



It's bad and it's getting worse: the looming food crisis in emerging markets

RBC Emerging Markets Equity team

As the world heads towards a food crisis, for emerging markets investors the question is: what will the humanitarian, political and economic fallout be?

On 17 May, Andrew Bailey, the Bank of England governor, referenced the biblical book of Revelation in warning of “apocalyptic” food shortages in his testimony to the Commons’ Treasury Committee. In Revelation the apocalypse is foretold by a wheat price that rises more than 1,000%¹. While that mark may yet be some way off, for some emerging market nations the looming food crisis may well feel like the arrival of the four horsemen.

- In 2007 and early 2008 global food prices rose dramatically as an increase in the price of oil pushed up the cost of fertilizer, transport and industrial agriculture. Protests followed in many countries, including Egypt, Mexico, South Africa and Sri Lanka.
- In 2010 the global wheat price doubled after the Russian government blocked exports to preserve domestic supply. In the ensuing Arab Spring, protests led to riots and regime change.
- In the first quarter of this year the prices of wheat and corn hit all-time highs following Russia’s invasion of Ukraine.

Even before the Russia/Ukraine conflict many lower-income nations were under pressure. The hit to growth from Covid-19, rising funding costs and reduced supranational support have left 41 low-income nations either in or on the verge of debt distress, according to

the IMF². Meanwhile Sri Lanka has defaulted on its offshore debt and is experiencing anti-government protests, and in April of this year the Egyptian government asked the IMF for new funding assistance. Against this backdrop, soaring food prices could hardly have come at a worse time.

Short-term wheat supply

Many low-income nations are heavily dependent on imports for their wheat consumption, and with wheat providing 20% of the world’s calories³, disruptions to supply can have catastrophic consequences. Together Russia and Ukraine account for around one-third of total wheat exports – 55 million tonnes each year⁴ – a contribution which will now be largely absent from the import/export market.

The loss is leaving major wheat importers, among them Egypt, Turkey, Indonesia, Nigeria and Morocco, and many smaller import-dependent nations, scrambling to secure more costly supplies at a time when budgets are already under pressure. It had been hoped that other nations could increase production to make up the difference, but this hope has faded recently following a US Department of Agriculture prediction that Australia’s 2022/23 harvest will be smaller than last year’s output by one-fifth, the decision by the Indian government to block most wheat exports to preserve domestic supply, and a US government projection that global wheat production will fall for the first time in four years⁵.

¹ Revelation 6 v5-6

² Restructuring Debt of Poorer Nations Requires More Efficient Coordination – IMF Blog

³ <https://wheat.org/nutrition/>; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4998136/>

⁴ FAOSTAT

⁵ Global wheat crop likely to fall for first time in four years, US forecasts | Financial Times (ft.com)

For some this represents opportunity. In Brazil, for instance, wheat exports are running at an all-time high⁶ and, should China decide to sell its large inventory into the international market, it would doubtless find a queue of willing buyers. However, despite Chinese silos being home to more than half of the world's entire wheat reserves⁷, enough to feed the domestic populace for at least a year, with Chinese wheat production projected to fall this year⁸ the Chinese government may not be inclined to open the taps.

Wider food system

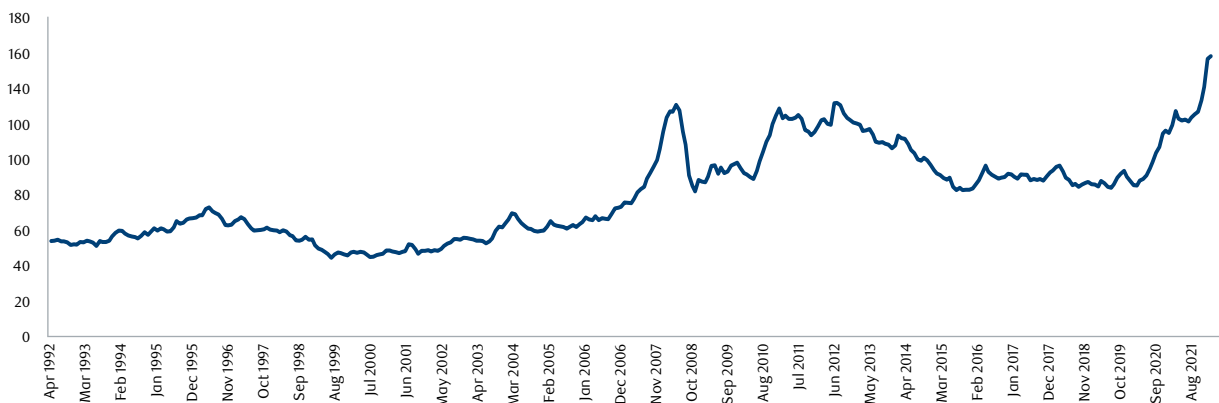
While it's wheat that has grabbed the headlines, price rises are being seen across the food system. In April of this year the price of corn near-matched its 2012 high, and rice, a possible alternative staple calorie source, now sits well above its long-term average.

The price of cooking oil has also risen markedly, as global output of sunflower oil – 60% of which comes from Russia and Ukraine⁹ – has plummeted. In the UK, Edible Oils, the country's largest supplier of sunflower oil has warned that it has limited supplies and that high prices are likely to be in place for at least a year. With supplies of sunflower oil dwindling, buyers have turned instead to palm oil. As a result Indonesia, by

some distance the world's largest palm oil exporter, has seen public protests against the rising domestic cost of oil. The government's response has been to ban all exports of palm oil, cutting more than half of supply¹⁰ from the global export market overnight. This leaves India, China and Pakistan, all heavily reliant on Indonesia for palm oil, looking for ways to fill the gap, with the price of other alternatives, such as soybean oil, also reaching record highs.

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Chart 1: World Bank Food Price Index



Source: World Bank Group. Data as at 16.05.2022.



⁶ [Brazil wheat exports hit new high 28.03.2022 - UkrAgroConsult](#)

⁷ [Column: To exclude or not? Grain analyses evolve as China ups imports | Reuters](#)

⁸ [Global wheat crop likely to fall for first time in four years, US forecasts | Financial Times \(ft.com\)](#)

^{9,10} [FAOSTAT](#)



Cost of fertilizer and falling yields

Despite wheat, rice and grain prices all sitting precipitously high, and the UN Food and Agricultural Organisation Food Index having hit a new high in March of this year, it's the rising cost of fertilizer that gives real cause for concern.

Across 2021 the price of natural gas, the feedstock for the production of nitrogen fertilizers, more than doubled. In response, several European fertilizer manufacturers suspended production and the cost of nitrogen fertilizers hit an all-time high, in some places rising by as much as 250%. In the UK, for example, the price increased from £200 per tonne in the spring of 2021, to £700 per tonne by the autumn¹¹. In China, the world's top exporter of phosphate¹², a base component of several fertilizers, authorities reacted by curbing fertilizer exports¹³.

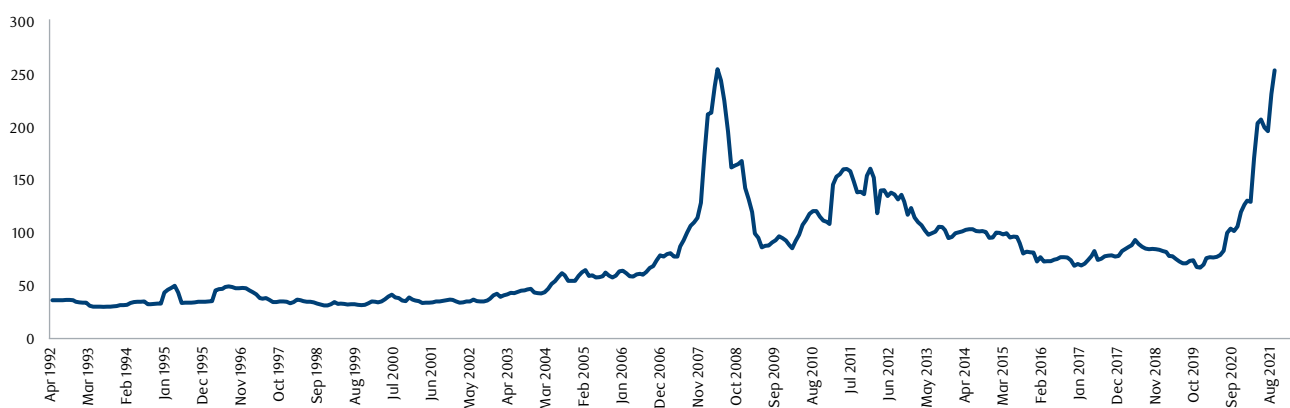
Since Russia's invasion of Ukraine on 24 February the price of natural gas has risen further; Belarus, which is responsible for 20% of global potash exports, has been unable to bring much of its potash to market due to sanctions and port blockades¹⁴; and Russian fertilizer exports, which make up a significant portion of the global

market¹⁵, have fallen significantly. As a result, the World Bank's Fertilizer Price Index shows a further 25% increase across all fertilizer types since the start of the conflict.

As the cost of fertilizer rises, smaller farms in low-income countries will be priced out of the market. Speaking at an online conference on the topic of fertilizer availability and affordability Theo de Jager, President of the World Farmer Organisation, noted that in many regions farmers are already failing to plant, with the outsized input cost creating too much risk, especially on marginal fields. More widely, in both low and high-income countries, farmers will use less fertilizer, and yields will fall as a result.

The 2008 and 2011 fertilizer price spikes were short-lived. However, with the Russia/Ukraine conflict appearing to have entered an attrition phase, and with the oil and gas industry less well-placed to hike output at short notice than it was a decade ago, the fertilizer price is likely to hold high or even rise across the rest of the year. A food shortage is now inevitable – the only question is how wide and deep it will be.

Chart 2: World Bank Fertilizer Price Index



Source: World Bank Group. Data as at 16.05.2022.

¹¹ [Surge in fertiliser prices a 'financial nightmare' for farmers - FarmingUK News](#)

¹² [Chinese fertilizer producers to suspend exports | World Fertilizer](#)

¹³ [China's Curbs on Fertilizer Exports to Worsen Global Price Shock - Bloomberg](#)

¹⁴ [Belarusian Potash Force Majeure Adds to Global Fertilizer Chaos - Bloomberg](#)

¹⁵ [Russia Calls On Domestic Fertilizer Producers to Halt Exports - Bloomberg](#)

¹⁶ [Fertilizer Availability & Affordability: Implications for agricultural productivity & food security - YouTube \(at 13 mins\)](#)

Emerging markets at risk

The White House has, rather opportunistically, labelled rising food and energy prices “the Putin price hike”. While this avoids the fact that the cost of many commodities had been rising long before Russia’s invasion, it is certainly true that the supply shock caused by war has added a further burden to governments under strain.

Rising food prices are often a driver of social upheaval, and in some places the effects are already being felt – in Iran, for instance, regional protests have broken out following an end to the government subsidy for imported wheat, a decision which quickly led to a rise in the cost of flour and bread¹⁷. This is just the start. As fertilizer usage drops and yields fall, the real impact will be felt in the third and fourth quarters of this year and throughout 2023. In the West this will mean inflated prices in the shops and, perhaps, less variety and volume of imported

out-of-season fruit and vegetables. For those lower-income nations particularly dependent on grain and fertilizer imports, the result will be more serious.

To see which countries in our universe are most at risk from social unrest, we have tried to gauge their vulnerability to food shortages in the table below. Using the UN’s Food and Agricultural Organisation database, we have estimated each country’s net imports per capita of cereal and cereal preparations (semi-processed cereals such as wheat or rice flour) and compared this against GDP per capita to get a “Food Vulnerability Score”. While admittedly a rough approximation that won’t cover exports of finished goods or current inventories, we still think it’s a useful indication of where political pressure will likely be most acute in the coming months.

Chart 3: Net imports of cereals and cereal preparations

Country	Net Imports/Capita (kg)	Nominal GDP/Capita (USD)	Food Vulnerability Score
Egypt	158.9	4,162	38.2
Peru	195.2	7,034	27.7
Colombia	169.1	6,807	24.8
Vietnam	97.5	4,122	23.7
Philippines	82.4	3,687	22.3
Bangladesh	47.8	2,362	20.3
Sri Lanka	63.8	3,699	17.2
Mexico	158.6	10,166	15.6
Malaysia	199.2	13,268	15.0
Chile	213.3	15,941	13.4
Saudi Arabia	315.0	28,759	11.0
Turkey	84.6	8,081	10.5
Korea	311.5	34,994	8.9
Indonesia	41.6	4,691	8.9
Taiwan	253.5	36,051	7.0
United Arab Emirates	341.1	50,349	6.8
Qatar	257.6	84,514	3.0
China	28.2	14,096	2.0
South Africa	-0.8	6,979	-0.1
Thailand	-2.0	7,449	-0.3
Pakistan	-7.2	1,562	-4.6
India	-12.8	2,515	-5.1
Poland	-207.3	18,506	-11.2
Brazil	-121.6	8,570	-14.2
Hungary	-796.8	20,336	-39.2

Source: UN Food and Agricultural Organisation, UN Population Estimates, IMF and RBC GAM.

¹⁷ [Protests Triggered by Rising Food Prices Spread in Iran - The New York Times \(nytimes.com\)](https://www.nytimes.com/2022/09/14/world/middleeast/iran-protests-food.html)

In our view, at most immediate risk is Egypt, which imports 80% of its wheat needs from Russia/Ukraine¹⁸, and is reliant on wheat for a heavily-subsidised bread programme that feeds 70% of the population. The Egyptian government has announced that the price to the consumer for this subsidised bread will rise for the first time in thirty years. The devaluation of the Egyptian pound from around 15.7 to 18.3 per US dollar, which took place in March this year, is only adding to the strain on the government's budget.

Peru and Colombia also look vulnerable on this measure, however this is somewhat mitigated by being situated close to Brazil, the fourth largest grain exporter in the world¹⁹. South American food supply chains have been insulated from the disruption caused by the Russia/Ukraine war, however, given Brazil's position as the world's largest fertilizer importer²⁰, rising input prices will still mean higher food prices and rising pressure on the region's governments.

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Likewise Vietnam, Philippines and Bangladesh food supplies have not been affected by the disruption in the wheat market, however we expect the price of rice to continue to rise as people substitute wheat for rice. We could see shortages if the world's largest exporter of rice, India²¹, widens its wheat export restrictions to include rice.

Sri Lanka is already in a political crisis, with violent riots over the shortage of energy, medicine and food forcing the resignation of the Prime Minister, Mahinda Rajapaksa. Although there are a number of factors at play, not just food, Sri Lanka's default on its international debt and the subsequent 78% drop in the Sri Lankan rupee underscores the heightened risk that political crises might bring to foreign investors.

Even countries that score low on the food vulnerability score could see political unrest. India, for example, while a net exporter of un-finished and semi-finished cereals, was the second largest importer of fertilizer in 2020²². As a result, despite being self-sufficient in the production of wheat and rice, domestic prices are likely to continue to increase, and, with over 45%²³ of Indian consumer spending going on food, the government will come under pressure to act. Indeed such pressure is already being

felt, with lobbying having started for an expansion of the subsidised food programme that supplies the poorest households. A very similar dynamic also exists in Pakistan, where an even higher proportion of income is spent on food.

Global food inflation is also likely to create further political pressure for President Erdogan of Turkey, where consumer inflation is already running at over 60%. Turkey is a net energy and fertilizer importer and is one of world's largest importers of wheat, with 70% and 15% coming from Russia and Ukraine respectively²⁴. Whilst much of this is not for domestic consumption but rather for milling and reselling as flour, disruptions in supply will be unwelcome at a time when companies are already struggling with rising imported inflation.

Indonesia, also a net energy and fertilizer importer, has already seen unrest after a sharp rise in cooking oil prices. The fourth most populous country, with over 270 million people, has a relatively low nominal GDP/capita of USD 4,700. Rising costs of rice would pose a risk to the government given that food makes up over 20%²⁵ of the consumer basket.

Finally South Africa, despite being a net exporter of food and not obviously at risk on our food vulnerability score, could be indirectly hit by a food crisis in other sub-Saharan countries. The African continent as a whole is vulnerable to higher energy and fertilizer prices disrupting food production. Many farmers in sub-Saharan Africa don't have access to the credit needed to buy the diesel and fertilizers required to plant seeds and maintain yields in the coming months. Our concern is that this could result in famine in neighbouring countries that would put extra pressure on the South African government's budget, due to the need to provide food aid and manage the mass immigration that could follow.

Conclusion

Unless we see an end to the Russia/Ukraine conflict, and the lifting of sanctions soon, energy and fertilizer prices are likely to stay elevated. This will result in food shortages later this year as farmers cut back on fertilizer use and choose to leave economically marginal fields fallow. As such, investors need to be on the lookout for political unrest in the most vulnerable emerging markets highlighted above.

¹⁸ [Egypt's wheat imports from Russia rose in March despite war | Reuters](#)

^{19, 21, 24} [FAOSTAT](#)

^{20, 22} [OECD](#)

^{23, 25} [CEIC](#)



Author

Richard Farrell

Portfolio Manager, RBC Emerging Markets Equity
RBC Global Asset Management (UK) Limited

CFA (2013), MSc (Investment Management) (2009), Cass Business School, UK; BSc (Business and Finance) (2005)
King's College London, UK.

Richard is an emerging markets portfolio manager at RBC GAM. Prior to joining the firm in 2013, Richard spent three years at a major UK asset manager providing fundamental equity analysis in the energy and materials sectors within global emerging markets. Richard began his career in the investment industry in 2005 as an equity analyst in the mergers and acquisitions team of a large multinational bank.

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