.

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, as we forecast Brent price forecast at US$100/bbl.

US Oil Production



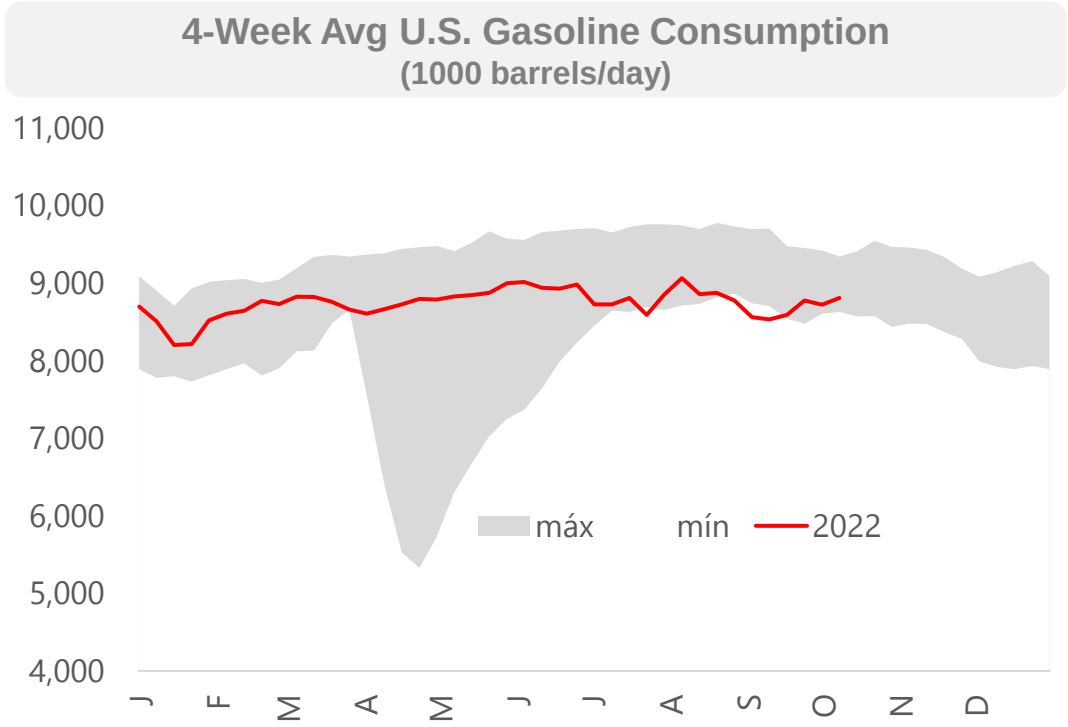
Sources: Bloomberg, Santander.

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.

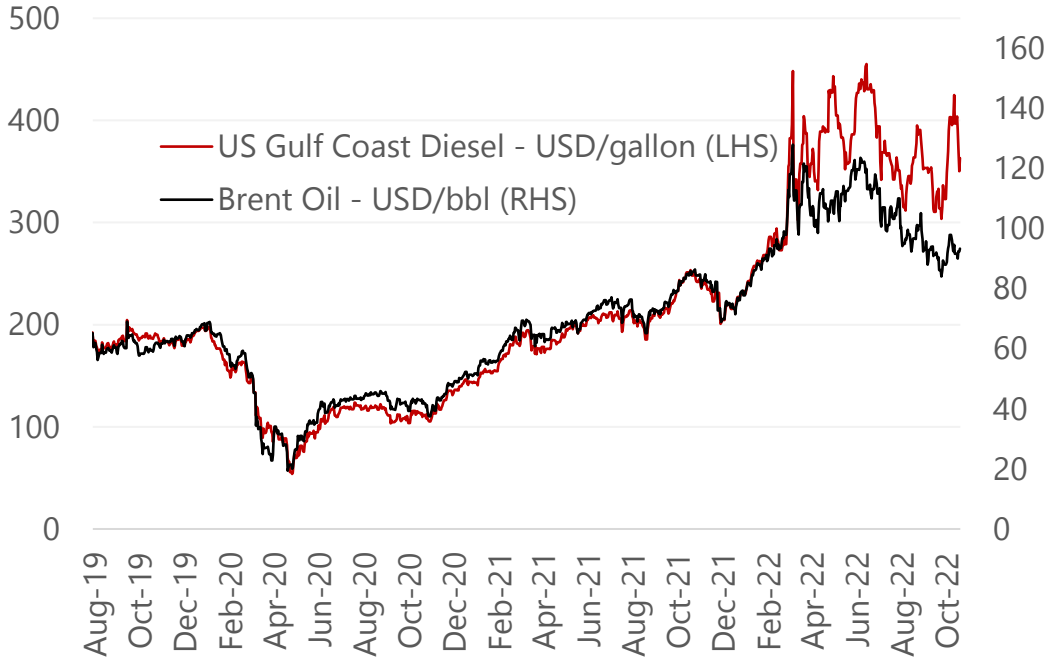


Sources: Bloomberg, Santander.

Diesel Shortage Looms Over Brazil, But Risks Have Decreased

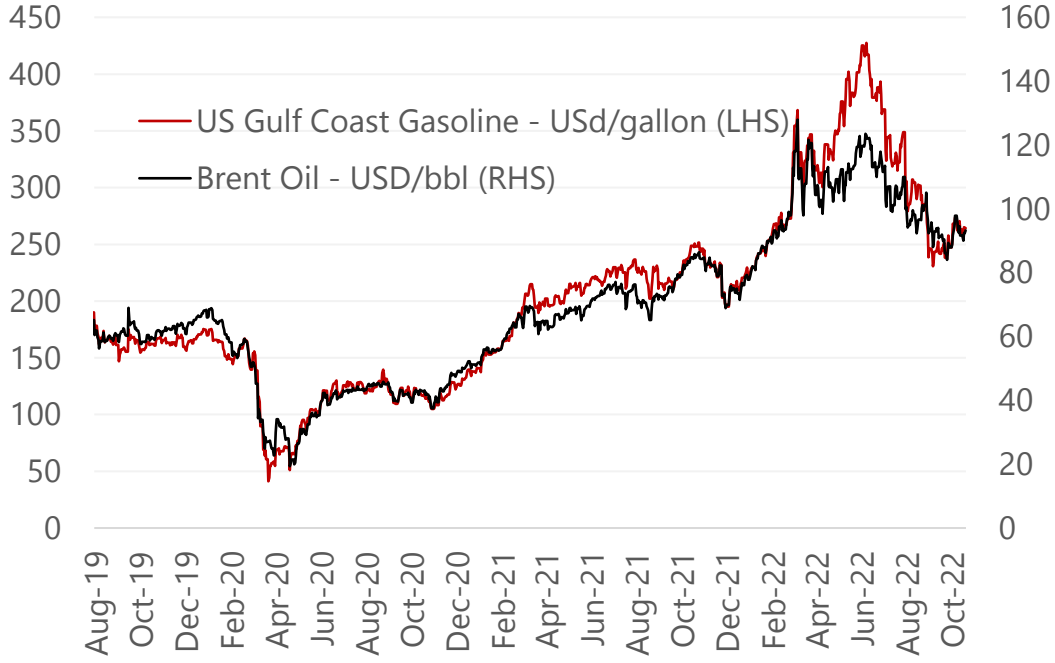
- Brazil imports nearly 30% of its domestic demand for diesel, of which 80% comes from the U.S. Gulf Coast.
- The gap between oil products (diesel and gasoline) and oil has narrowed recently, though for diesel it is still detached in historical terms. A peak of diesel demand is expect in Brazil in 3Q22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

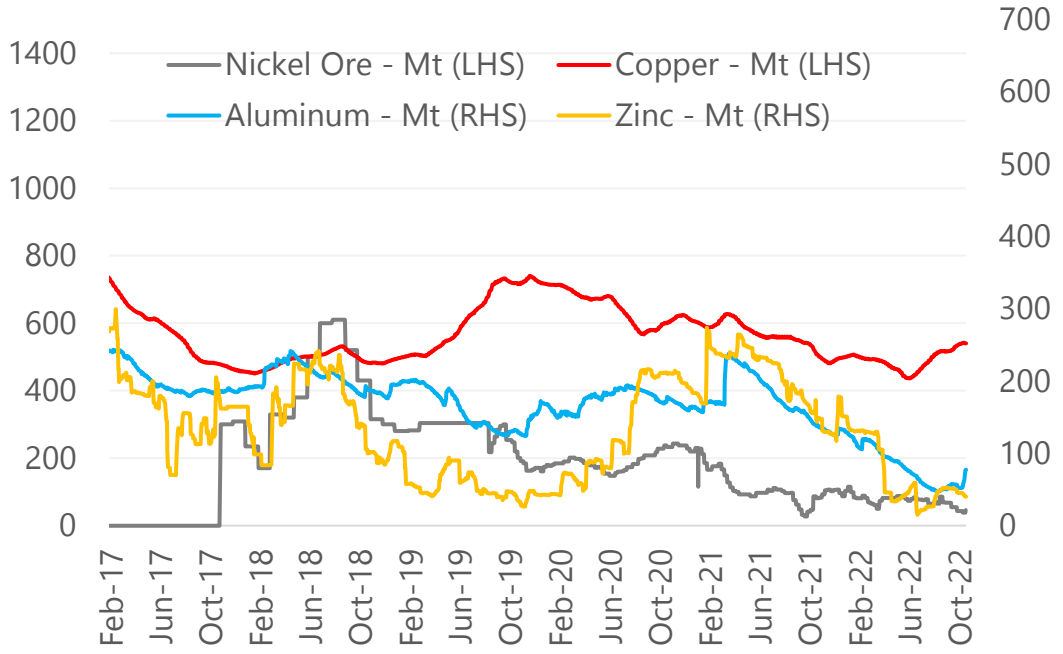
METALS

04

Several Metals Facing Low Stocks and High Production Costs

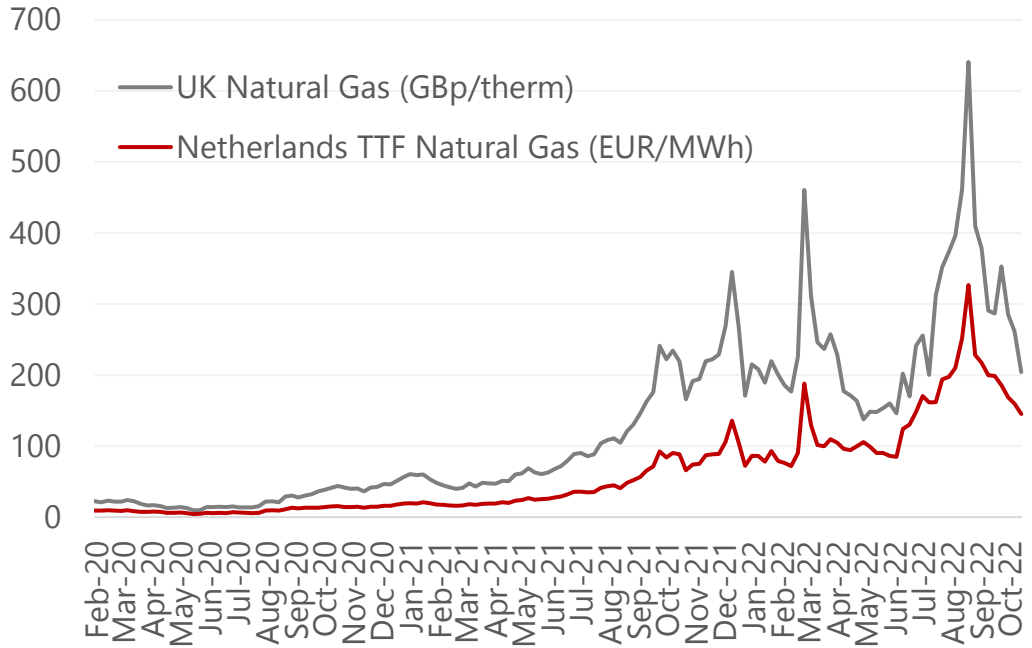
- From London to Shanghai warehouses, some metals have inventory levels at multi-year lows.
- The power crunch in China and Europe send prices up, raising concerns about supply shortage in industrial metals. The geopolitical shock adds to this already tight scenario.

Base Metals Inventories



Sources: Bloomberg, Santander.

Europe Natural Gas

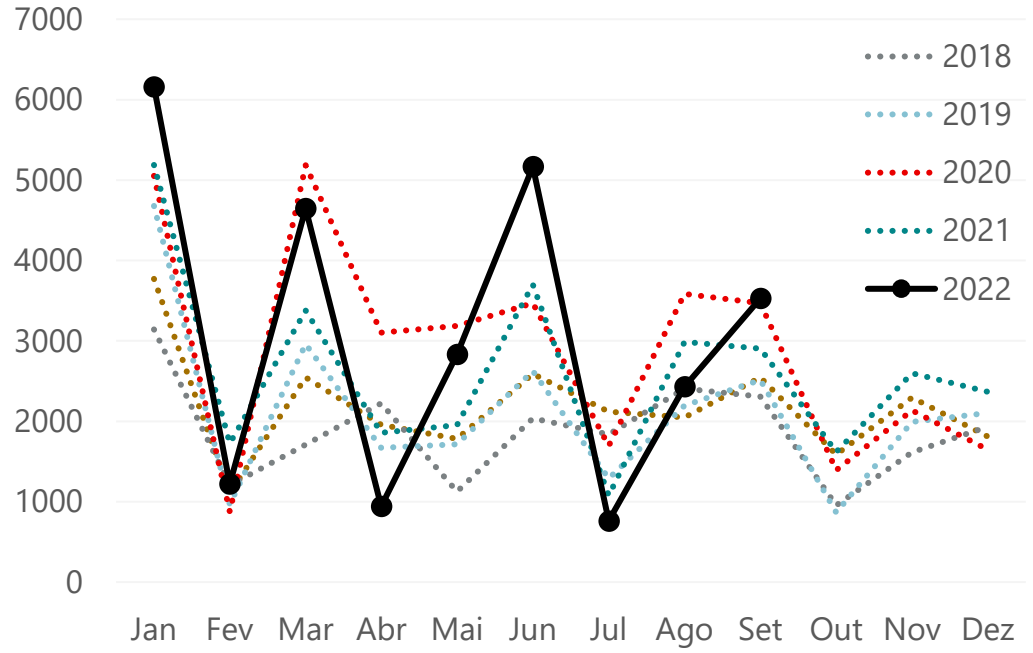


Sources: Bloomberg, Santander.

China Will Keep Adding Stimulus To Support Growth, But Zero-COVID Policy Remains

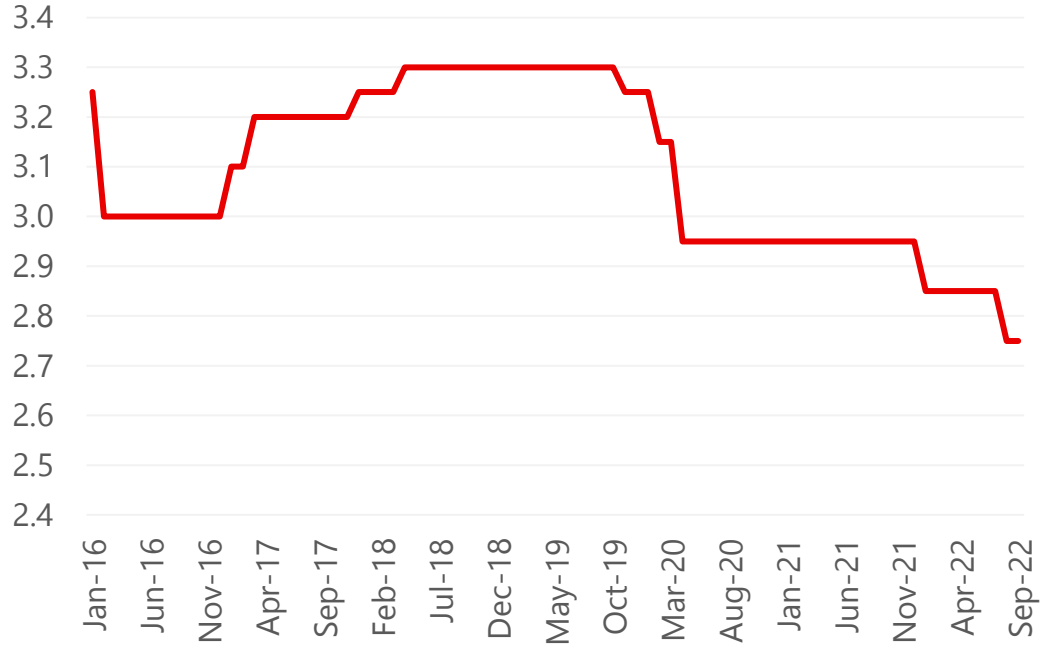
- The Chinese Communist Party, during the party's Congress, reaffirmed its commitment to the zero-COVID policy, signaling the likelihood of continued weakness in commodities demand.
- Mortgage boycotts have been spreading in China, deepening the real state crisis in the country. However, rumors that 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

China Will Keep Adding Stimulus To Support Growth, But Zero-COVID Policy Remains

- The Chinese Communist Party, during the party's Congress, reaffirmed its commitment to the zero-COVID policy, signaling the likelihood of continued weakness in commodities demand.
- Mortgage boycotts have been spreading in China, deepening 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.

Sources: PBOC, 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

Brazil Macroeconomic Research Team

Ana Paula Vescovi
Chief Economist
anavescovi@santander.com.br
+55 (11) 3553-8567

Mauricio Oreng
Head of Research & Strategy
mauricio.oreng@santander.com.br
+55 (11) 3553-5404

Jankiel Santos
Economist – External Sector
jankiel.santos@santander.com.br
+55 (11) 3012-5726

Ítalo Franca
Economist – Fiscal Policy
italo.franca@santander.com.br
+55 (11) 3553-5235

Tomas Urani
Economist – Global Economics
tomas.urani@santander.com.br
+55 (11) 3553-9520

Daniel Karp Vasquez
Economist – Inflation
daniel.karp@santander.com.br
+55 (11) 3553-9828

Lucas Maynard
Economist – Economic Activity
lucas.maynard.da.silva@santander.com.br
+55 (11) 3553-7495

Felipe Kotinda
Economist – Commodities
felipe.kotinda@santander.com.br
+55 (11) 3553-8071

Fabiana Moreira
Economist – Credit
fabiana.de.oliveira@santander.com.br
+55 (11) 3553-8071

Gilmar Lima
Economist – Modeling
gilmar.lima@santander.com.br
+55 (11) 3553-6327

Gabriel Couto
Economist – Special Projects
gabriel.couto@santander.com.br
+55 (11) 3553-8487

IMPORTANT DISCLOSURES

This report has been prepared by Santander Investment Securities Inc. ("SIS"; SIS is a subsidiary of Santander Holdings USA, Inc. which is wholly owned by Banco Santander, S.A. "Santander"), on behalf of itself and its affiliates (collectively, Grupo Santander) and is provided for information purposes only. This document must not be considered as an offer to sell or a solicitation of an offer to buy any relevant securities (i.e., securities mentioned herein or of the same issuer and/or options, warrants, or rights with respect to or interests in any such securities). Any decision by the recipient to buy or to sell should be based on publicly available information on the related security and, where appropriate, should take into account the content of the related prospectus filed with and available from the entity governing the related market and the company issuing the security. This report is issued in Spain by Santander Investment Bolsa, Sociedad de Valores, S.A. (“Santander Investment Bolsa”), and in the United Kingdom by Banco Santander, S.A., London Branch. Santander London is authorized by the Bank of Spain. This report is not being issued to private customers. SIS, Santander London and Santander Investment Bolsa are members of Grupo Santander.

ANALYST CERTIFICATION: The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed, that their recommendations reflect solely and exclusively their personal opinions, and that such opinions were prepared in an independent and autonomous manner, including as regards the institution to which they are linked, and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report, since their compensation and the compensation system applying to Grupo Santander and any of its affiliates is not pegged to the pricing of any of the securities issued by the companies evaluated in the report, or to the income arising from the businesses and financial transactions carried out by Grupo Santander and any of its affiliates**: Felipe Kotinda*.**

*Employed by a non-US affiliate of Santander Investment Securities Inc. and not registered/qualified as a research analyst under FINRA rules, and is not an associated person of the member firm, and, therefore, may not be subject to the FINRA Rule 2242 and Incorporated NYSE Rule 472 restrictions on communications with a subject company, public appearances, and trading securities held by a research analyst account.

The information contained herein has been compiled from sources believed to be reliable, but, although all reasonable care has been taken to ensure that the information contained herein is not untrue or misleading, we make no representation that it is accurate or complete and it should not be relied upon as such. All opinions and estimates included herein constitute our judgment as at the date of this report and are subject to change without notice.

Any U.S. recipient of this report (other than a registered broker-dealer or a bank acting in a broker-dealer capacity) that would like to effect any transaction in any security discussed herein should contact and place orders in the United States with SIS, which, without in any way limiting the foregoing, accepts responsibility (solely for purposes of and within the meaning of Rule 15a-6 under the U.S. Securities Exchange Act of 1934) for this report and its dissemination in the United States.

© 2021 by Santander Investment Securities Inc. All Rights Reserved.