Global Insights

Wheat Supply Shortfall Has Intensified Global Pressures, Especially for Emerging Markets

In our May 4 Global Insights, “Rising Food Prices Threaten Emerging Markets,” we considered the relationship between rising food prices and social unrest in emerging economies. Since then, the situation has worsened, as various nations restrict exports to contend with increasingly expensive food imports and extreme weather that has damaged crops. Such short-term solutions have limits. Longer-term, we see policymakers and businesses embracing agriculture technology, also known as agritech, to improve crop yields and maintain profitability amid rising costs.

This edition of Global Insights updates our thinking and introduces readers to developments in agritech, which could provide a long-term solution to extreme food prices.
Elon Musk once quipped that “some people don’t like change, but you need to embrace change if the alternative is disaster.” The ongoing Russia-Ukraine conflict exposed global supply chain vulnerabilities and an overreliance on certain trade partners for critical inputs. Now, policymakers face the challenge of addressing food security. And that’s on top of the sharp increase in food prices.

Food prices are forecast to remain elevated through next year, driven in part by extreme weather in South Asia and South America. As fears of a global food crisis grow, policymakers are weighing short- and long-term solutions. Unfortunately, many of the short-term solutions emphasize inward-looking policies, such as those that limit exports. In fact, according to an August 2017 report from the Organization for Economic Cooperation and Development, on average, a 1% increase in trade affected by insulating policies (export restrictions) corresponds to an increase of between 0.4% and 1.2% for international food staple prices. Said more simply, food export bans usually lead to higher food prices.

A lower starting point. Having peaked in October 2020 at 320 million metric tons, according to data from Bloomberg, global wheat stocks were in decline even before Russia invaded Ukraine, as distorted supply chains had already contributed to lower wheat procurement. In fact, by the time Russia invaded Ukraine—considered by many to be the world’s breadbasket—global inventory had already fallen 13.5% (see Exhibit 1).

The conflict in Ukraine has only compounded the problem. According to the Food and Agricultural Organization of the United Nations (FAO), nearly 26 countries depend on either Russia or Ukraine for over 50% of their wheat imports. As long as fighting continues, wheat shipments from Ukraine, the world’s biggest exporter, will likely be stalled.

Exhibit 1: Global Ending Stocks for Wheat Were Already in Decline When Russia Invaded Ukraine

<table>
<thead>
<tr>
<th>Ending Stocks of World Wheat</th>
</tr>
</thead>
<tbody>
<tr>
<td>325 Million Metric Ton</td>
</tr>
<tr>
<td>300</td>
</tr>
<tr>
<td>275</td>
</tr>
<tr>
<td>250</td>
</tr>
<tr>
<td>225</td>
</tr>
</tbody>
</table>

Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office as of May 31, 2022

Short-term solution. Since the start of the Russia-Ukraine conflict, food export restrictions have contributed to higher prices. Typically, export restrictions are targeted, temporary and enacted in response to supply shocks. When adopted broadly, however, they can generate ripple effects through the global economy.

India, the world’s second largest exporter of wheat, recently imposed several restrictions to safeguard its food supply in the face of extreme weather, including a May 14 ban on wheat exports. Investors worry this will exacerbate food shortages and inflation, which could have severe economic consequences. Furthermore, according to its commerce minister, India has no immediate plans to lift its ban but will continue to conduct specific deals directly with other governments, potentially introducing new variables to a shifting geopolitical landscape where tensions are already high.

Limits on exports have left import-dependent economies in a difficult position. So far, researchers at the World Bank have identified 106 restrictive export policies focused on food. In fact, active restrictive export curbs in Europe and Central Asia have jumped 77% since Russia invaded Ukraine in February (see Exhibit 2).

Exhibit 2: Restrictive Trade Policies Put Upward Pressure on Prices

<table>
<thead>
<tr>
<th>Number of Active Restrictive Export Curbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe and Central Asia</td>
</tr>
<tr>
<td>East Asia and Pacific</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
</tr>
</tbody>
</table>

Source: World Bank, University of St. Gallen’s Global Trade Alert, Morgan Stanley Wealth Management Global Investment Office as of April 2022

Together, depressed inventories and inward-oriented policies promote higher prices. However, the impact of high prices on emerging economies will not be evenly distributed. In our May 4 Global Insights, “Rising Food Prices Threaten Emerging Markets,” we highlighted Egypt’s official request for support from the International Monetary Fund (IMF) as a canary in the coal mine. Since then, Pakistan’s policymakers have discussed options for dealing with surging food prices with the IMF.

Because high prices weigh heavily on importers, individual countries will need to rely on their foreign exchange reserves to cope with them. As such, the capacity to address looming
threats will vary among developing economies. In March, rather than depleting its foreign exchange reserves, Egypt sought help from the IMF and let its currency depreciate by 18%. It now has enough reserves to cover just under four months of imports. While this analysis addresses only part of the story, it provides an objective comparison. As a reminder of the pressure facing emerging market policymakers, Sri Lanka’s and Pakistan’s liquid foreign currency reserves are enough to meet only one and one and a half months of imports, respectively, which compares to nine months for India and 17 for Brazil (see Exhibit 3).

Exhibit 3: Some Countries May Lack Sufficient Foreign Exchange Reserves to Combat Inflated Prices

![Graph showing international foreign exchange reserves/goods imports for Brazil, India, Egypt, Sri Lanka, and Pakistan from May 2011 to May 2021.]

Notes: Sri Lanka data based on all imports; Egypt based on goods imports; India, Brazil and Pakistan based on merchandise imports. Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office as of May 25, 2022

Long-term solution. The current global food shortage highlights the importance of food security. A bill recently introduced to parliament in the United Kingdom (UK) calling for relaxation of restrictions on gene-edited crops has been floated by policymakers as a way to improve crop yields through the development of disease- and drought-resistant crops. Unlike genetically modified organisms (GMOs), which may result from altering organisms in a way that does not occur naturally, gene editing methods modify existing genetic materials. According to S&P Global, the bill calls for alignment of the approval process for research trials with traditional plant breeding rather than with genetically modified plant technology, per the current alignment.

While gene-editing technology has thus far been underutilized, avenues for broader adoption have emerged. Along with the UK proposal, in Canada, health officials argued in a May 18 briefing that “Gene-edited plants are just as safe as conventionally bred counterparts.” The European Commission recently reaffirmed its conviction that new genomic techniques, including gene editing, can contribute to the objectives of EU strategies like the European Green Deal and the Farm to Fork strategy.

Exhibit 4: Key Crops May Offer Additional Yield Improvement Potential

![Graph showing global yield, no crop protection remaining potential, and crop protection for rice, wheat, corn, and soybean from 2021 to 2025.]


In emerging economies that rely on imports, agritech could lead to more productive crops. Already, 90% of the world’s 13.3 million biotech crop farmers are from developing countries, according to the UN. In response to the current food crisis, we anticipate that more countries will loosen regulations, such as those pertaining to gene editing, on agritech, providing a boost to the industry. In fact, according to a 2016 Deloitte report, agricultural technology focused on yield efficiency could foster crop improvements of 28%, 30% and 38% for wheat, corn and rice, respectively (see Exhibit 4). With government policy and the regulatory landscape for genetically edited crops changing quickly, many biotech companies that develop these technologies and the agricultural companies that implement them stand to benefit from increasing access and demand.
Investment Implications

Driven in part by extreme weather in South Asia and South America, food prices are forecast to remain elevated through next year. Low global inventories and temporary restrictions on exports could harm countries that do not have sufficient foreign exchange reserves to contend with substantially higher food prices. The most vulnerable emerging economies may need to rely on lending facilities from supranational entities to provide debt service relief, which could weigh on their currencies and creditworthiness. Longer-term, developments in agritech could mitigate concerns that policymakers have around food supplies. Recent agribusiness outperformance of broad equity indexes may hint at a big trend just getting under way (see Exhibit 5).

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Exhibit 5: Agricultural Stocks Have Outperformed the S&P 500 Index

Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office as of May 25, 2022
Charts You Can't Miss

Exhibit 6: High Food Prices Could Drive Greater Currency Volatility

Exhibit 7: Wheat, Corn and Rice Prices Have Accelerated at a Pace Not Seen Since 2008

Exhibit 8: Food Inflation Has Risen Across Emerging Economies

Exhibit 9: Food Prices Were Just Under a Record High in April

Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office as of May 31, 2022

Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office as of March 31, 2022

Note: Egypt, Pakistan and Sri Lanka data encompasses food and nonalcoholic beverages and Brazil data encompasses food and beverages. India data encompasses all consumer food prices.
Source: Haver, Morgan Stanley Wealth Management Global Investment Office as of March 31, 2022

Please refer to important information, disclosures and qualifications at the end of this material.
Exhibit 10: Emerging Market Equity Has Done Well When the Financial Conditions Index Has Tightened From Very Accommodative Levels

Note: Emerging Markets based on MSCI Emerging Markets Index; Latin America based on MSCI Emerging Markets Latin America Index; Asia Pacific ex Japan based on MSCI Asia Pacific ex Japan Index. Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office as of April 30, 2022.

In our Feb. 23 Global Insights, “Will Emerging Markets Face a Tight Squeeze?” we examined market returns during tightening cycles. Fast forwarding to today, emerging economies are coping with high inflation and, in some places, social unrest. The Citi Emerging Markets Asia Financial Conditions Index, a close proxy for emerging markets, is 1.8 standard deviations above its 523-day average. Although emerging market equities outperformed the US at the start of the year, Fed tightening, a large withdrawal in market liquidity and risk-off sentiment following Russia’s invasion of Ukraine signal a regime shift away from “loose and tightening” financial conditions and toward “tight and tightening,” which could foster less attractive total returns. — Brad Fulton


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GLOBAL INSIGHTS

Disclosure Section

Index Definitions

DAXGLOBAL AGRIBUSINESS INDEX measures exposure to publicly traded companies worldwide that derive at least 50% of their revenues from the business of agriculture.

FAO FOOD PRICE INDEX measures the monthly change in international prices of a basket of food commodities.

For other index, indicator and survey definitions referenced in this report please visit the following: https://www.morganstanley.com/wealthinvestmentsolutions/wmir-definitions

Glossary

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