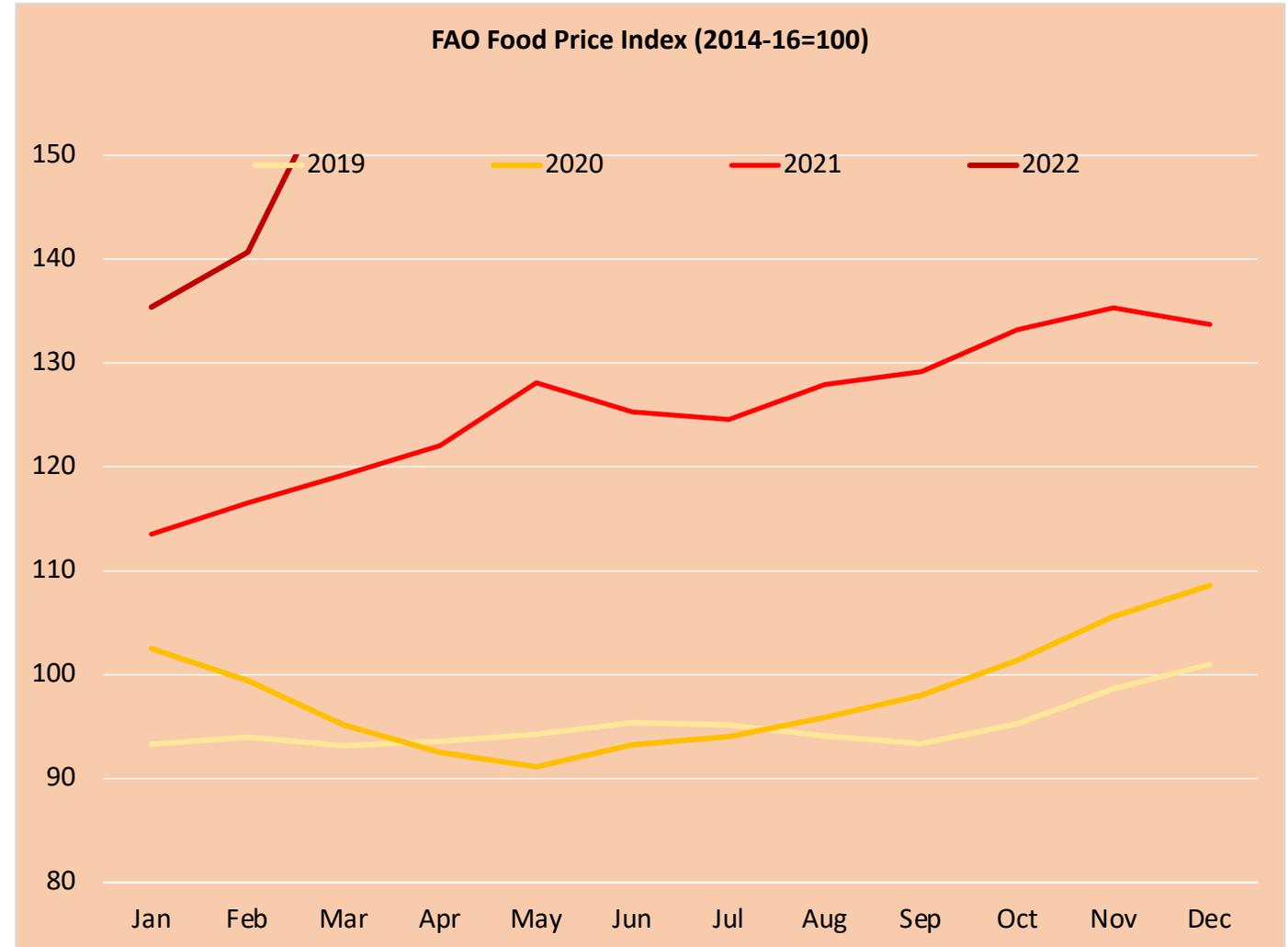


The four big “Cs”:
Climate, Conflict, Covid and now high
food **Costs** – a hunger crisis in the
making?

Alexander Müller
TMG Research gGmbH

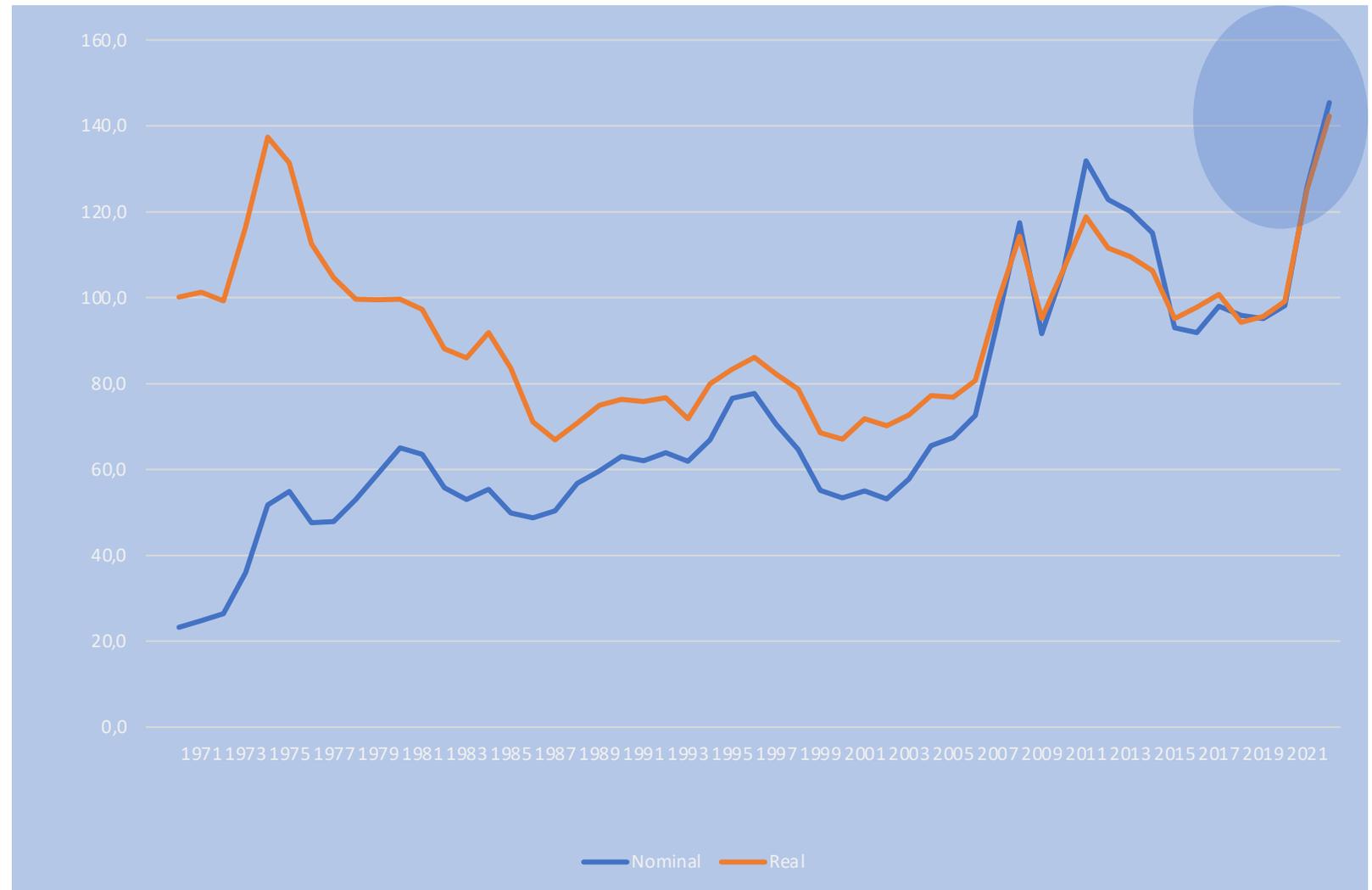
Food Prices Reached Record Highs in March 2022

- The FAO Food Price Index (FFPI) is the go-to benchmark indicator of prices of internationally traded foods: cereals, vegetable oils, sugar, meat and dairy
- February 22 to March 22 biggest jump on record (18 points). Index stands at a record high
- Prices already began rising throughout much of 2021
- Poorer (importing) countries hit the hardest: as much as 80% of h/h income spent on food, compared to a fraction in richer countries



Food prices in perspective: 1970 – 2022*

- Deflated the nominal FFPI (“real purchasing power”) the great food crisis of the 1970s saw prices rising to levels similar today – but incomes were a fraction then
- 1970: using excess mortality data, millions died of hunger, famine and malnutrition causes.
- Are we set for a similar scenario in 2022/23 (mass hunger)? Or a similar “perfect storm” during 2006-2009 (protracted high food prices – no known hunger-related deaths)?



How did we get here - drivers of crisis

1. COVID-19 restrictions lifted rapidly leading to a surge in demand (**higher prices**, esp. energy)
2. Supply chain disruptions continue today (**higher prices**)
3. Soaring energy prices led to soaring fertiliser prices causing sharp rise in the cost of food production (**higher prices**)
4. Russia and Ukraine war: two of the largest food exporters in the world (wheat-30%, maize-6% and sunflower oil-60%). Russia also largest exporter of fertilisers (esp. N).
5. Will Russia halt ag. exports – protest at sanctions? As long as they maintain oil and gas sales (China, India, Africa). Uncertainty = **higher prices**
6. Ports are closed in the Black Sea (not safe). Will or can Ukraine harvest and export? Huge uncertainty = **higher prices**
7. Many producing countries are imposing export restrictions and many consuming countries are lowering tariffs (**higher prices**)
8. Secret hoarding? (**higher prices**)

What could 2022/23 look like? Part 1

- Farmers in the northern hemisphere are deciding now what and how much to plant
- Fertilisers are becoming unaffordable. Yara (big fertiliser dealer) recently said that crop yields could fall as much as 50%
- In Americas, farmers turning to soybeans (less fertiliser intensive) at the expense of maize. Wheat plantings in the US expected to rise. High prices do not matter. Profits do

Surging fertiliser costs forecast to eat into global rice harvest leaving 500m hungry

By Louis Ashworth

HALF a billion people are at risk of going hungry as the world's rice harvest is decimated as a result of soaring fertiliser costs.

The total rice yield this year could drop 10pc, or 36m tons, the International Rice Research Institute (IRRI) has predicted - enough to feed about 500m people.

Humnath Bhandari, a senior agricultural economist at IRRI, warned it was a "very conservative estimate", with the potential for more severe disruption if the conflict in Ukraine continues.

Russia is one of the world's biggest suppliers of fertiliser, a core part of global agricultural production. Prices have increased two or threefold for many farmers in recent weeks. Alongside energy, it makes up a major part of producers' costs, and is causing inflationary pressures across the industry.

Global food prices have hit a record high in recent weeks as supply from Russia and Ukraine is disrupted by conflict and Western sanctions. Wheat and



Workers rake billions of grains of rice in India, but experts fear a lower yield this year

production and plentiful stockpiles before Russia's invasion of Ukraine.

Charles Branch, head of softs and agriculture commodities at Britannia

higher, which could have potentially seismic political consequences in Asia, where keeping rice affordable is a key focus for politicians.

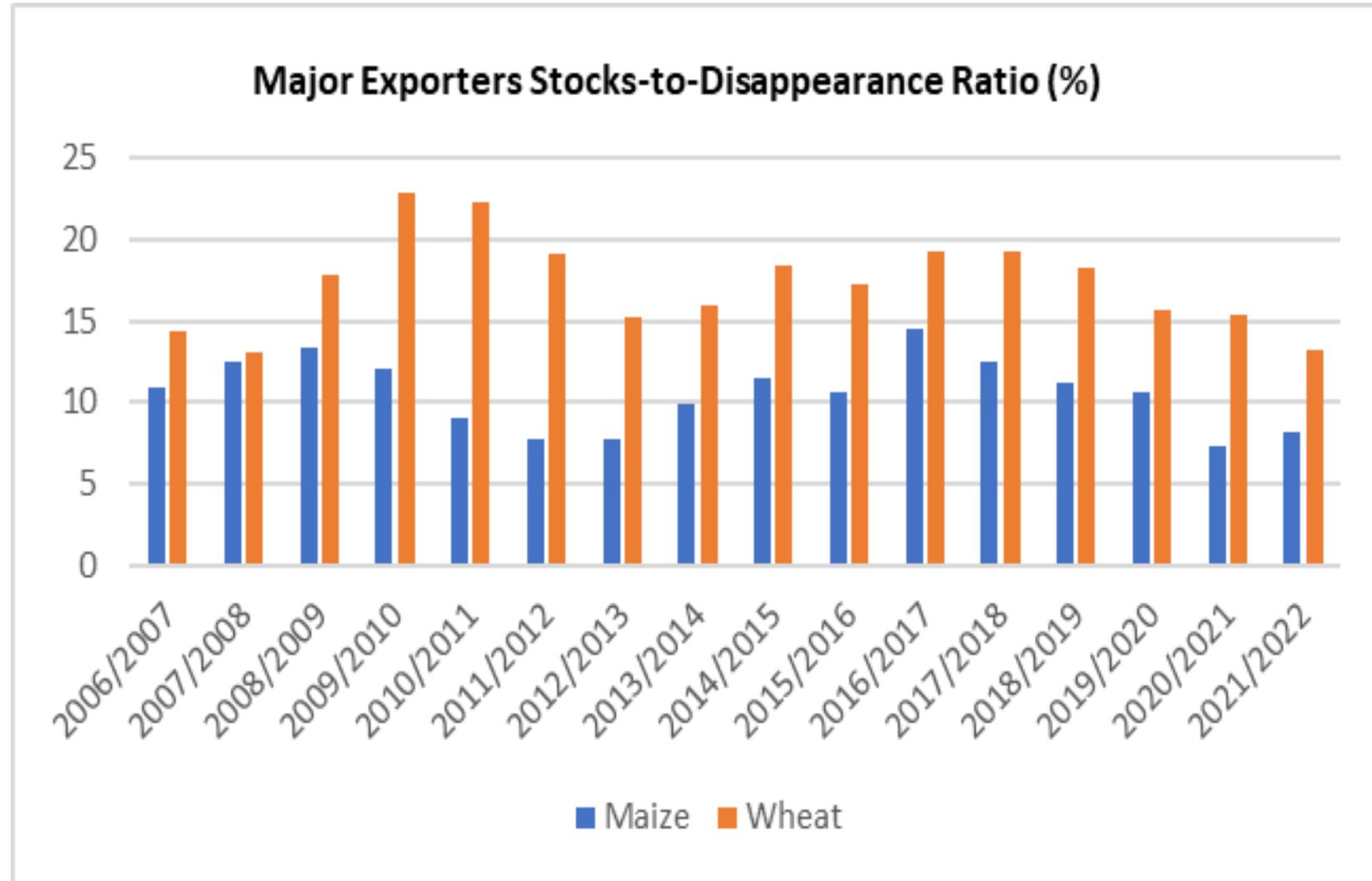
Michael Every, global strategist at

DEBANK ROY/SOLENT NEWS

What could 2022/23 look like? Part 2

• Some Fundamentals

- Global population is close to approaching 8 billion people
- Must crop production reach record levels every year?
- Not necessarily - thanks to stocks
- But are stocks sufficient? We assess through Stocks-to-Disappearance Ratios (i.e., stocks as ratio of domestic utilisation plus exports)
- As we enter 2022/23 stocks are strained, e.g., for wheat at 13% x 365 days, means we can only feed importers for 45 days. Lowest since last (price) crisis of 2006/08



What could 2022/23 look like? Part 3

- **Back to the 4 “Cs”**

- **Climate**- weather always dictates crop outcomes. But will extreme climatic events feature? Dry weather being reported in Northern Hemisphere. Breadbaskets at risk?
- **Conflict** – when will it end???
- **COVID-19** – return to normalcy, with functioning supply chains? Not so in China...
- **Costs** – fertiliser manufactures at full capacity. New investment needed to expand supply – but unlikely in the short-term. Prognosis for inflation not good. Stagflation (economists worst nightmare!!!)

What could 2022/23 look like? Part 3

- **Back to the 4 “Cs”**

- **Climate**- weather always dictates crop outcomes. But will extreme climatic events feature? Dry weather being reported

Uncertainties dominate!

- **Conf**
- **COVID-19** – return to normalcy, with functioning supply chains? Not so in China...
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What can the world do?

- FAO has proposed a **Food Import Facility (FIF)** for vulnerable countries. Countries borrow from a dollar fund to finance imports conditional on investing in sustainability/resilience in ag.
- FAO also is designing a **barter system with Russia**. Swapping food for fertilisers. Oil-for-food failed in the past
- **AMIS (G20)** calling for free markets, uninterrupted trade and market transparency . . . Silent today!
- **Crops for food** rather than feed and (bio)energy? US increased blending mandate. Binding global governance needed. Where is AMIS?
- **Legumes** for nitrogen fixation (soil) and animal feed (legumes)
- Tackle **food losses and waste** – long-term
- Invest in **green ammonia** for N fertiliser (wean off NG) – long-term
- **Fossil fuels got us into this mess (always does)**. Stop perverse subsidies/false economy of FF. EU food systems absorb 26% of all fossil fuel energy consumed. Alternative energy needed – long-term
- TCA for food systems + price adjustment (long-term)

What can the world do?

Combination of short- and long-term responses needed.

Is a global hunger crisis looming on the horizon?

**Is there real prospect of food shortages (not since the
1970s!)**

**There is a risk that short-term solutions make medium-
term perspectives worse**