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Chinese demand and the impact in metal and agricultural commodity prices

Priscila Trigo
Fabiana D'Atri

Strong global demand – particularly from China – has been keeping commodity prices at high levels. This is added to short- and medium-term supply restrictions and high global liquidity, stemming from the stimuli adopted to cushion the pandemic's impacts. In our view, China's demand for metals to be used in infrastructure, housing sector and the industry itself has been the main driver. Regarding agricultural commodities, the replenishment of swine herds has driven grain consumption, ultimately placing China as a major corn importer. We believe commodity prices will start to drop moving forward, as new production capacity comes into play and demand stabilizes, largely due to the migration of consumption from goods to services, as economies start to fully reopen. In this sense, China's demand for metal commodities remains high in the second half of the year, albeit on a downward trend, which suggests some relief in prices. As for grains, the new market dynamics continue to drive prices up, but the rising supply also tends to bring some relief in the second half of 2021 and especially in 2022.

Our models indicate that current commodity prices are approximately 20% above fundamentals. This rate is based on a model that explains the behavior of the future CRB index in relation to global growth (demand proxy) and the DXY index (to capture dollar pricing trends). A portion of current pressures relates to restrictions to the expansion of supply. Another portion is due to the high level of liquidity and greater inflationary risk, maintaining the position of funds purchased in commodities. The difference is even greater when it comes to metal commodities: fundamental prices point to values around 30% to 40% lower than current rates. Without major projects bringing in added capacity in recent years, metal commodities have a greater supply restriction, which explains this gap. In addition, structural shifts in demand, such as those related to sustainability[1], cannot be captured by the GDP.

Agricultural commodity prices, in turn, have already reversed some of the upswing in recent weeks, and therefore are closer to fundamental prices: models indicate that current prices should drop approximately 10%. We know that short-term supply restrictions tend to keep prices higher. However, as current prices make the activity quite profitable, crop area expansion and use of technology tend to boost harvest yields in subsequent years (evidently disregarding climate-related issues), ensuring a better balance between supply and demand, while also taking some of the pressure off of the prices. With that in mind, it is important to delve deeper into the main drivers of demand, particularly in China.

Table 1: Current prices vs. commodities fundamentals

	14/jul	fundamentals	difference
CRB	214	170	-21%
CRB – agricultural	617	550	-11%
CRB – metal	340	234	-31%
Iron ore	212	120	-43%

Source: Bloomberg, Bradesco

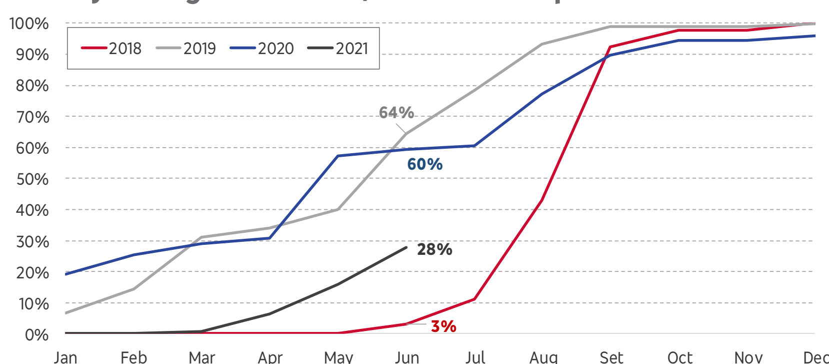
[1] The adoption of more sustainable measures leads to a structural change in the demand of some metal commodities. A particularly noteworthy example is the demand for copper for electrical cabling and aluminum and nickle, used in wind turbine blades.

The dynamics of China's economy following the pandemic have been focusing on supply: the industry and investments have been driving growth. On the industrial side, China's effort has always been on keeping activities "up and running", even with mobility restrictions. At the same time, the upsurge in global demand for goods ensured an exceptional performance in exports since the second quarter of last year, covering everything from sales of healthcare equipment, to electronics and assorted consumer goods. The infrastructure and housing sectors have also underpinned China's economy. The strong credit expansion and issuance of bonds from local governments explain the solid performance of such important drivers of metal commodities.

We expect some moderation in China's growth in the second half of the year, falling back to a pace closer to pre-pandemic levels: between 5.5% and 6%. The normalization of the monetary policy – underway since late last year – is the main driver behind this slowdown, which also implies a high level of demand. In addition, even if we assume some deceleration in exports in the second semester – considering the expected migration of global consumption from goods to services –, they will remain above the historical trend. That is because the cycle of inventory replenishment and reestablishment of global chains should still take some time, also considering that Asian neighbors have struggled with major production restrictions, as a result of the pandemic – making room for Chinese sales in the global market.

For the housing sector, in addition to a drop in demand, the adjustment in credit offering and lower supply of lands point to a deceleration in the sector moving forward, following a strong upsurge during the pandemic, caused by a greater precautionary demand for real estate. There is an additional risk stemming from potential restrictive measures applied by local governments to curb rising property prices. Regarding infrastructure projects, however, we expect an upturn in the next few quarters. That is because only 28% of the annual bond issuance quota of local governments was used in the first half of the year (compared to 65% in 2019 and 2020). There is a risk in this cycle, considering a highly rigorous project approval process – which could result in not all funds raised in the market to be reversed into projects.

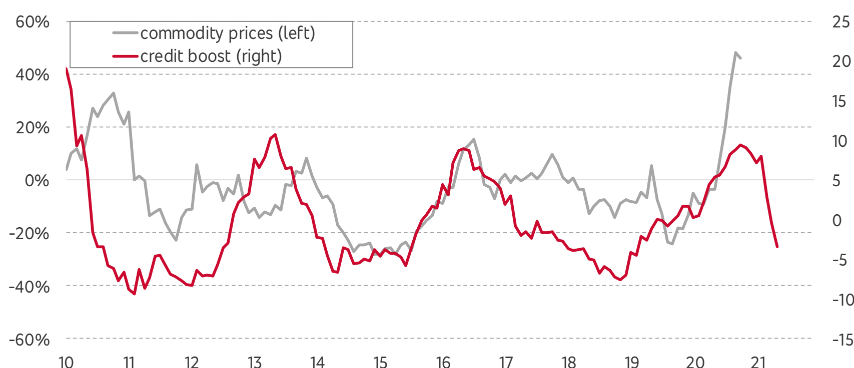
Chart 1: Bond issuance by local governments, % of annual quota



Source: CEIC

Therefore, from the standpoint of Chinese demand, we believe that the normalization of the economic policy has advanced significantly. Moving forward, measures tend to be increasingly targeted, and we underline the bearish risk over the housing sector. Conversely, we expect some relief in the funding of local governments (through the acceleration of bond issuances) and a loosening of the monetary policy for smaller companies – struggling with weaker financial conditions due to the strong upsurge in costs caused by rising commodity prices. In fact, the mandatory 0.50-p.p. cut, in effect as of July 15, hints to Chinese authorities' willingness to support the economy.

Chart 2: Credit boost in China and commodity prices
YoY change, commodity prices with 6-month lag



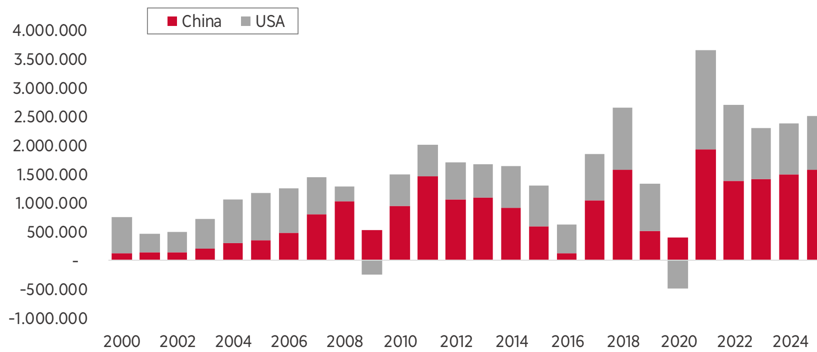
Source: Bloomberg

In addition, we must also consider two important drivers of the demand for metal commodities. The Chinese government has intensified actions to control pollutant emissions, and these actions should be considered to be permanent. Efforts towards a green economy are one of the pillars of Chinese politics, and that implies closing up production capacity, especially in steel and coal production. Some speculate that China will end up importing more steel in the near future, as a way to "export pollution". In fact, production restrictions have been imposed across multiple Chinese provinces since March, particularly in the city of Tangshan. The second point relates to the Chinese government's effort to contain the upsurge in commodity prices, reducing the speculative component, according to the government. Multiple measures have been adopted, such as selling strategic stocks, tweaking pricing (reducing the market's role in this process), increasing financial restrictions, among others. In our view, these measures help contain the speculative bias, but price trends should be determined by the balance between supply and demand. Regarding the latter, restrictive measures such as those imposed in the housing sector tend to be more effective.

The end result, for metal commodity prices, tends to be slightly bearish in the second half of the year. On the bearish side, we expect a gradual migration of the demand for goods into services, as the housing sector continues to lose momentum. Moreover, the Chinese government's attempt to contain speculative bias also limits potential highs over the next few months. On the other hand, infrastructure works should help drive the consumption of metal commodities in the second half, provided that the project approval process becomes less rigorous. Finally, the closing of production capacity in times of strong demand puts more pressure on prices. All of these factors suggest that, despite the weaker demand, the restriction in supply tends to keep prices above fundamentals.

Finally, we know that the pressure in demand does not come solely from China. The following chart clearly illustrates the growth shock faced by the global economy as it emerges from the pandemic crisis. The additional GDP from China and the U.S. in the 2021 and 2022 cycle alone covers most of the upturn in commodity prices. The promised infrastructure packages in the U.S. and investments in a "green" economy may already be having an impact on the prices of some commodities. In addition, we know that the breakdown of this GDP was much more concentrated in the consumption of goods over services, with an important upturn in the housing sector. Although some moderation in the global growth rate is expected over the next few quarters, as the economic policy (fiscal and monetary) normalizes, and with the threat of the pandemic still looming over the world, the vaccination rollout, reopening of economies, improvement in job markets and accumulated savings ensure an expansion rate above the historical standard for some time.

Chart 3: U.S. and China GDP, YoY change in USD billion



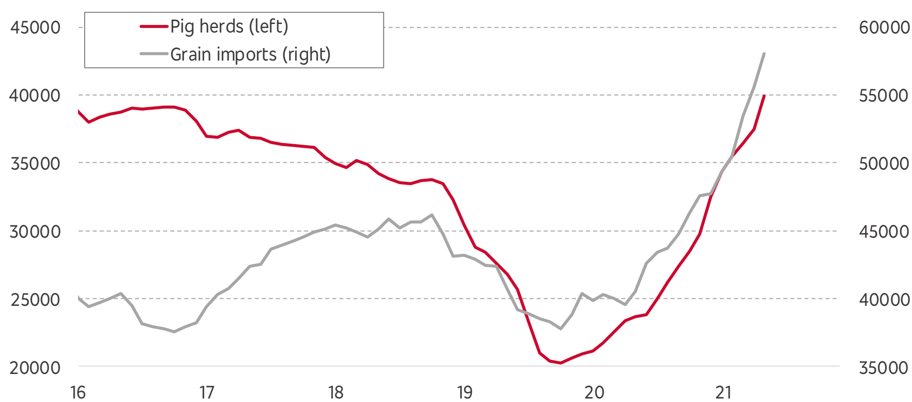
Source: IMF

In the case of agricultural commodities, global demand, supported by countless economic stimuli, has also advanced at high rates, while supply has grown timidly. Regarding grains, coffee and sugar also face supply restrictions from previous harvests (grains) or in this harvest (sugar and coffee), and it is estimated that another two positive annual harvests are needed to adjust inventory levels, which are well below the historical average.

Changes in swine farming activities in China led to a higher consumption of grains and increased the expansion rate of the global demand for soybeans, corn and wheat. In fact, China was no longer self-sufficient in corn production in 2018 and became a major corn importer last year, accounting for 14% of global imports. The same is true for wheat, albeit at a lower intensity: Chinese consumption surpassed local production last year, but China's imports accounted for only 5% of global imports. Finally, China has not been self-sufficient in soybean production since 1993, and the country accounted for nearly 60% of global imports in the last crop year. With the Chinese herd virtually recomposed, demand for grains will continue to be positive, albeit at a slower growth rate. This is a structural and permanent change. However, there is a general notion that swine farming tends to drop in China in the second half of the year, reflecting negative margins in the activity. Because of that, the growth in China's demand for grains also tends to lose steam, albeit still maintaining high levels, generated by the greater use of feed products in swine farming.

Chart 4: Chinese swine herds and grain exports

In 10,000 heads and USD mi accumulated in 12 months



Source: Bloomberg, CEIC

Moreover, the trade agreement signed between China and the U.S. in early 2020 also favors a greater grain demand. That applies to purchases in the U.S., which indeed occurred last year. However, since the country came from a crop loss in 2019, the increase in China's demand last year further reduced the U.S. stocks-to-use ratio, which is currently at its lowest rate since 2012 – equivalent to a crop-loss scenario.

Finally, the reopening of bars and restaurants is another important point to determine the global demand for food products. The advance of vaccination rollout efforts and broader reopening of these establishments, as well as the demand for some food products, should remain stable or even grow from now on. In this sense, there is no significant relief in the demand for agricultural prices. That explains the higher fundamental prices.

With a stronger demand, the attention now turns to crop yields in the U.S. and Brazil. U.S. crops should show better results, according to USDA estimates. However, July is a crucial months for corn and soybean development. The rainfall forecast for the next few weeks suggests positive crop results, with a still high yield, but there are still lingering risks that must be monitored. In Brazil, crops start being planted in September and an increase in crop area is expected for soybean and corn. For now, climate models show La Niña coming into play as of September, extending until May 2022. However, these models have been quite volatile in recent months and there is still much uncertainty surrounding these estimates. This scenario could lead to a loss in productivity in the south-central region of Brazil and Argentina. For a full harvest, weather neutrality would be required in the next few months, which, coupled with an increase in area, would lead to a new record in soybean production, and possibly corn as well.

In the absence of climate issues, prices tend to continue dropping. That is especially true for 2022 and 2023, when positive crops in the northern and southern hemispheres add up to replenish global stocks. This year, even with a full harvest in the U.S. (already accounting for the Brazilian harvest), prices should remain slightly above fundamentals.

In conclusion, we have maintained scenario of dropping commodity prices in the next few quarters, particularly in 2022. The stronger U.S. dollar, moderate growth in China, and the gradual addition of supply apply such bearish bias to current prices, as indicated by the futures market. Meanwhile, we realize that there are structural factors (higher demand for metal commodities due to sustainability issues, and grains in swine farming) and short-term supply restrictions (e.g. closing of units, fewer projects deployed, and climate risks), which limit the negative bias for metal and agricultural commodity prices.

Technical Staff

Director of Economic Research and Studies	Fernando Honorato Barbosa
Economists	Ana Beatriz Moreira dos Santos / Constantin Jancsó / Ederson Luiz Schumanski / Fabiana D'Atri/ Felipe Wajskop França / Myriã Tatiany Neves Bast / Priscila Pacheco Trigo / Renan Bassoli Diniz / Robson Rodrigues Pereira / Thiago Coraucci de Angelis
Interns	Bruna Andreata Valentino / Henrique Monteiro de Souza Rangel / Lorena Pires Sene / Lucas Daniel Duarte / Rafaela de Sousa Silva

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