Commodities Digest

Food crunch continues

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Economics - Global

- Food prices have reached new record highs, in nominal and real terms, in 1H22, with grains prices sharply higher…
- …driven by the Russia-Ukraine conflict, inclement weather, high input costs, shipping delays, and labour shortages
- Hoarding behaviour has emerged, and is nearing the levels of 2007-08, posing further upside risks to food prices

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Prices spike higher

Global food prices are rising, with many product prices now at all-time highs. Although agricultural prices have been rising throughout the pandemic – in line with other commodities – recent events have caused further significant supply disruptions and seen an acceleration in the price upswing.

A key shock has been the Russia-Ukraine conflict, which has had a first order impact on food supply, particularly of grains and fertilisers. The ongoing conflict is also further disrupting planting, which is likely to constrain supply for longer. A sharp rise in the price of fertilisers – of which Russia is the world's largest exporter – is likely to affect agricultural yields elsewhere during the coming season. Agricultural production has also been impacted by the effect of the pandemic on available labour supply and disruption and cost increases for shipping. Unfavourable weather is also contributing, with a second consecutive season of the La Niña weather pattern playing a role.

Another disruptive effect is through increased food protectionism and hoarding behaviour, with some metrics suggesting this is now at similar levels to that seen in 2007-08. Recently introduced restrictions affect around 17% of globally traded calories. The challenge here is that these policy moves can have non-linear effects, forcing prices markedly higher, as they did for some products in 2007-08.

Recent estimates from the USDA show a markdown in expected production and inventories of wheat and corn in 2022-23, as a result of these disruptions.

Policymakers in many emerging economies face growing challenges in managing food security, which could flow over into geopolitical volatility in unpredictable ways. There is upside risk to inflation, particularly in emerging economies, which reduces household disposable incomes. These challenges also complicate policy choices for central banks globally.

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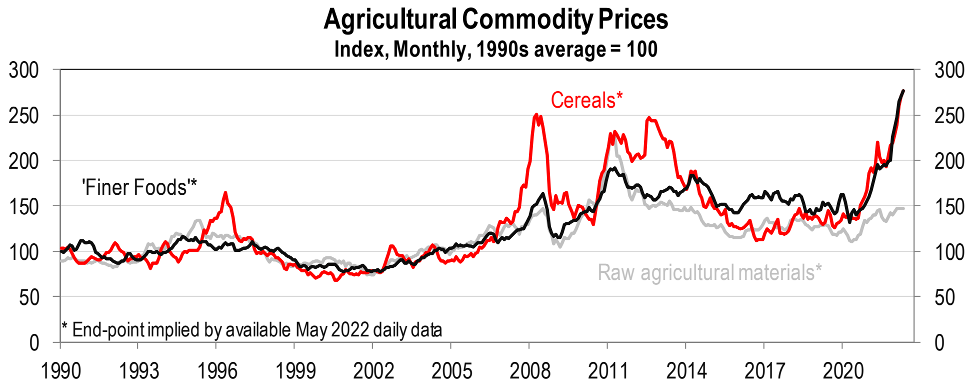
1. Agricultural commodity prices have risen to new record highs



Source: IMF, Bloomberg, HSBC

Overview of agricultural commodity price developments

Agricultural commodity prices have risen sharply in 1H22…

Agricultural commodity prices reached new record highs as of May 2022, after rising strongly (Chart 1). Supply-side challenges and low inventories, coinciding with robust demand and a heightened risk of food insecurity, resulting in generally tight markets.

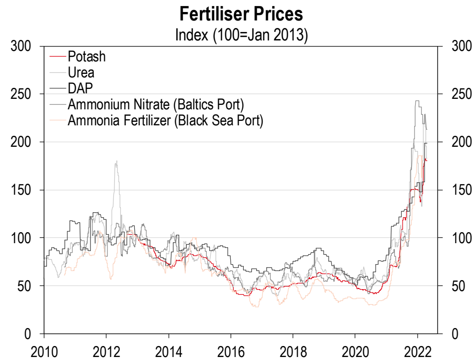
…with grains prices up sharply on supply-side challenges

Cereals prices (wheat, corn, barley, rice, and sorghum) are at new record highs, collectively up 26% y-o-y and 107% vs pre-pandemic levels. Prices of the 'finer foods' (meat, dairy, sugar, seafood, and coffee) also rose to their highest levels since 1990, up 41% y-o-y and 71% vs pre-pandemic levels. Prices of 'raw agricultural' materials (timber, cotton, wool, rubber, and hides) have been more subdued, up 1% y-o-y and 21% vs pre-pandemic levels.

The Russia-Ukraine conflict has lifted prices directly, and indirectly via input costs

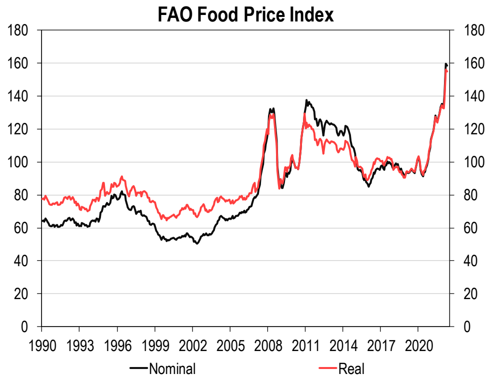
The Russia-Ukraine conflict has continued to impact the supply-side of agricultural commodities, placing upwards pressure on key agricultural commodity prices, including inputs such as energy and fertilisers (Chart 2). In March, we outlined the initial impacts on agriculture prices. This has continued over the past two months, and risks impacting Ukraine's 2022-23 agricultural production.

2. Fertiliser prices have risen sharply



Source: Bloomberg, HSBC

3. Global food prices are near record highs



Source: FAO, HSBC

Food prices rose to new record nominal and real highs in 1H22

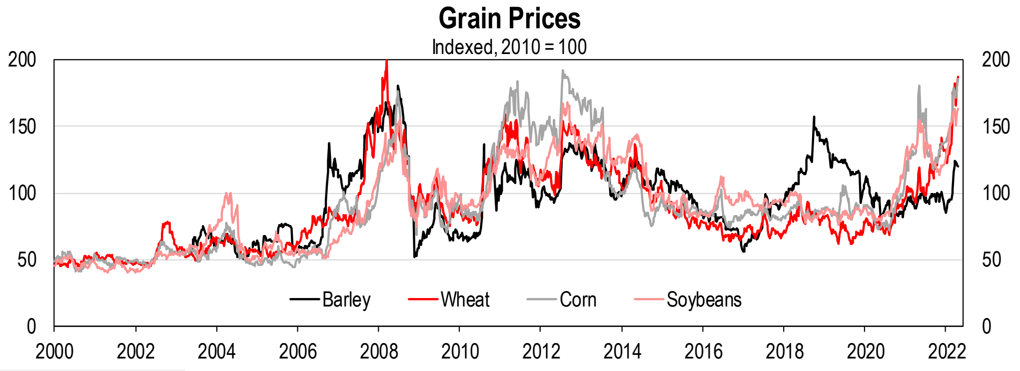
The FAO Food Price Index reached a new record high in 1H22, in nominal and real terms, although it has pulled back slightly over the past month (Chart 3). The pass-through from high agricultural commodity prices to food price inflation varies across countries, and there is a risk that food prices, particularly in emerging markets, could increase further.

Grains prices are all higher

The USDA's forecasts for 2022-23 suggests a tightening grains markets

Grains prices have all risen sharply recently (Chart 4). The USDA published new World Agricultural Supply and Demand Estimates on the 12 May – its first detailing of forecasts for the 2022-23 supply and demand outlook. The USDA forecasts show a decline in grains production in 2022-23 and, with consumption relatively unchanged, suggests tighter grains markets.

4. Grains prices have risen sharply through 1H22



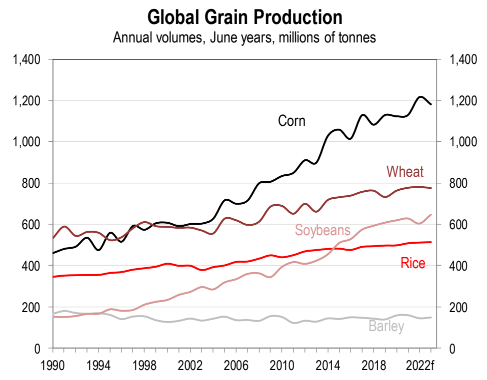
Source: IMF, Bloomberg, HSBC

Wheat

Wheat is up 144% vs pre-pandemic levels; the market could tighten further in 2022-23

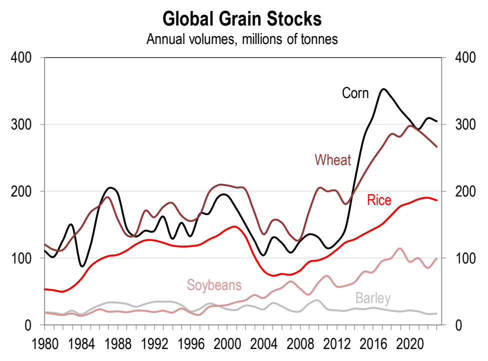
Wheat prices have risen 72% y-o-y in May 2022, and are up 144% vs pre-pandemic levels (Chart 5). Wheat has been particularly impacted by the Russia-Ukraine conflict, reflecting that Ukraine supplies nearly 10% of global exports, and exports have been halted due to the closure of all Ukrainian ports on the Black Sea. Global production is forecast, by the USDA, to remain relatively stable in 2021-22, but decline by 0.6% in 2022-23, reflecting lower production in Ukraine and Australia (Chart 6). Consumption is forecast to rise 1.7% y-o-y in 2021-22, and decline 0.4% y-o-y in 2022-23. This partly reflects that increases in food use are more than offset by declining feed and residual use. Overall, these developments should see the wheat market tighten in both 2021-22 and 2022-23, with ending stocks expected to be lower by 3.9% y-o-y and 4.5% y-o-y, respectively, which would leave ending stocks at their lowest level in six years.

5. Corn and wheat production in 2022-23 is expected to decline…



Source: USDA, HSBC

6. …while the ending stocks of wheat, corn, and rice are expected to fall



Source: USDA, HSBC

Corn

Corn production is expected to decline in 2022-23; prices are up 116% vs pre-pandemic levels

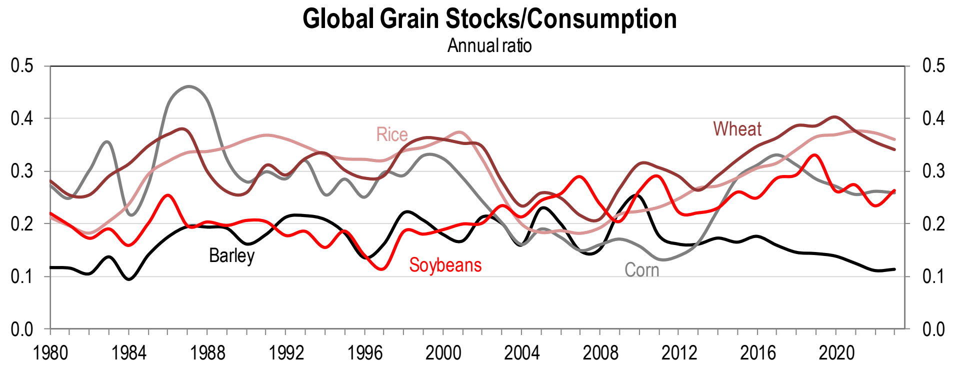
Maize prices have risen 14% y-o-y in May 2022, and are up 116% vs pre-pandemic levels. The surge partly reflects supply uncertainties due to the Russia-Ukraine conflict, with Ukraine accounting for around 3.5% of global maize production. The USDA forecasts maize production to increase 7.7% y-o-y in 2021-22 but decline 3% in 2022-23 mostly reflecting reductions from Ukraine, the US, the EU, and China. Consumption is forecast to rise 3.2% y-o-y in 2021-22, and decline 0.3% in 2022-23, largely reflecting lower imports from China. The global maize outlook is for a tighter market in 2022-23, with ending stocks declining 1.4% y-o-y, after an improvement of 5.5% y-o-y in 2021-22.

Rice

Rice price pressure has been subdued; production is expected to be a record high

Rice prices are somewhat of an outlier in the food commodities. Rice prices declined 5% y-o-y in May 2022, and are up only 16% vs pre-pandemic levels. USDA forecasts for rice production in 2021-22 and 2022-23 to show improvements of 0.7% y-o-y and 0.3% y-o-y, respectively. This would see record rice production, with greater output expected from China, India, and Bangladesh. Consumption is forecast to rise 2.2% y-o-y in 2021-22 and by 1.4% y-o-y in 2022-23, largely as a result of consumption in India and China. This should see a decline in the stocks-to-use ratio, but would still be elevated by historical standards (Chart 7).

7. Stock-to-consumption ratios for most grains show the impact of supply challenges



Source: USDA, HSBC

Barley

Barley production was hampered in 2021-22 but is expected to improve

Barley prices have risen 24% y-o-y in May 2022, leaving prices up 22% vs pre-pandemic levels. On the supply side, the USDA expects 2021-22 global production to fall 9% y-o-y in 2021-22, and rise 2.7% y-o-y in 2022-23. Lower barley production has been due to an expected reduction in output in Australia. Ukraine and Russia together account for just under 30% of the world's barley supply, with a clear risk posed by the conflict. Consumption is expected to decline 8.4% y-o-y in 2021-22, with little change in 2022-23, which could see a small improvement in the stock-to-use ratio.

Soybeans

The soybean market is expected to loosen somewhat over 2022-23

Soybean prices have risen 5% y-o-y in May 2022, leaving prices up 75% vs pre-pandemic levels. Likewise, soybean meal and soybean oil have risen. Soybean meal is up 2% y-o-y and 33% vs pre-pandemic levels. Soybean oil is up 29% y-o-y and 178% vs pre-pandemic levels. Global soybean supply is forecast, by the USDA, to decline in 2021-22 by 4% y-o-y before rising 7% y-o-y in 2022-23. Over half the increase is expected from Brazil, following the droughts that impacted South America in 2021-22. Consumption is expected to remain relatively unchanged in 2021-22 and increase 4% y-o-y in 2022-23, with China accounting for around half the gains. Overall, after tightening through 2021-22, the soybean market is expected to loosen. The

USDA's forecast for global soybean ending stock is down 15% y-o-y in 2021-22 before rebounding 17% in 2022-23.

The ongoing impact of the Russia-Ukraine conflict

The Russia-Ukraine conflict risks impacting 2022-23 agriculture supply

The ongoing Russia-Ukraine conflict has continued to impact commodities markets. Agricultural commodities have been particularly impacted by reduced exports from Ukraine. Most of Ukraine's grain exports were via Black Sea ports, which Ukraine has now officially closed and will likely be closed "until the restoration of control", according to the Ukrainian Agriculture Ministry (Reuters, *Ukraine formally closes seaports captured by Russia*, 2 May 2022). Road and rail transport is an alternative option, but the capacity is likely limited, given damage to infrastructure, and safety concerns.

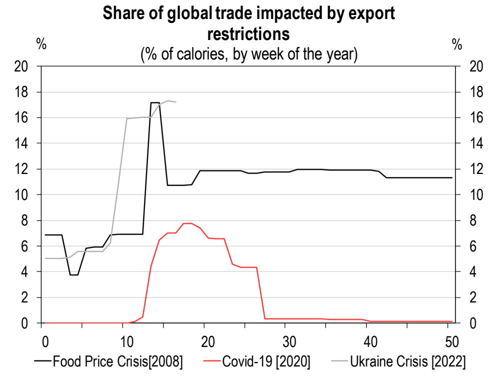
A key uncertainty is how much the conflict could impact the 2022-23 agricultural production season in Ukraine. Crops including maize, barley, and sunflowers are typically planted in spring (April to May), while wheat is planted later in the year before winter (September to November). Some early estimates have suggested Ukraine's agricultural production will decline in the upcoming season by between 25% and 50% (Famine Early Warning Systems Network*, Ukraine. Targeted Analysis*, 2022).

Food security is a growing issue

Trade restrictions have seen a growing risk around food security…

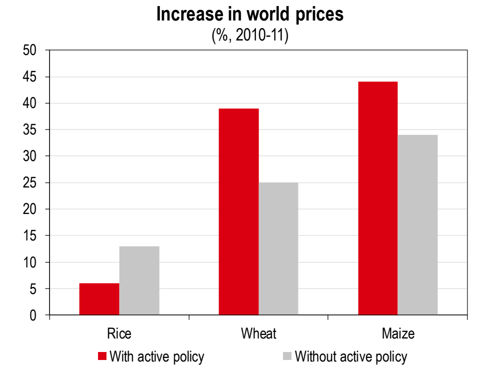
Food security has become a more pressing issue, reflecting the persistent supply challenges. Some countries, particularly lower income economies and food importers, are at more risk than others. A range of policy interventions, impacting the trade of agricultural commodities, have been introduced, now covering more calories (as a percentage of global trade) than in the 2008 crisis (Chart 8). These policies could exacerbate the high prices, as work from the World Bank has shown is the case in previous crisis (Chart 9).

8. A large share of globally traded calories are impacted by restrictions…



Source: IFPRI

9. …and restrictions tend to place upwards pressure on prices



Note: Estimates based on an error correction model described in *Poverty Impact of Food Price Shocks and Policies,* Laborde, D., C. Lakatos, and W. Martin., 2019, Based on data for 82 countries, of which 26 are advanced economies, 44 are non-LIC EMDEs, and 12 are LICs for the period 2010-2011.
Source: World Bank; HSBC

…with protective policies typically exacerbating price pressures

The heads of the World Bank, the International Monetary Fund (IMF), the United Nations World Food Program (WFP), and the WTO issued a joint statement on 13 April urging coordinated action to help vulnerable countries address growing threats to food security. The 2022 Global Report on Food Crises (*Global Network against Food Crises*, 2022) echoed this, highlighting 53 countries/territories with high severity or a high number of people in crisis. It is clear that the increase in food insecurity has been driven by persistent conflict, pre-existing and pandemic-related economic shocks, and weather extremes.

With supply concerns and high prices, a number of countries have introduced policies affecting food commodities. Although, according to the World Bank (*Commodity Markets Outlook 2022*), the trade restrictions imposed so far are not nearly as extensive as they were during the 2007-08 and 2011-12 commodity price spikes, they are likely to place further upwards pressure on prices at the margin.

A growing number of countries have introduced policies impacting food…

The International Food Policy Research Institute has tracked the various policies, as well as noting that the Russia-Ukraine conflict-related export restrictions exacerbate global food insecurity. Some of the policies are outlined in Table 10.

10. Selected list of active export restrictions on food products

	Country	Commodity	Start date	End date	Country global market share in restricted products	Share of restricted products in total country food exports (USD, annual)
Actual ban	Algeria	Wheat	13/03/2022	31/12/2022	0.3%	70.8%
	Argentina	**Beef**	1/01/2022	31/12/2023	**5.5%**	1.9%
	Egypt	vegetable oil, grits, maize	12/03/2022	12/06/2022	0.1%	1.00%
		wheat, flour, oils, lentils, pasta, beans.	10/03/2022	10/06/2022	0.5%	9.6%
	Indonesia	**Palm oil**	1/01/2022	31/12/2022	**53.1%**	51.6%
		Palm oil, palm kernel oil	28/04/2022	31/12/2022	**51.7%**	60.9%
	Iran	Potatoes, eggplants, tomatoes, onion	27/04/2022	31/12/2022	2.3%	8.1%
	Kazakhstan	Live cattle, small cattle	22/01/2022	21/07/2022	0.1%	0.4%
		Sunflower oil	15/12/2021	31/05/2022	0.6%	2.00%
		Sunflower seeds	15/12/2021	30/06/2022	**4.0%**	3.5%
		Wheat, wheat flour	19/04/2022	15/06/2022	**3.2%**	53.3%
	Russia	Rapeseed	1/04/2022	31/08/2022	1.4%	0.5%
		Sugar	14/03/2022	31/08/2022	0.4%	0.5%
		Sunflower seeds	1/04/2022	31/08/2022	**5.3%**	0.6%
		Wheat, meslin, rye, barley, maize, sugar	14/03/2022	30/06/2022	**13.1%**	51.6%
	Turkey	Beef meat, sheep meat, goat meat	19/03/2022	31/12/2022	0.1%	0.1%
		Butter	15/04/2022	31/12/2022	0.3%	0.1%
		Cooking oils	4/03/2022	31/12/2022	2.3%	5.1%
		Olive Oil	27/01/2022	31/12/2022	**3.8%**	1.00%
		Red Lentils and beans	27/01/2022	31/12/2022	2.8%	2.0%
	Ukraine	**Wheat, oats, millet, sugar**	9/03/2022	31/12/2022	**5.9%**	21.7%
Export license	**Argentina**	**Beef meat**	1/01/2022	31/12/2022	**3.5%**	2.0%
	Russia	**Sunflower oil**	15/04/2022	31/08/2022	**18.2%**	8.3%
	Turkey	**Grains, oilseed, cooking oil**	4/03/2022	31/12/2022	**3.3%**	9.9%
		Poultry, meat, eggs, vegetables, fruits	27/01/2022	31/12/2022	**3.8%**	21.9%
	Ukraine	**Poultry, eggs, sunflower oil, bovine meat, rye, maize**	6/03/2022	31/12/2022	**10.3%**	43.0%
Export taxes	**Argentina**	**Soybean oil, soybean meal**	19/03/2022	31/12/2022	**40.0%**	11.0%
	Russia	**Sunflower oil, sunflower meal**	15/04/2022	31/12/2022	**13.7%**	9.9%

Source: IFRPI, HSBC

…with restrictions estimated to now cover around 17% of total global traded calories

The total amount of exports affected by the restrictions represents about 17% of total calories traded in the world. Specifically, 18 countries implemented export bans, covering 28 separate measures and accounting for 12.5% of traded calories, while nine countries implemented export licensing requirements, covering 11 separate measures and accounting for over 4% of trade calories. In terms of calories affected, export restrictions are particularly relevant for following five agricultural commodities: Wheat (31% of total calories affected), palm oil (29%), maize (12%), sunflower oil (11%), and soybean oil (6%).

11. Selected list of active export restrictions on fertiliser products

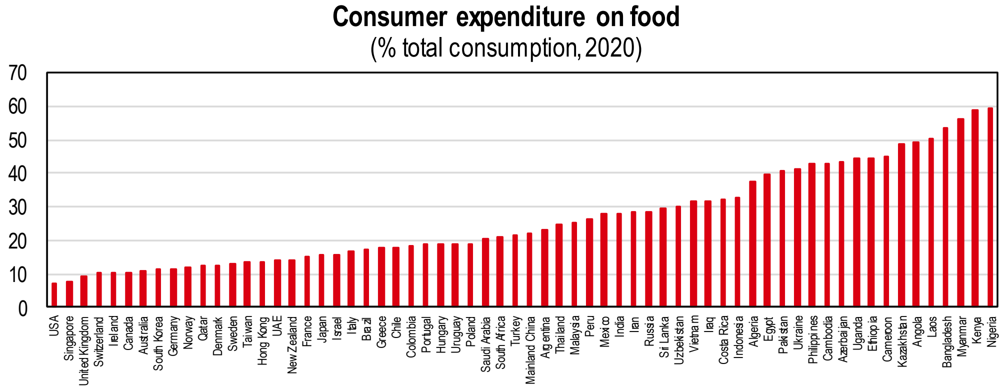
	Country	Products	Start date	End date	Share of global exports of Nitrogenous	Share of global exports of Potash	Share of global exports of Phosphates
Actual ban	China	Phosphate rocks	28/09/2021	31/12/2022	0.0%	0.0%	0.6%
	Kyrgyzstan	Mineral fertilisers	26/02/2022	26/08/2022	0.0%	0.0%	0.0%
	Russia	Fertiliser	04/02/2022	31/08/2022	10.1%	18.7%	8.6%
	Ukraine	Nitrogenous fertilisers, phosphate fertilisers, potassium	12/03/2022	31/12/2022	0.9%	0.2%	0.0%
Export license	China	Fertilisers	24/09/2021	31/12/2022	10.6%	1.2%	11.4%
	Russia	Nitrogenous fertilisers, phosphate fertilisers, potassium	03/11/2021	31/05/2022	10.1%	2.8%	8.5%

Source: IFPRI, HSBC

Higher food prices tend to impact emerging markets and food importers more

During the 2008 price increase, governments in several EMDEs were confronted with difficult policy decisions. Allowing domestic prices to adjust to world food price changes would have led to higher food price inflation, thereby causing a decline in real incomes of poor households that were net food buyers (*Inflation and the Poor,* Easterly, W., and S. Fischer, 2001). Instead, many countries attempted to reduce the transmission of international food price shocks to domestic markets.

12. Low- to middle-income countries are likely the most exposed to global food prices



Source: ERS, USDA calculations based on annual household expenditure data from Euromonitor International, HSBC

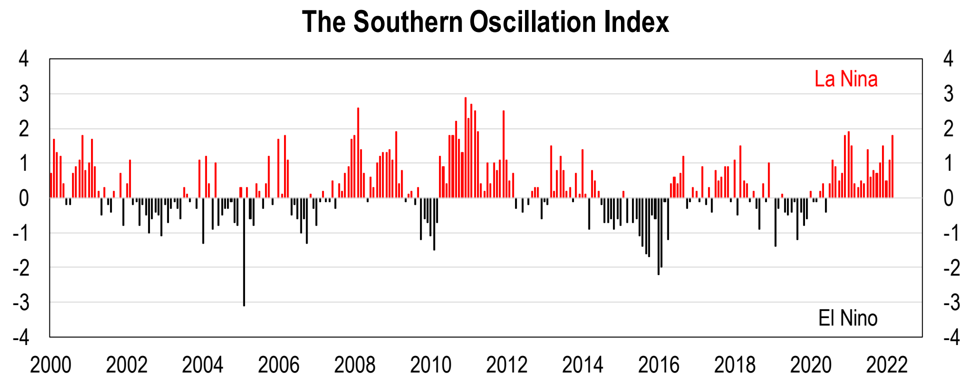
Indeed, during the 2007-08 food price spike, close to three-quarters of EMDEs undertook policy actions to insulate their economies from the sharp increase in international food prices, especially for rice. Similar policy actions were undertaken during the spike of 2010-11 (*Implications of Domestic Price Insulation for Global Food Price Behavior,* Ivanic, M., and W. Martin. 2014). Several studies have shown that the use of such trade policy interventions compounded the volatility of world prices (World Bank. 201*9. Commodity Markets Outlook Report: Food Price Shocks: Channels and Implications*).

La Niña could continue through 2022

La Niña has extended longer than expected…

The La Niña weather phenomenon that began in October 2020 has continued for a second season. The El Niño-Southern Oscillation (ENSO) is currently in the La Niña phase and is expected to remain as La Niña through at least July (73% probability). Long range forecasts show more than a 50% likelihood that La Niña will continue all the way through to January 2023, and a very low chance of El Niño, through the end of 2022.

13. La Niña has extended beyond what was previously forecast



Source: NOAA, HSBC

La Niña's are generally associated with cooler, wetter winters in the Northern US and Canada along with dryer and warmer conditions in the southern US. The phenomenon can also disrupt weather in South America, correlating with droughts in parts of the continent and wetter-than-normal weather in other parts.

…with a risk that it continues to impact the 2022-23 season

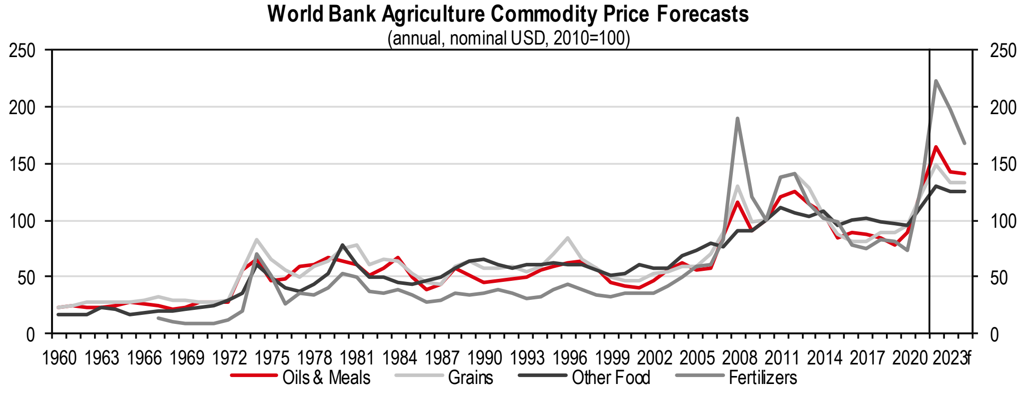
We have already seen the impact of La Niña on agriculture supply through 2021. Another La Niña event could elevate the risks of repeated dry conditions in negatively affected regions, such as eastern East Africa, southern South America, Central and Southern Asia, and southern North America, where several rainfall seasons have been below average since late 2020.

Price pressure expected to ease in 2023; risks to the upside

The World Bank forecast's higher agriculture commodity prices in 2022…

While HSBC does not forecast agricultural commodity prices, forecasts from international organisations, such as the IMF, World Bank, and UN, provide a useful cross-check on the broader outlook and economic implications. In this respect, the latest forecasts available are from the World Bank's April 2022 Commodity Market Outlook.

14. The World Bank's forecasts are for a decline in 2023



Source: World Bank, HSBC

…before prices decline in 2023, although they remain elevated

The Grain Price Index is expected to increase over 20% in 2022 before easing in 2023 as recent production and trade disruptions unwind. Maize is projected to average nearly 20% higher this year and decline 10% in 2023, while wheat is expected to rise 43% in 2022 and decline 16% in 2023. In contrast, rice is projected to register small declines both this year and next. The Oils and Meals Index is projected to be 30% higher in 2022 before easing 14% in 2023. The largest expected increases this year are in palm oil (+46%) and soybean oil (+30%).

The risks to prices are tilted to the upside

The World Bank has noted a number of risks to the outlook including a prolonged conflict in Ukraine, higher and more volatile input prices (especially energy and fertilisers), biofuel policies, the current La Niña weather pattern, and macroeconomic uncertainties.

In general, the risks appear tilted to the upside. While slowing global growth could see less upwards price pressure in agricultural commodity markets, given the non-discretionary nature of food consumption, agriculture is likely to be less directly impacted than energy and metals (as we saw in 2020, see World Bank, *Commodity Markets Outlook Report 2020*). Lower income growth, or lower real incomes, could reduce food consumption per-capita, or see a compositional change in food demand. The developments in oil and gas prices are likely to play a more important role than global growth itself, through impacting inputs costs.

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