The Chamaeleo Optimus Fund

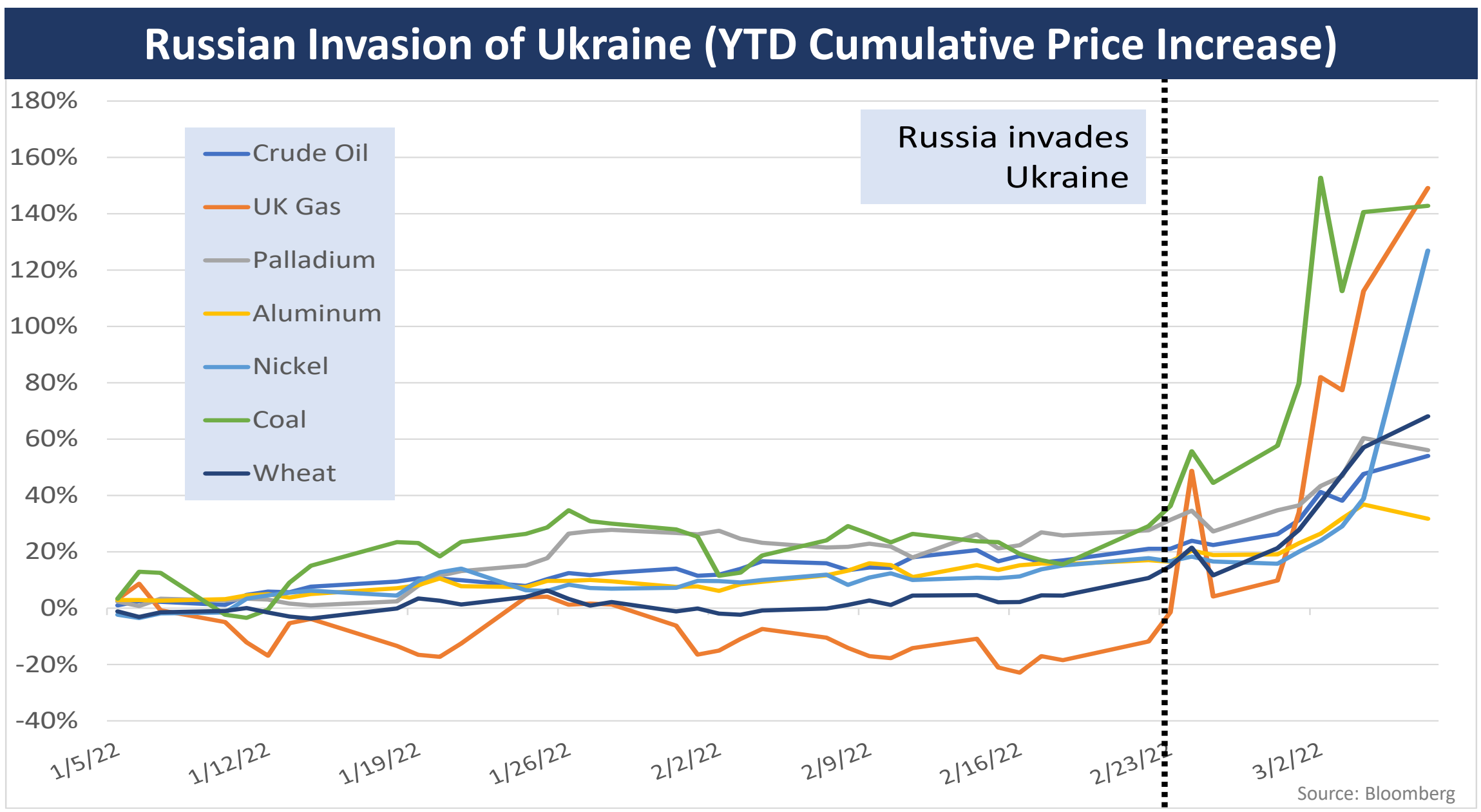
April 2022

Chamaeleo

Market Commentary

Commodity Market Executive Summary

Commodities finished the best quarter in over 30 years. As we alluded to in our previous market report, inventory deficits across commodity sectors have existed for some time driving backwardation in their term structures and now Russia's invasion of Ukraine has amplified the market rally. Russia ranks number one, two and three, respectively, among the world's exporters of natural gas, oil and coal. Europe gets the bulk of its energy from its eastern neighbor. Russia also accounts for half of America's uranium imports. It supplies a tenth of the world's aluminum and copper, and a fifth of battery-grade nickel. Its dominance in precious metals such as palladium, key in the automotive and electronics industries, is even greater. It is also a crucial source of wheat and fertilizers. The war has disrupted shipping on various commodities, curtailing supply and igniting sharp price swings across the complex. An even more dire scenario would be if Russian decided to weaponize its commodity exports. Any increase in geopolitical turmoil, such as nuclear war, would support gold and silver as safe-haven investments. The resurgence in prices extends last year's rebound, which was driven by higher consumer demand for goods and services when the economy reopened after the COVID-19 pandemic.



Despite the impressive performance, several threats are lurking that have caused our price outlook to remain cautious. First, global economic growth is slowing which translates into moderating demand for commodities. In fact, according to the Commerce Department, the U.S. economy contracted by 1.4%

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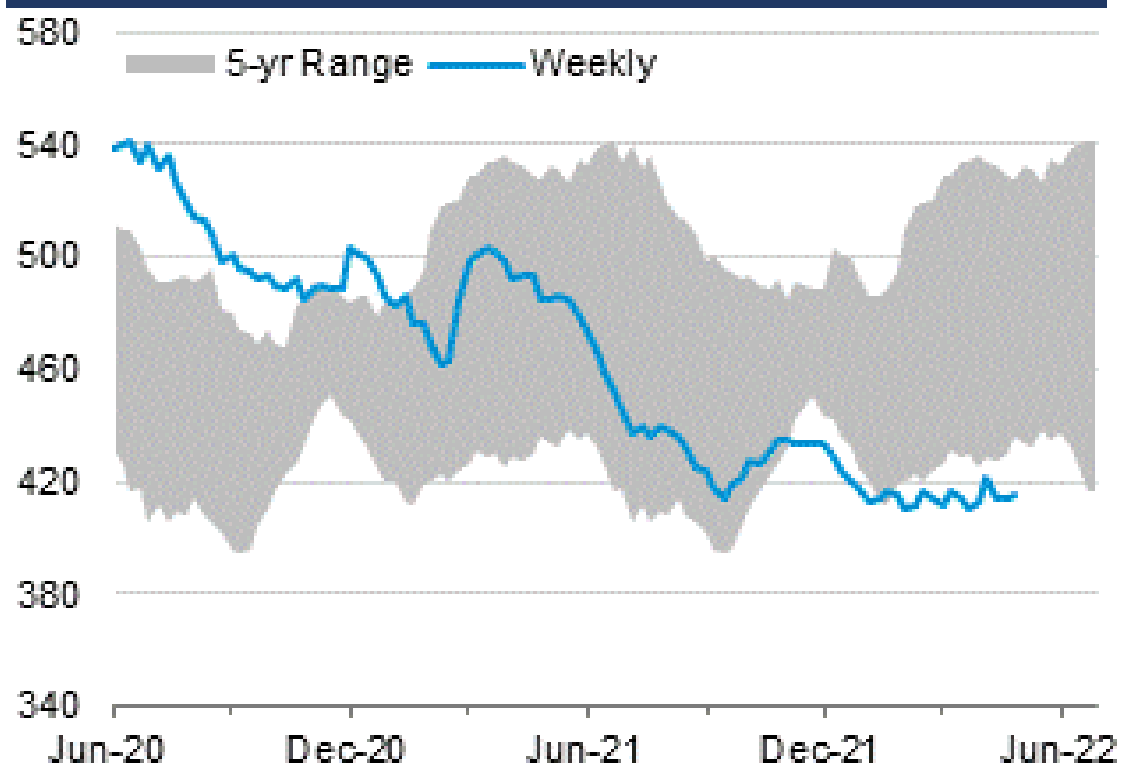
Market Commentary

Commodity Market Executive Summary (Continued)

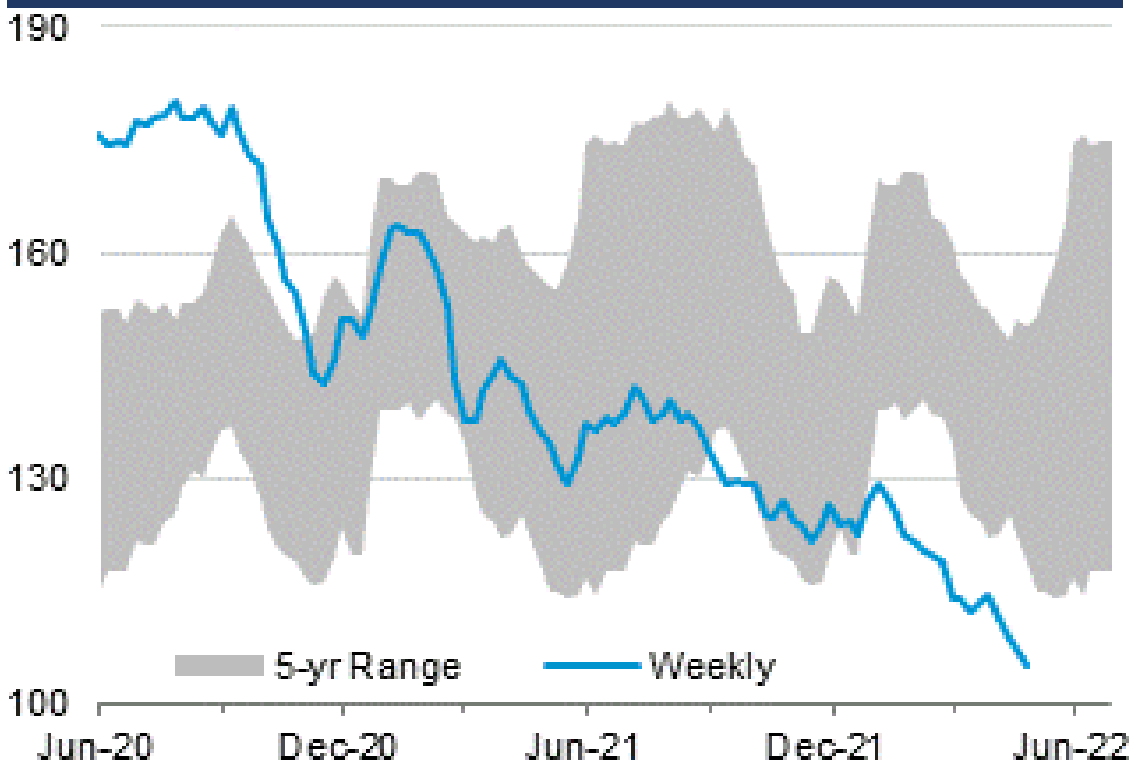
during the first quarter. However, the drop stemmed from a widening trade deficit while consumer and business spending remained strong. Chamaeleo's economic growth barometer has not registered a contraction so although growth is indeed slowing, we do not have concerns of a recession at this time. Secondly, inflation has reached levels where demand destruction occurs as consumers are feeling the impacts of high prices. In March, consumer prices were 8.5% higher than a year earlier, the fastest annual rise since 1981. According to the Economist, nearly a fifth of Americans say inflation is the country's most important problem. This consequently leads to the next caveat which is the Fed's hawkish stance to combat inflation. The Federal Reserve delivered an expected 50bp hike and is beginning to shrink its $9 trillion asset portfolio. The moves are a double-sided effort to slow the economy and ease price pressures that are at a four-decade high. Finally, China is facing one of its largest COVID-related challenges since the early stages of the pandemic. COVID related lockdowns continue to spread throughout China as the country implements its Zero-COVID policy. Having considered the above caveats, Chamaeleo still remains constructive on those commodities driven by supply constraints.

U.S. Oil Inventories (Million Barrels)



Source: EIA

U.S. Distillate Inventories (Million Barrels)



Source: EIA

Energy

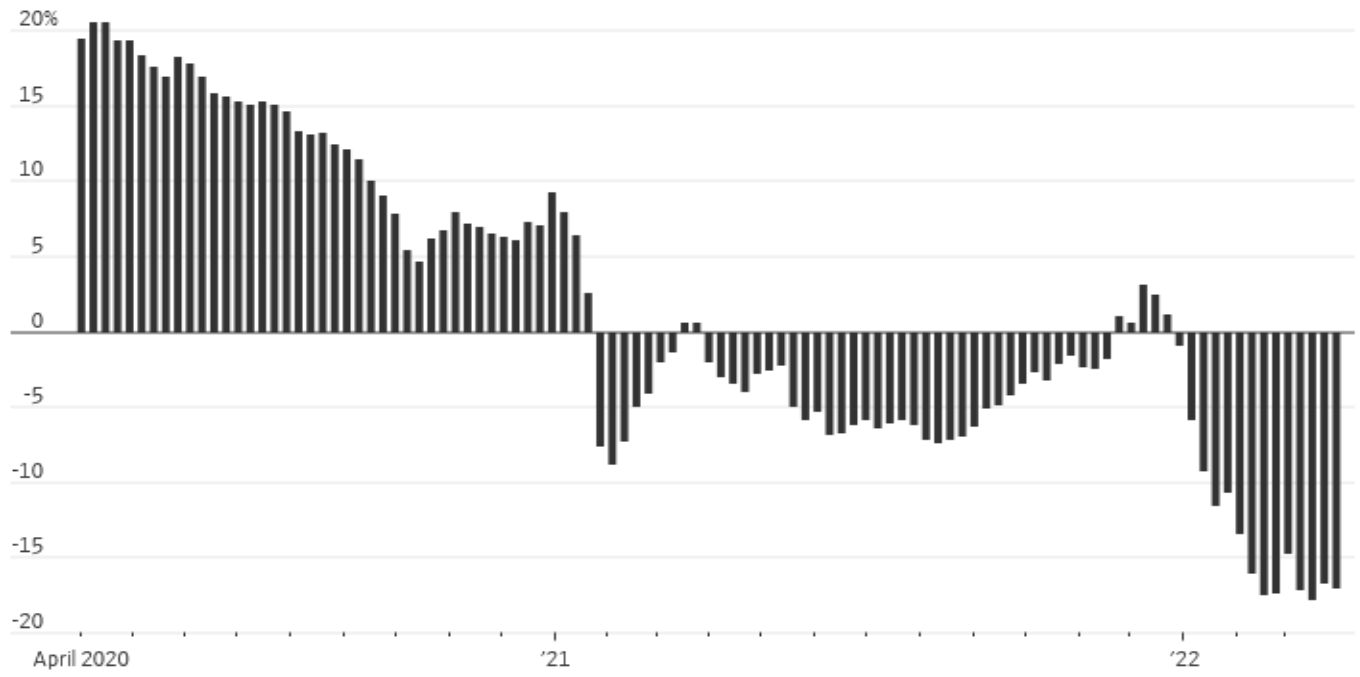
Chamaeleo is modestly bullish on oil and petroleum products, given the caveats above. As we mentioned in our previous newsletter, fundamentals have supported higher prices for some time now, and since Russia invaded Ukraine, the situation has become critical. Last year, Russia supplied Europe with 38% of its oil and petroleum imports as the world's second-largest exporter of oil. Fear over possible supply disruptions caused oil prices to soar. America announced an embargo on Russian oil on March 8th, although it buys most of its oil from other countries. Britain and now Germany are poised to stop buying Russian oil and the European Union has proposed a ban on Russian oil by the end of the year,

Market Commentary

Energy (Continued)

with restrictions on imports introduced gradually until then. Among the oil complex, heating oil futures (now mostly represented by ultra-low sulfur diesel due to environmental related changes) in the U.S. recently hit an all-time high (nearly $6/gallon) amid plummeting distillate inventories as exports to Europe have dramatically increased since the start of the year.

U.S. Natural Gas Inventories



Source: EIA, Chamaeleo Research

As a side note, distillate inventories represent all grades of diesel fuel as well as higher sulfur types of fuel oil such as heating oil. European economies are facing a shortage of diesel fuel as Russia accounts for approximately half of Europe's diesel imports. Not only is diesel fuel used for heavy machinery, transportation, and farming, but it is also used for power and heating. In the power industry, baseload combined cycle electric generators (that run 24x7 for a base level of continual electric load) as well as peaking generation units (that fire up on short notice when temperatures rise or fall) have the ability to switch between natural gas and diesel fuel. The ramifications of Europe's gas crisis have caused the demand for diesel fuel to dramatically rise in recent months as diesel fuel can more easily be transported internationally than Liquified Natural Gas (LNG).

Chamaeleo shifted our view on natural gas prices in late January and is now bullish. Increased heating demand for natural gas late this past winter resulted in more withdrawals from U.S. natural gas storage than normal. By the end of March, U.S. natural gas held in underground storage was at its lowest level since 2019. This is a consequence of increased residential, commercial, and electric power demand for natural gas. More heating demand and record-high LNG exports resulted in above-average withdrawals from working natural gas storage. Producers of natural gas are skeptical about increasing supply as they learned a lesson during the shale boom when prices collapsed. Rather, they are acting on their bullish outlook by stepping up their own share repurchases.

There is also a geopolitical premium to some degree in the price of natural gas as Russia supplies Europe with approximately 31% of its gas. Recently, Russia halted gas flow to Poland and Bulgaria until payment demands were met in rubles. European natural gas inventories are low along with coal, so LNG imports to Europe are critical. Although the Biden administration is asking U.S. natural gas companies to reroute LNG cargos to Europe, there is not currently enough U.S. LNG export capacity to alleviate the shortage. Expanding U.S. LNG volumes would require new, multibillion dollar export terminals which traditionally have required long-term contracts from buyers to line up financing. U.S. and European officials have previously expressed opposition to such long-term contracts which could lock in fossil-fuel supplies for decades, conflicting with the goal of reducing greenhouse gas emissions. However, in recent weeks, they have reversed course and are now supportive, given the objective of reducing dependency on Russian supplies.

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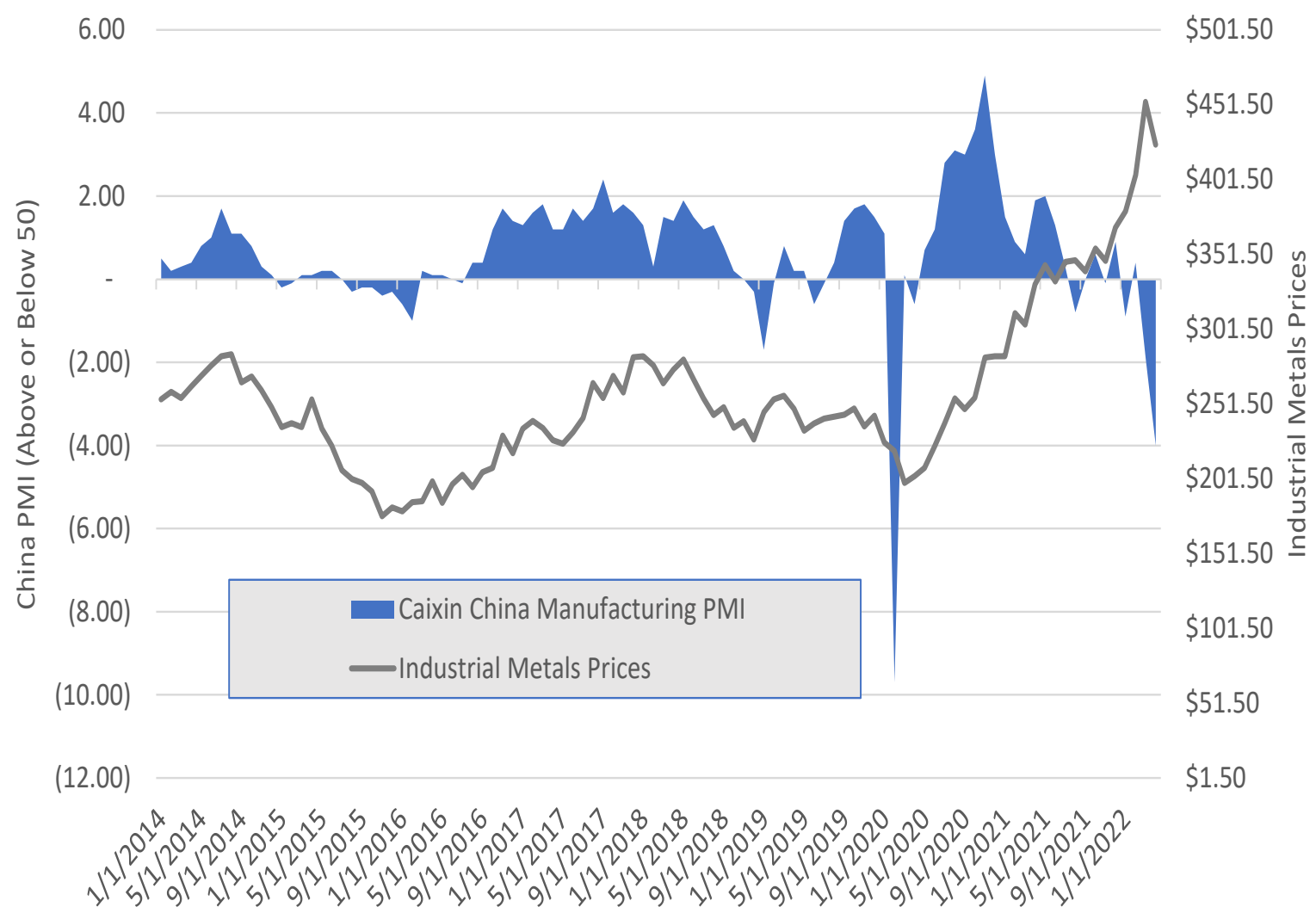
Market Commentary - Continued

Industrial Metals

Chamaeleo is cautiously bullish across most of the industrial metals complex with the Chinese economy a major concern as China's share of world consumption of industrial metals is nearly 50%. The Caixin manufacturing PMI dropped to 46, indicating the third contraction this year. Despite this, the sector continues to be predominantly driven by supply risks. Lithium has been the best performing industrial metal this year, rising over 150%. This price increase fuels worries about long-term shortages of a vital ingredient in the rechargeable batteries that power everything from electric vehicles to smart phones. Aluminum prices have been supported because the output of Europe's power-hungry aluminum smelters and refiners is at risk from the region's extremely high electricity prices. Moreover, the Rusal-owned Ukrainian alumina refinery in Mykolaiv had to stop operations in early March due to the war. All this while London Metal Exchange (LME) inventories are at their lowest since 2007. Zinc prices have been affected by many of the same factors as aluminum. High power costs in Europe are driving smelter curtailments. Zinc is also impacted by the Russian invasion of Ukraine as sanctions are imposed on Russian refined zinc exports. Russia controls slightly more than 2% of the global mine supply. Nickel had a historic month as the war in Ukraine triggered Western sanctions on Russia, which controls 10% of global supply. This major threat to supply occurred when the market was already in deficit (see last quarter's market report) and facing strong demand from electric vehicles. Meanwhile on the LME, major Chinese producers had large short positions (as a hedge) and difficulty meeting their margin calls with rising prices moving against their positions. The concentration of these LME short positions triggered a massive, short squeeze that led to a 250% surge in nickel prices for two days in March. Chamaeleo is currently short copper prices in light of China's COVID lockdowns and how reduced exposure to the Russia/Ukraine conflict has more than offset supply disruptions in Chile and elsewhere.

China Manufacturing versus Industrial Metals Prices



Source: Bloomberg, Chamaeleo Research

Market Commentary - Continued

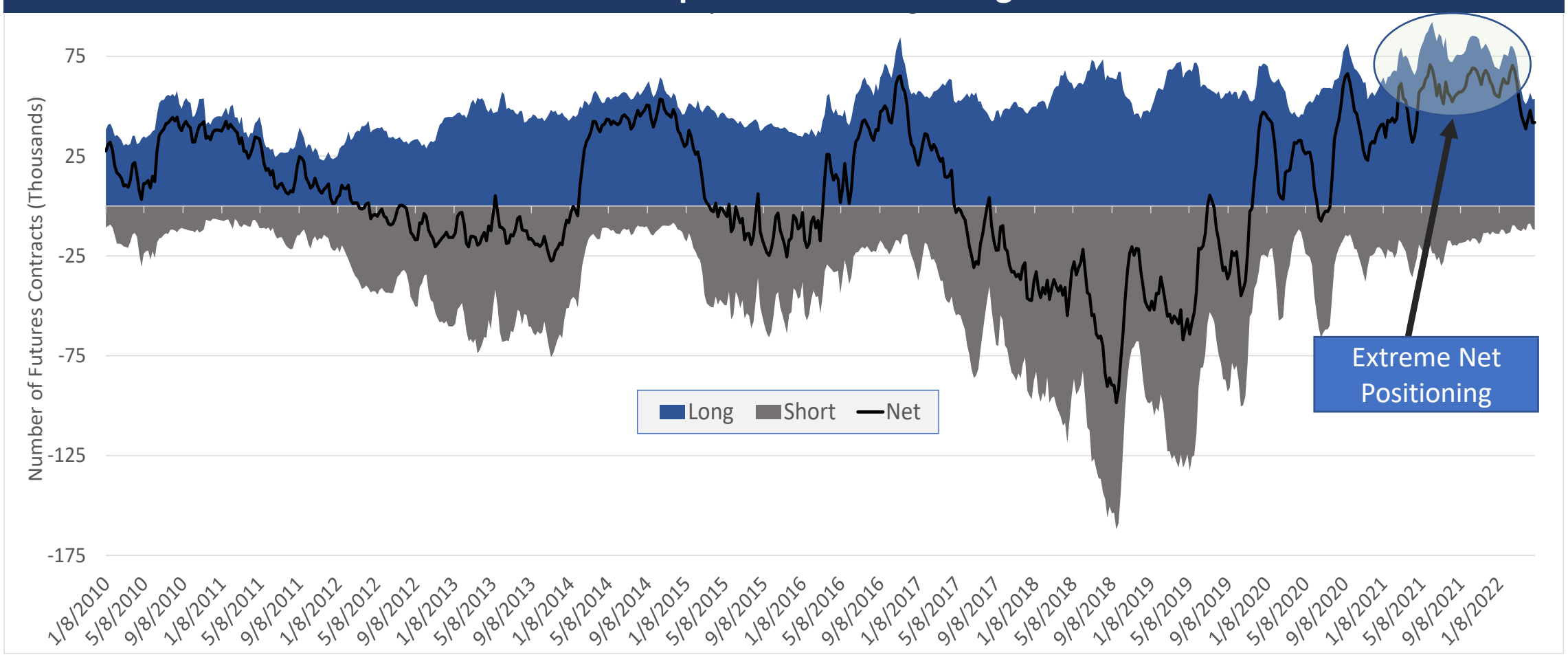
Precious Metals

Chamaeleo is currently short the entire precious metals complex. While the U.S. CPI printed an 8.3% YOY increase in April, nominal interest rates have increased at an even greater pace this past quarter, fostering our bearish viewpoint. The sideways price action during the past few weeks illustrates how exceptionally strong gold and silver prices have been in the face of rising yields. While managed money has continued to cut length in recent weeks and total ETF inflows have slowed, gold and silver's performance is being driven by its long-term safe-haven and diversification appeal. Chamaeleo believes that if geopolitical turmoil continues to persist or macroeconomic conditions worsen, gold and silver prices would respond favorably. Palladium has had an impressive run, with prices reaching nearly $3500/troy ounce in early March as Russia produces nearly 40% of global supplies. We believe this price move was excessive as the relative strength indicator moved into overbought territory. While supply risks remain unclear, platinum is increasingly being substituted for palladium and future demand from the auto industry is questionable—electric vehicles (EVs) do not need catalytic converters.

Softs

Chamaeleo's market view is mixed among the softs complex. Cotton prices have reached 10-year highs stimulated by strong global demand and drought conditions in the U.S., the world's largest exporter. Indeed, global cotton stocks are at their lowest since 2011. Orange juice futures recently hit the highest price since March 2017 due to supply constraints. The U.S. Department of Agriculture warns that the

Coffee Speculative Positioning



Source: CFTC, Chamaeleo Research

Market Commentary - Continued

Softs (Continued)

the crop in Florida, the biggest U.S. grower of the varietal used in juice, will be the smallest since the early 1940s as a result of citrus greening, a disease that not only makes the fruit shrivel and fall prematurely, but also kills the trees. Chamaeleo recently began shorting coffee as inventories monitored by the ICE rebounded from a February low to reverse an eight-month downward trend. Due to the difficulty of receiving payments from Russia for coffee deliveries, Brazilian exporters have been forced to call off contracts, resulting in more available supply. Furthermore, coffee speculative net positioning reached extremely bullish levels, indicating a price reversal was imminent. Chamaeleo is also short cocoa, one of the few food commodities slightly cheaper today than before Russia's invasion of Ukraine. There is currently plenty of cocoa supply to meet demand and the industry has been less affected by supply-chain challenges in recent months. Chamaeleo is short sugar as well in light of Brazil's and India's increasing sugar supply (6% and 13%, respectively). Demand is also in question as a worsening of the COVID-19 outbreak in China spurs concerns about one of the world's top consumer markets. Fears about the economic toll of China's strict Zero-COVID policy intensified after news that lockdowns may spread to Beijing.

Grains

Chamaeleo is currently bullish across the grain complex. Grain, oilseed, and fertilizer export dislocations from Russia and Ukraine are creating global supply challenges in an already-depleted-inventory environment. Ukraine is the world's fourth largest corn exporter, accounting for 15% of world exports. To add to supply uncertainty, corn global stocks have contracted to a nine-year low after recent seasons of adverse weather. Russia and Ukraine together account for roughly 30% of global wheat exports. Although global wheat inventories are equipped to manage trade flow disruptions over the near-term,

Wheat exports from Russia and Ukraine account for ~30% of global exports

2020/21 (million tonnes)

	Russia	Ukraine	Total
Egypt	8,135	2,458	10,593
Turkey	6,988	820	7,808
Bangladesh	1,821	1,125	2,946
Pakistan	1,570	1,400	2,970
Indonesia	3	2,606	2,609
Other	16,577	8,420	24,997
Total	35,094	16,829	51,923

Ukraine's corn exports typically account for 15% of the world total

2020/21 (million tonnes)

	Ukraine
China	8,816
EU	6,928
Egypt	2,242
Iran	1,214
Turkey	577
Other	3,280
Total	23,057

Ukraine is the leading producer and exporter of sunflower oil

2020/21 (million tonnes)

	Ukraine
India	2,129
EU	1,705
China	838
Iraq	398
United Kingdom	88
Other	385
Total	5,543

Source: JP Morgan, Chamaeleo Research

Market Commentary - Continued

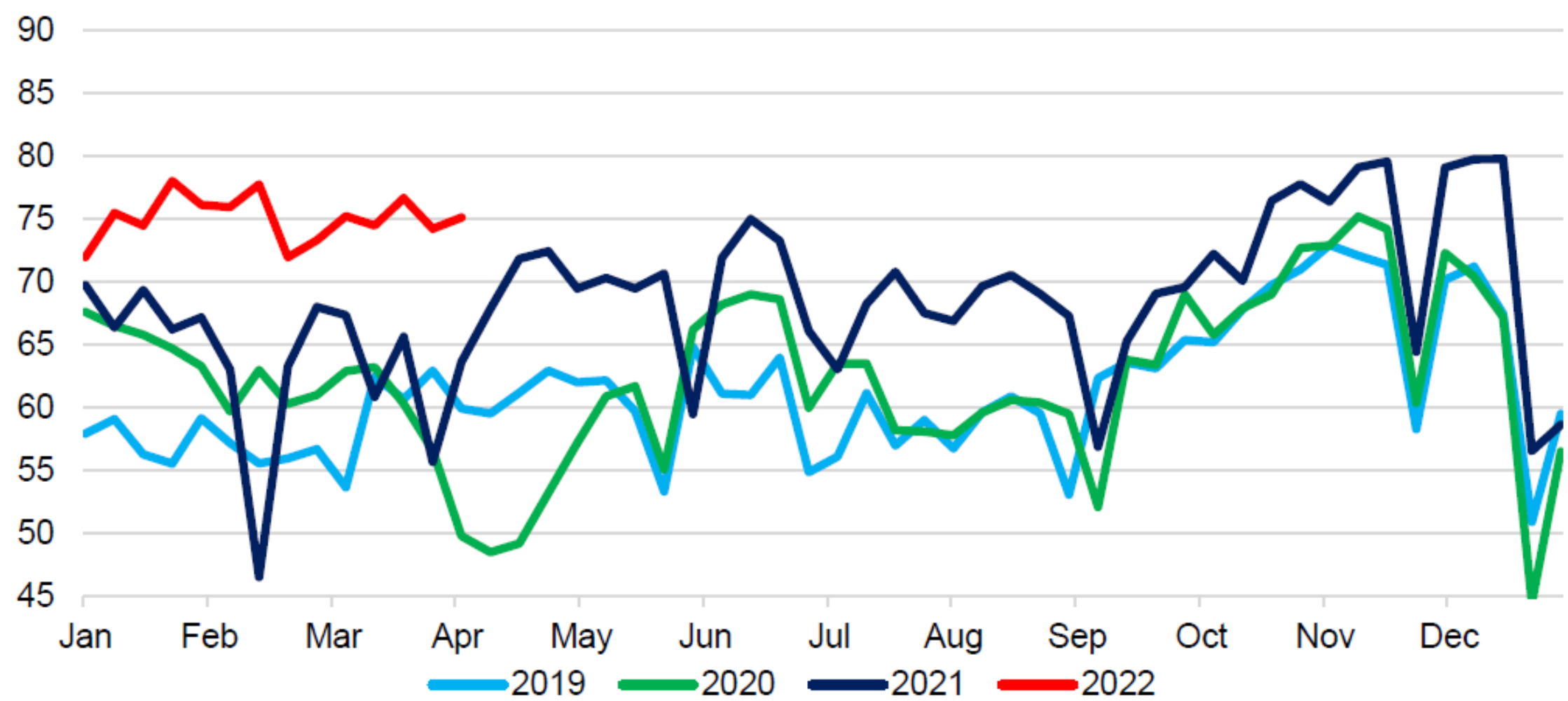
Grains (Continued)

supply-side challenges remain a lingering threat. While soybean trade flow is not directly impacted by the Russia/Ukraine conflict, soybeans are affected by increased demand as a substitute for sunflower oil, which Ukraine, a leading producer of sunflower oil, has been unable to export. Furthermore, global soybean inventories have contracted by 25% since last quarter, leaving balances precariously tight.

Livestock

Chamaeleo is not constructive on livestock prices at this time. The USDA cattle outlook dropped sharply amid sanctions on Russia, a large beef importer. Furthermore, skyrocketing feed prices (due to rising grain prices), higher fuel prices, and operating costs are affecting producers' decision to move U.S. cattle to slaughter as first quarter cattle slaughter volumes reached levels not seen since the mid-1980's. Lean hog prices have risen on tight supply and demand balances as the USDA reported year-over-year declines in hog production during the first quarter. Additionally, across-the-board reductions in hog and pig inventories are both likely reflections of pork producers' response to a market environment characterized by heightened levels of risk and uncertainty. However, Chamaeleo cautions that hog prices have become overbought recently, and in February, speculator net length was at elevated levels, thereby increasing the risk of a price correction.

Weekly U.S. Federally-Inspected Beef Cow Slaughter (Thousand Head)



Source: USDA, Chamaeleo Research

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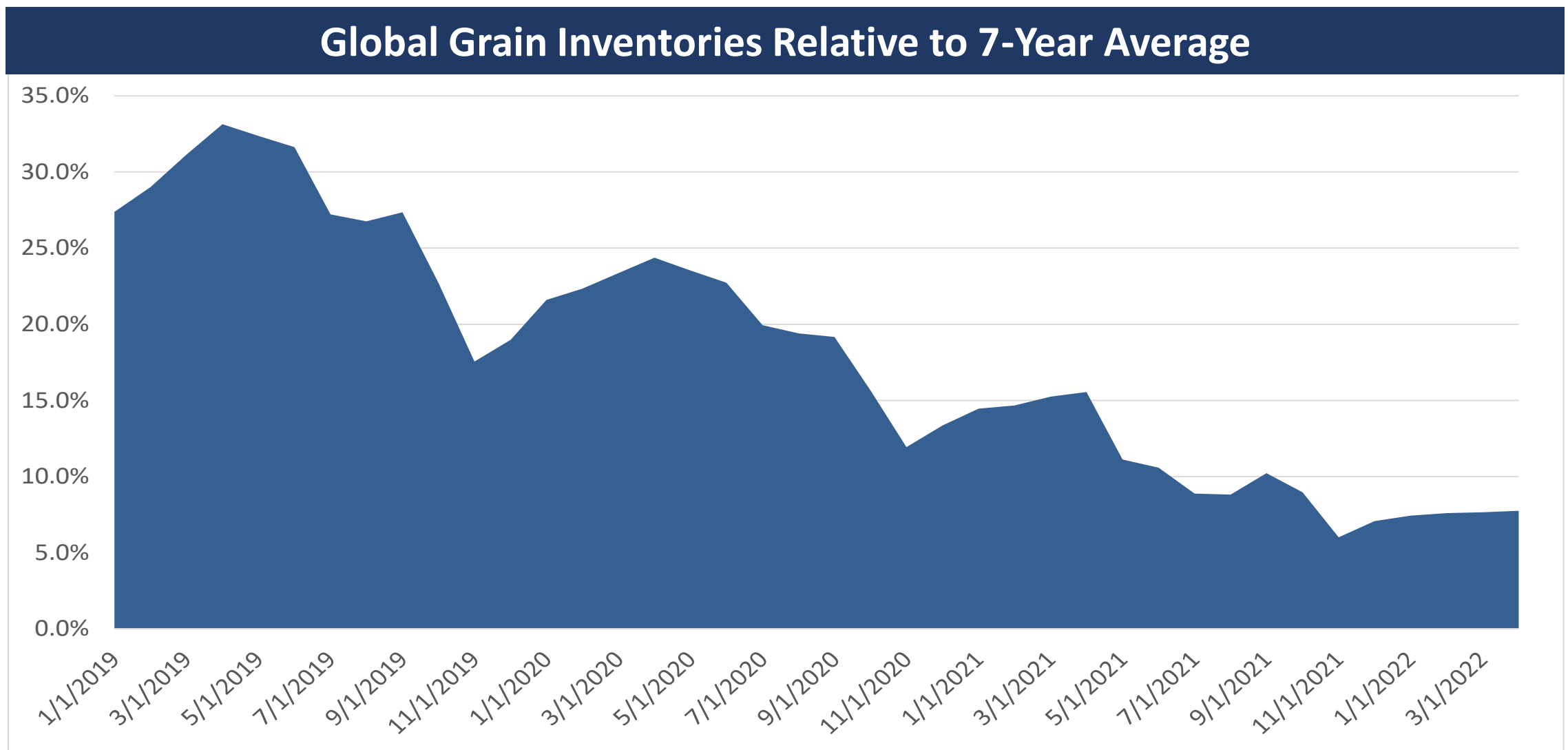
Market Special Report - Wheat

The COVID-19 Pandemic has led headlines for the last two years. It's not often we have circumstances that impact the global economy at this magnitude. The Russian invasion of neighboring Ukraine on February 24, 2022, began yet another anomalous event with severe global ramifications that are still unfolding. Russia and Ukraine are both flush in such natural resources as oil and gas, metals, and grains and are key local and global suppliers. Some countries are more impacted than others, and as commodity markets slowly recover from supply constraints, labor shortages, transportation bottlenecks, and increased demand during the pandemic, they are now trying to determine how the war will further impact supply-and-demand fundamentals. Wheat is just one of the markets heavily impacted by the turbulence in Ukraine and had already suffered from two years of poor growing weather. Weather, input costs, inflation, and potential deglobalization will each have a major impact on wheat production and prices long term.

Before the war, and in some cases even pre-pandemic, weather conditions reduced the planting of wheat crops globally. Grain stockpiles are heading for a fifth straight year of declines due to extreme weather conditions. The last shortage of this magnitude was in 2010, when Russia experienced a heat wave that devastated crops and banned exports. Wheat prices doubled, which played a role in the Arab Spring, a series of protests and revolts in Arab nations against poverty, authoritarianism, and corruption.

La Niña, a weather pattern of strong trade winds that push warmer water towards Asia and cause colder water to gather in the Pacific and push the jet stream northward, is back in 2022.



Source: USDA, Chamaeleo Research

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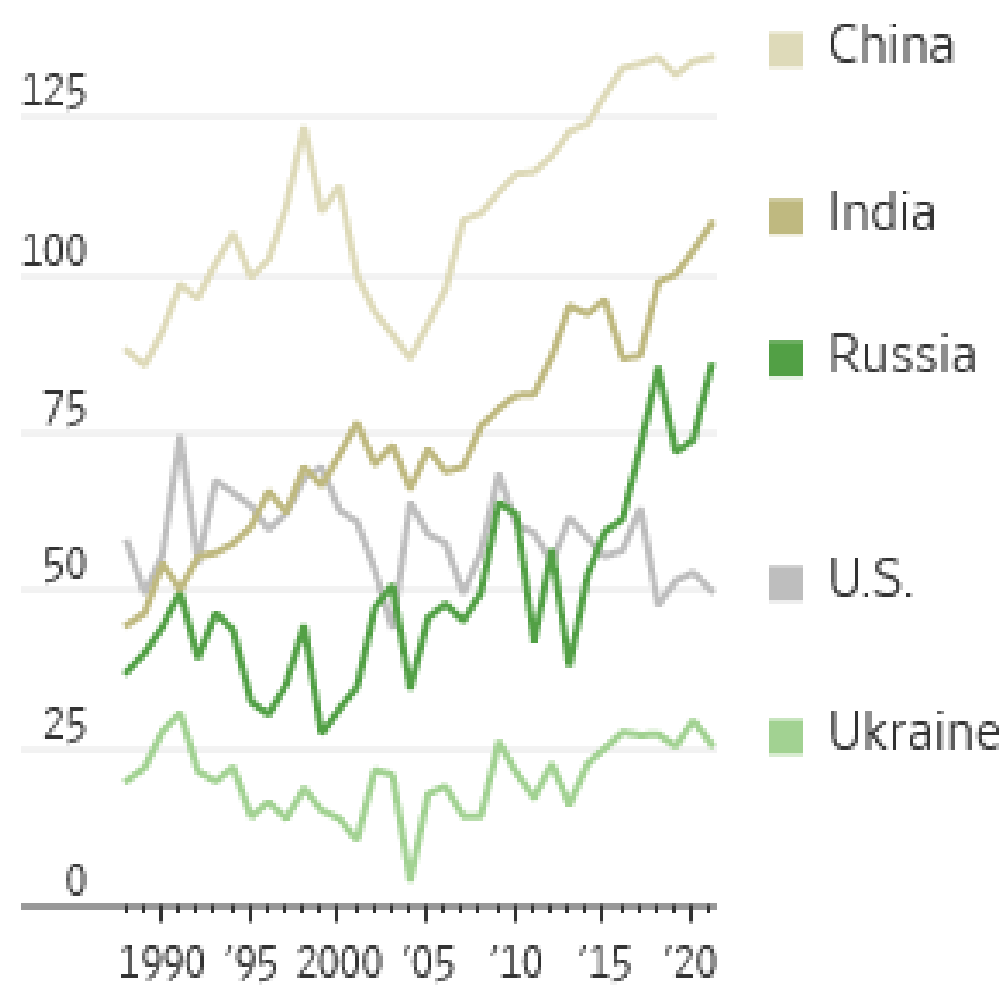
Market Special Report - Wheat

This phenomenon of fluctuation of ocean temperature historically caused the Northern U.S. to be cooler than normal, whereas the South is expected to be warmer and dryer than usual. Global weather patterns fluctuate and lead to uncertainty and disruption in the supply of such climate-dependent commodities as grains. Since 1959, there have been nine major episodes of La Niña and 13 total episodes since 1950. In all 13 cases, wheat prices were higher six months after La Niña started. Corn was higher following 10 out of 13 episodes and soybeans 9 out of 13. Inventories of wheat, like many other crops, were lower at the end of 2021 than in previous years, so this production shock combined with the potential elimination of Russian and Ukrainian wheat from the global export trade is a dire situation for millions. Other countries that produce wheat are experiencing their own setbacks. For example, Brazil is currently suffering from drought after exporting a tremendous amount of wheat between December and March 2022. China, the world's largest consumer of wheat, had to significantly delay the planting of its own winter wheat crop due to unusually high rainfall. In the U.S in 2020-2021, North Dakota, Kansas, Oklahoma, Washington, and Montana were the leading wheat-producing states, and were also impacted by weather conditions. Drought in Washington, for example, caused the 2021 wheat harvest to have the lowest production since 1964, whereas 2020 was a year of almost record production. The upper great plains area, where the majority of U.S. spring wheat is grown, also experienced a drought that reduced the crop yield by over 30%. These conditions, along with the start of the war in Ukraine, have contributed to a significant supply/demand imbalance in the short term. Based upon the current futures price curve, it appears that the market believes supply will eventually be able to accommodate the loss of the majority of Russia and Ukraine's wheat exports post-2023, should they still be disrupted.

Russia produces approximately 11% of the world's wheat and Ukraine produces approximately 3%. These two countries also account for 19% and 9%, respectively, of global exports. Indeed, Russia was the largest exporter in 2021 and Ukraine was fifth. Nearly 71% of Ukraine's land is agricultural. Ironically, the U.S.S.R. imported more than 50 million metric tonnes of wheat per year, with the United States supplying nearly two-thirds of their exports in wheat and corn to the U.S.S.R in the early 80s. Following the collapse of the Soviet regime, the government removed barriers to business that allowed farmers to expand their crop, invest in technology to boost yields, and take advantage of the fertile soil and conducive climate for growing wheat to capitalize on the massive export demand. Prior to the war, Ukraine was on track for a record year of wheat exports.

Annual Wheat Production (Metric Tonnes)



Source: USDA, Chamaeleo Research

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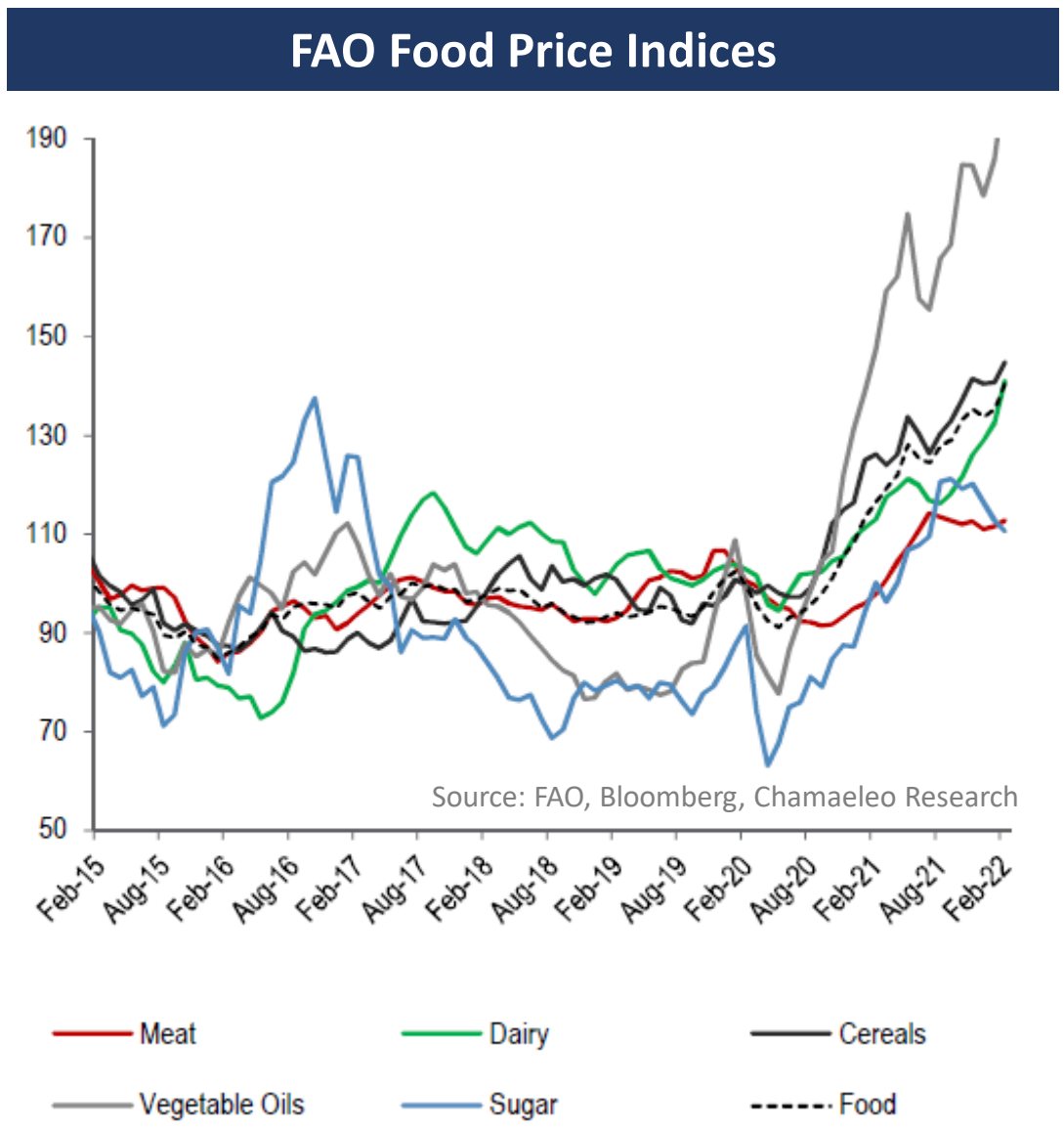
Market Special Report - Wheat



Wheat is the second-most-produced grain in the world behind only corn. It is used to make bread, pasta, and other staples, and plays a prominent role in the diets of many cultures. Price spikes have an extreme impact on consumers, especially lower socioeconomic classes. Consumers have already felt the high inflation on staples like food and energy prices. Indeed, global food prices rose by as much as 21% in 2021 alone according to the Food and Agricultural Organization. Egypt is the largest wheat importer in the world, spending over 4 billion USD annually. Turkey is also a large importer of wheat, with 74% (1.6 billion USD) of its wheat imports coming from Russia and Ukraine. Russia and Ukraine's combined wheat exports are three times higher than U.S. wheat exports, therefore, accessibility to the Black Sea to transport wheat, among other crops and materials, is critical to reaching end-users in these areas. Part of the attraction of Russian and Ukrainian wheat to Middle Eastern and African nations is its historically lower prices than exports from other countries. Currently, Ukraine has banned the export of wheat and other staples to attempt to avoid a humanitarian crisis within its borders. Furthermore, the Black Sea port city of Kherson fell to Russian troops in late February, and another strategic port city, Mariupol, is under blockade and without water or power. The removal of this critical source of wheat could not come at a worse time with inflationary pressure and weather already fostering a fragile wheat crop and anxious consumers. While Russia's wheat crop has not formally been sanctioned, its main transit route for exports via the Black Sea is at a standstill.

Global companies are looking for ways to reduce or eliminate their dependencies on Russian products and resources. Everyone, from lenders and insurers to shipping firms, is leery of interaction with the country, leaving stockpiles of oil, grains, metals, and other products abandoned. Prior to February's outbreak of violent conflict, Federal Reserve Chair Jerome Powell outlined a series of rate hikes in 2022 in a more aggressive attempt to get inflation under control. It remains to be seen just how aggressive those rate hikes will pan out to be. Global inflation is currently at 7%, although some economists believe inflation has peaked. The current rate of inflation cannot be sustained in the long term without impacting growth. How long can government subsidies continue to prop up consumer demand? The longer high inflation continues, the more likely that negative impacts will be irreversible. Rising inflation with lower economic growth could increase recessionary risk as purchasing power continues to diminish. As the ruble plummets, other countries' currency fluctuations will likely be tied to their ability to supply coveted commodities.

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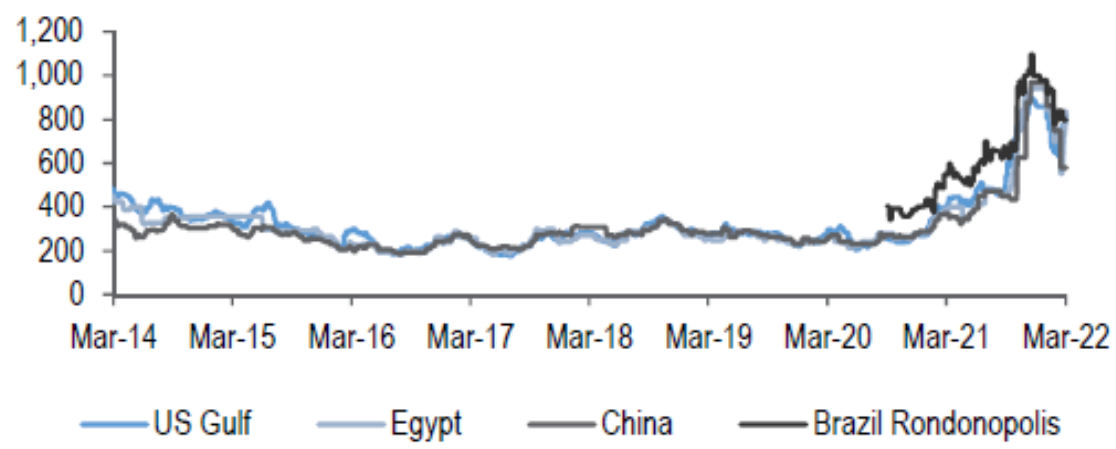
Market Special Report - Wheat

Those countries dependent on natural resource and agricultural imports will likely find their currencies devalued by nations that are more self-sufficient. Such countries as the U.S., Australia, and India have pledged to grow more wheat, but weather conditions may stimy those efforts. What is more, inflation has raised input costs enough to add to the difficulty of maintaining even the existing production targets.

Two of the most important input costs to farmers are fertilizer and energy prices, both of which have skyrocketed due to inflation and the war. Some farmers have seen fertilizer prices up by as much as 300%. Oil prices have already touched levels not seen since the move in 2008, and natural gas prices are already up nearly 60% this year. While wheat futures continue to decouple from cash prices, farmers find themselves struggling to pass along additional costs rather than hedge production. Basis risk, i.e., the differential between the underlying product specs of a derivative instrument and the actual specs of the product being hedged, has been especially volatile, and this makes it difficult for farmers to manage cash flow and capitalize on price spikes. Keep in mind that the majority of the wheat crop in 2022 has already been sold through pre-existing contracts at 40% less than current future prices. Prices continue to go up, however, few farmers have passed along enough of the additional overhead to expand their production. Labor and shipping costs are also squeezing profit margins. Ports are bottlenecked due to strikes and inadequate staffing.

Urea Spot Prices ($/Metric Tonne)



Source: Green Markets, Bloomberg, Chamaeleo Research

Globalization has allowed countries to prosper and companies to expand their services, improve their bottom line, and grow. Technology has lowered the cost of transportation and made it more reliable, making goods and services accessible in unreachable regions. Rampant inflation and war, however, challenge the essence of globalization by revealing that the global value chain is vulnerable. Companies are reconsidering where to locate the production of goods and services based upon such factors as labor wages, proximity to customers, specific skilled labor and access to natural resources. Access to capital is also critical. Governments and companies alike are analyzing their dependencies on other countries for manufacturing, natural resources, and movement of goods. Whereas cheap labor may have attracted firms in the past, reliability and sustainability may trump strategies that are solely price focused. It is likely that companies and governments will be more willing to pay a premium to secure better control over the entire supply chain, especially for such coveted products as grains, metals, and energy. How much of a premium remains to be seen? In the meantime, one clear effect of geopolitical uncertainty is stockpiling. India is expected to increase its wheat reserves by more than 160% of what is required by the central pool by April 2022. American farmers will increase wheat plantings this spring to bring the total recent plantings to just under 50 million acres.

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Market Special Report - Wheat

This is an increase of more than 2 million acres from the previous year. China's National Development and Reform Commission (NDRC) reports that its grain acreage for 2022 will remain steady at approximately 290 million acres.

Chamaeleo continues to maintain a long bias on wheat. Fundamentals continue to support price appreciation. Although the USDA projects a slight decrease in global wheat consumption, the disruption of the wheat crop and exports from Ukraine and Russia provide the catalyst for current market backwardation. As of March 25th, non-commercial traders continue to add length to their wheat futures positions. Dry weather and elevated input costs will also support wheat futures in the near term.

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