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Eleven countries at high risk of a food crisis

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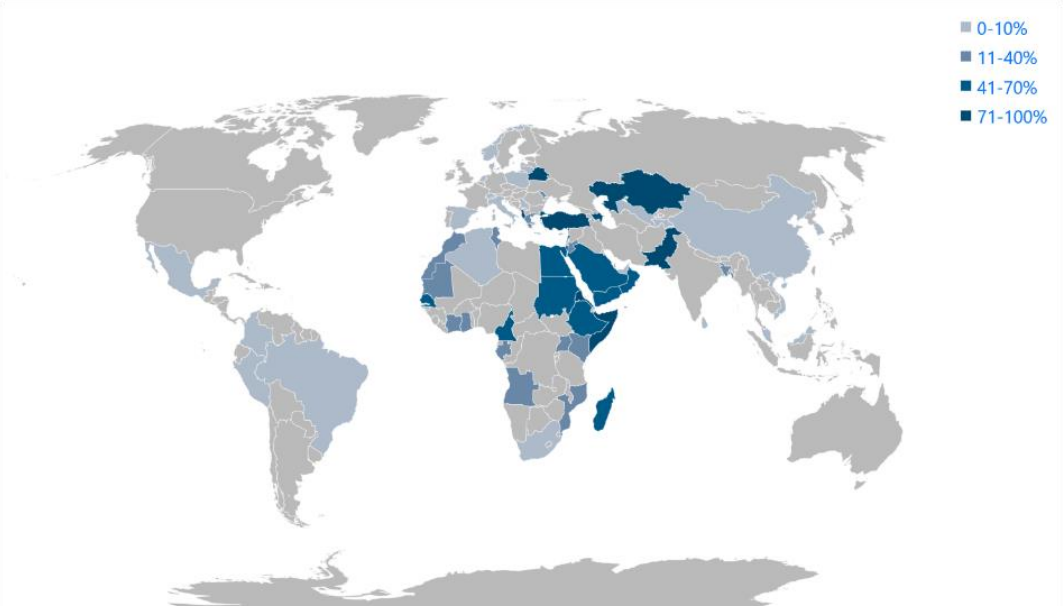
EXECUTIVE SUMMARY

- **The war in Ukraine has affected food availability as the country supplied 12% of the world's grains.** While there is still enough to feed the planet, ensuring access is key to avoid a global food crisis, especially as shortages of grain and fertilizer, alongside climate change and lingering pandemic-driven supply-chain issues, have pushed up global food prices by +56% compared to end-2019.
- **Disposable income and purchasing power will suffer from the higher inflation environment.** The most affected countries in terms of purchasing power are those that have a higher share of food consumption as a percentage of total consumption. Based on the current food price trend for this year (food Consumer Price Index: +425% y/y and 25% of total consumption on food), Turkey could lose over 100% of purchasing power and Lebanon 75% (food CPI: over 300%, 20% of total consumption on food). Similarly, Argentina would lose 15%, given its food CPI at +62% and food consumption at 23% of total consumption. **Using a simple panel data approach, we find that, on average, a 1pp increase in the CPI would result in a -0.81pp decline in real disposable income** in the absence of government intervention or consumer behavior changes.
- **Countries that have higher import needs and less fiscal space will need to find the right policy mix to maintain financial stability, both in the private and public sectors.** Policymakers have already announced measures to counteract inflation, including cutting taxes, cash transfers, subsidies and even price controls. However, many of these actions can carry large fiscal costs and unintendedly increase global imbalances in supply and demand.
- **Net food-importing countries with a high level of social risk are the most vulnerable to social unrest in the current global environment.** We identify 11 larger emerging markets that face a high risk of food-related protests in the next few years: Algeria, Bosnia and Herzegovina, Egypt, Jordan, Lebanon, Nigeria, Pakistan, the Philippines, Sri Lanka, Tunisia and Turkey. Out of these 11 countries, only Bosnia and Herzegovina and Egypt have so far embarked on consumer-oriented policies to mitigate the food price shock for households.

Arab Spring? Summer? Fall? Winter?

The war in Ukraine has created the perfect storm for a global food crisis that could last for years. Before the Russian invasion of Ukraine, the latter supplied 4.5mn tons of agricultural produce through its ports – 12% of the world's wheat, 15% of globally traded corn and 50% of the planet's sunflower oil. Russia and Ukraine cumulatively supplied 28% of traded wheat. Now, without access to these markets, the coming years could see a resurgence of malnutrition and mass hunger (UN Secretary-General António Guterres' in the Global Food Security Call to Action), with millions of people at risk of food insecurity.

Figure 1: Percentage of wheat imports from Russia and Ukraine

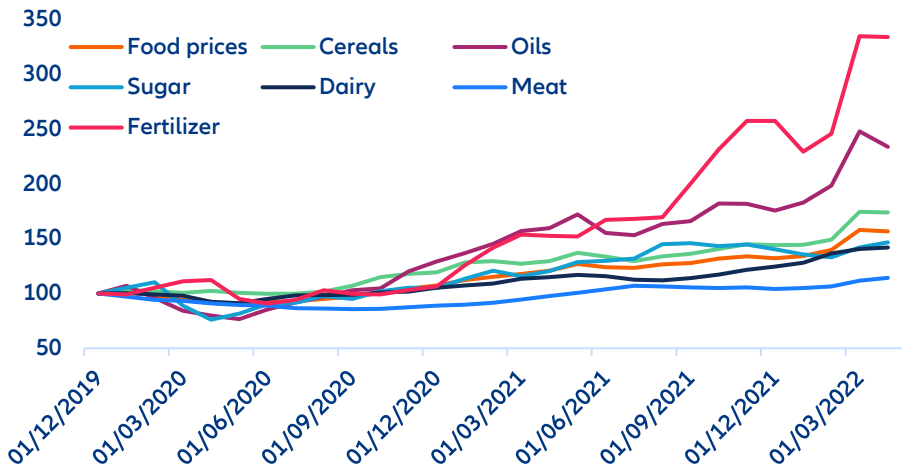


Sources: ITC calculations based on UN Comtrade, Allianz Research.

Soaring energy prices have also played a part in the current crisis by making it more expensive to produce fertilizer and to run farm equipment. Russia is the world's top supplier of certain fertilizers and natural gas. While fertilizers are not subject to western sanctions, sales have been disrupted by measures taken against the Russian financial system and Moscow has also restricted exports. In addition, China's curb on its fertilizer exports and trade sanctions dampen the prospects of higher grain production in other parts of the world. The IMF's fertilizer index indicates that the global fertilizer prices are 3.4 times higher than before the pandemic.

As a result, food is now over +56% more expensive than at the end of 2019 and oils have soared to 2.3 times the price that they were in December 2019.

Figure 2: Global food and fertilizer prices (Dec 2019=100)

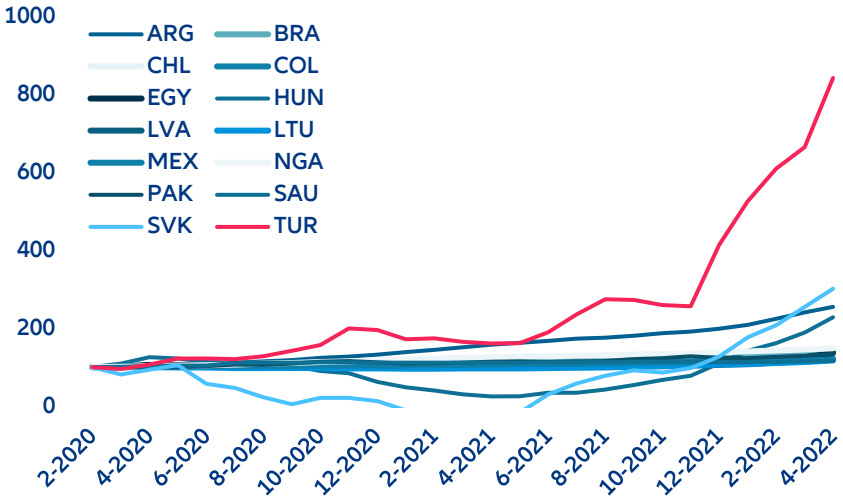


Sources: FAO, IMF, Refinitiv, Allianz Research

While we do not expect a generalized fall in GDP per capita in 2022, higher inflation is bound to have an effect on disposable income. Using least squares fixed effects panel data, we estimate that a +1% increase in inflation results in -0.82% decrease in disposable income in our sample (using real personal disposable income growth, CPI forecasts and the second lag of GDP per capita growth, all independent variables were statistically significant to 95%).

In Figure 3, we observe the 15 countries within our coverage that have experienced the highest food consumer price index (CPI) increase since the onset of the pandemic. While higher prices are affecting all countries, it is the ones depending on imports ones that will face the strongest hit. In Turkey, where food consumption accounts for 25.3% of total food consumption, the food CPI has increased by +425% y/y, according to the OECD. This means that in the absence of government intervention or a change in consumption habits, households would have lost 100% of their purchasing power.

Figure 3: Food CPI (Feb 2020=100)



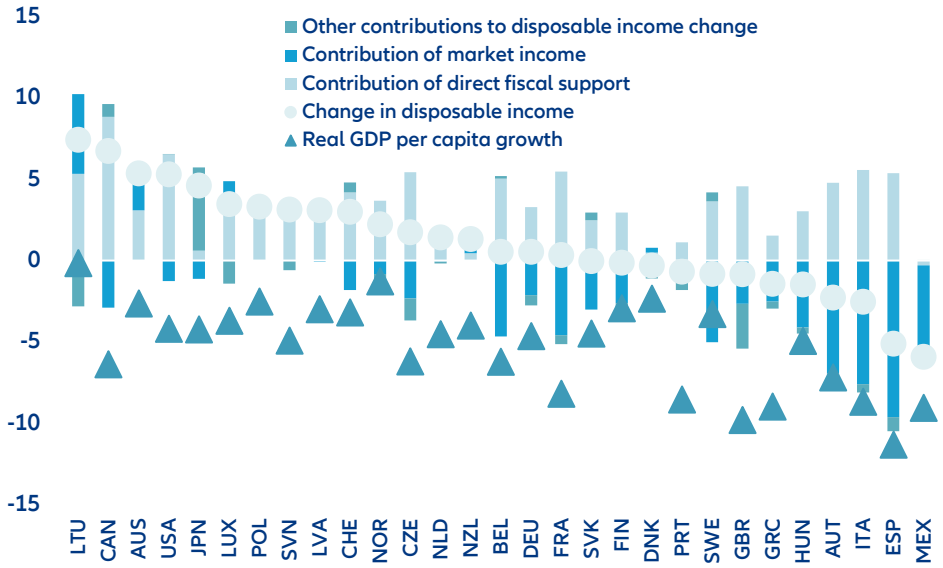
Sources: Statistical offices, OECD, Refinitiv, Allianz Research.

Argentina, Brazil and Egypt will also feel the pinch given the high proportion of food consumption as % of total consumption and the high domestic food prices: Households in Argentina could see a -12% loss of purchasing power. If inflation grew by another 50% of this year's trend, their purchasing power could drop by -22%. In Brazil, food consumption represents 24% of total consumption the food CPI at 18% y/y would result in a -4% loss of purchasing power, of it grew another 50% of this year's trend it would erase -6% of their purchasing power. Egypt has a food CPI of 44% could see a -10% loss in purchasing power and if it continued to grow by an additional 50% of the trend, they would see -15% loss of purchasing power (see Table 1 in the annex for other countries).

Historically, high food prices have had positive effects on income distribution in countries where the poorest households are net agricultural producers. However, this current spike in food prices might prove more challenging for a plethora of reasons: First, some of the poorest households are still recovering from the impact of the Covid-19 crisis. Second, hunger and malnutrition were already on the rise. Third, cash-strapped governments will have a limited room to maneuver and support households. Finally, uncertainty remains over how long the current challenges and

supply shocks will persist as fertilizer and fuel prices do not yet offer any positive signs of respite in the near future.[1]

Figure 4: Changes in household income, 2020



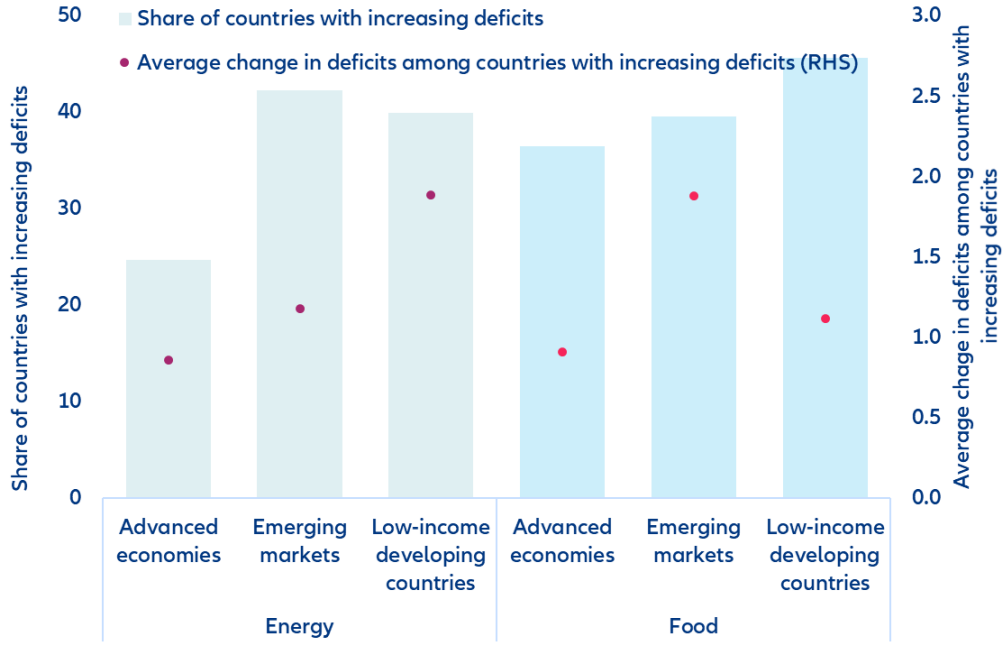
Sources: World Bank ASPIRE database, IMF Fiscal Monitor

Fiscal support giveth, fiscal support taketh away.

During the pandemic, high fiscal support helped cushion the blow of the fall in GDP per capita growth in some countries. In these countries, disposable income even increased in 2020 (see Figure 4). In addition, fiscal support created the opportunity to expand social safety nets and introduce innovation in social-protection programs. However, this was not without a cost. In Figure 5, we observe how deficits increased in times of energy and food price booms before the pandemic.

[1] *Rising Global Commodity Prices and Import Dependence Impacts. Ifpri.org. (n.d.). Retrieved June 8, 2022, from https://www.ifpri.org/event/rising-global-commodity-prices-and-import-dependence-impacts-retail-food-prices-and-food.*

Figure 5: Fiscal performance during energy and food price booms, 1991-2018 (Percent and percentage points of GDP)



Source: IMF Fiscal Monitor.

This time around, countries that have higher import needs and less fiscal space will have a hard time trying to find the right policy mix to help alleviate the financial burden on households, ensure food security and limit social risk (see Table 2 in the Annex for policy tracker). Several countries have already announced measures to counteract inflation, including cutting taxes, cash transfers, subsidies and even price controls.[2] Nonetheless, many of these actions can carry large fiscal costs and unintendedly increase the global imbalances in supply and demand. Governments also need to be cautious in withdrawing pandemic support, especially for the poorer households and in the context of higher-than-normal inflation.

If we don't feed the people, we feed the conflict.

The global food price shock is a particular concern for countries that are net food importers or net importers of certain food items that have become scarce due to the war in Ukraine, such as grains. In particular, Emerging Markets and Developing Economies (EMDEs) often have limited capacity to replace food imports with substitutes. Adjustments to the price shock could then lead to lower food availability and raise the risk of social unrest. It can even lead to the fall of governments, as the Arab Spring protests did in the early 2010s, when food prices last rose by +50%. In fact, wheat prices are currently higher than they were in 2012.

Surging food prices can also push weaker economies with balance-of-payment or debt-sustainability concerns over the edge into a full-fledged crisis, as the recent example of Sri Lanka has shown. Sri Lanka was already highly distressed before the war in Ukraine: In June 2021, our proprietary Public Debt Sustainability Risk Score identified the country as one of the

[2] *Fiscal Monitor, April 2022. IMF. (n.d.). Retrieved June 7, 2022, from* https://www.imf.org/en/Publications/FM/Issues/2022/04/12/fiscal-monitor-april-2022

most vulnerable to a sovereign default.[3] And Sri Lanka also scored poorly in our proprietary Social Risk Index in December 2021, which placed it at rank 147 out of 185 economies.[4] This year, the sharp rise in food prices not only led to mounting protests but also contributed to diminishing foreign exchange reserves, which ultimately led to Sri Lanka's first sovereign debt default in history last month.

In Figure 6, we look at selected advanced economies and emerging markets (EMs) based on their net agrifood imports as a share of food consumption and their Social Risk Index.[5] We identify 11 larger EMs (in the lower right-hand corner) that face a high risk of food-related unrest in the next few years. Sri Lanka is among them, along with Algeria, Bosnia and Herzegovina, Egypt, Jordan, Lebanon, Nigeria, Pakistan, the Philippines, Tunisia and Turkey. These markets are all net food importers and have relatively high social risk. Russia also belongs to this group but we do not expect social unrest to erupt there in the current geopolitical setting.

In the upper right-hand corner of Figure 8 we find some net food importers with below-average but still considerable social risk, some of which face a moderate risk of food-related unrest. This group includes Hong Kong, Romania and Kazakhstan – which all have already seen politically motivated anti-government protests in recent years – as well as Bahrain, which also faced an Arab Spring uprising in 2011, though it was suppressed swiftly. Renewed protests cannot be ruled out in these markets. Social unrest is less likely in China and Saudi Arabia. If needed, China has the means to reduce food exports in order to improve its net food importer status. And Saudi Arabia, like other large hydrocarbon exporters, is currently benefiting from higher oil and gas prices, which are more than offsetting the impact of increased food prices. We expect this situation to last until 2023 at least.

There are also some countries with only a small food trade surplus that could face a moderate risk of food-related unrest. Six of the eight marked countries in the lower left-hand corner of Figure 8 have received a significant or high share of their wheat imports from Russia and Ukraine in the past few years (see Figure 1): Colombia, Mexico, Peru, Kenya, Morocco and South Africa. These countries may struggle to replace wheat imports with appropriate substitutes, and consequently could face a lack of basic foodstuffs such as bread in the next year or so.

Unfortunately, only a few of the markets socially vulnerable to the food price shock have so far embarked on consumer-oriented policies to tackle the problem: Bosnia and Herzegovina, Egypt, Kazakhstan, Peru and Morocco (compare Table 2 in the Annex). Hence, the global risk of social uprisings, potentially accompanied by economic crises, has certainly increased for the next few years.

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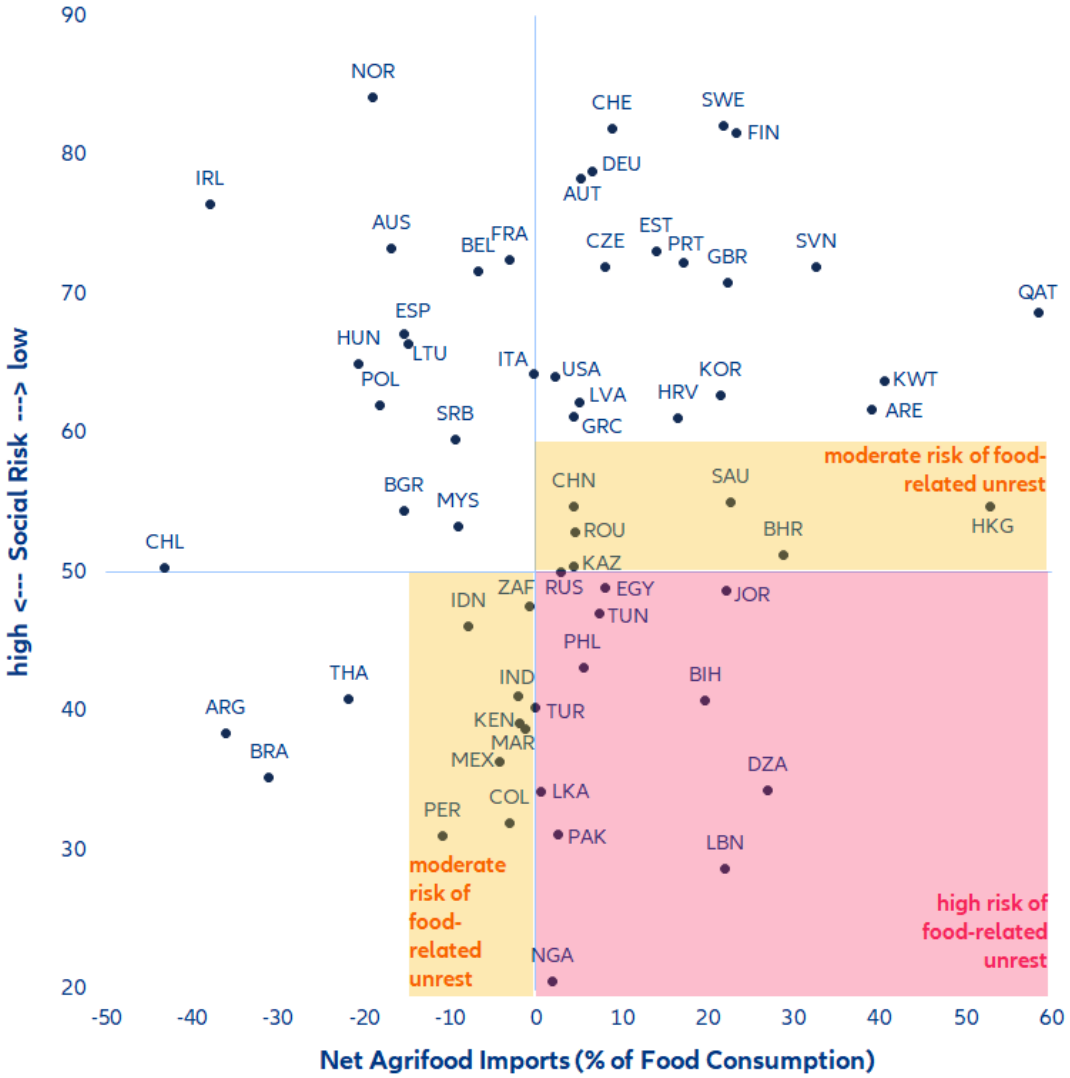
[3] *See our report Emerging Markets debt relief: Kicking the can down the road.*

[4] *Rank 1 reflects the lowest level of risk in our Social Risk Index. See our report Social Risk Index: Leave the door open for development.*

[5] *We have excluded here most Low-income Developing Countries (LDCs) due to the lack of available data. It goes without saying that many of these LDCs are net food importers and thus particularly affected by the global food price shock.*

Figure 6: Net food imports as a percentage of food consumption (2016-2020) and Social Risk Index (2021)



Sources: Various, Allianz Research calculations.

ANNEX

Table 1: Share of food consumption, food CPI and impact on purchasing power

		2021		Under the current trend		With a 50% increase in food CPI	
	Share of consumption spent on food	Food CPI	Loss of purchasing power	Food CPI	Loss of purchasing power	Food CPI +50%	Loss of purchasing power
Argentina	23%	50%	12%	62%	15%	93%	22%
Australia	17%	1%	0%	4%	1%	6%	1%
Austria	11%	1%	0%	8%	1%	13%	1%
Belgium	14%	0%	0%	5%	1%	8%	1%
Bulgaria	21%	-2%	-1%	21%	4%	31%	7%
Brazil	24%	15%	3%	18%	4%	27%	6%
Switzerland	9%	-2%	0%	0%	0%	0%	0%
Chile	19%	5%	1%	15%	3%	22%	4%
China	29%	-11%	-3%	-2%	-1%	-3%	-1%
Colombia	15%	5%	1%	15%	2%	23%	3%
Cyprus	14%	0%	0%	12%	2%	18%	3%
Czechia	17%	1%	0%	11%	2%	16%	3%
Germany	12%	3%	0%	8%	1%	12%	1%
Denmark	12%	0%	0%	6%	1%	8%	1%
Egypt	33%	5%	2%	29%	10%	44%	14%
Spain	16%	2%	0%	10%	2%	15%	2%
Estonia	22%	2%	0%	14%	3%	22%	5%
Finland	13%	1%	0%	6%	1%	9%	1%
France	15%	1%	0%	4%	1%	6%	1%
UK	12%	0%	0%	7%	1%	10%	1%
Greece	19%	1%	0%	11%	2%	16%	3%
Croatia	21%	2%	0%	13%	3%	19%	4%
Indonesia	25%	3%	1%	5%	1%	8%	2%
India	46%	4%	2%	8%	4%	12%	6%
Ireland	10%	0%	0%	3%	0%	5%	1%
Italy	16%	1%	0%	8%	1%	11%	2%
Kazakhstan	39%	0%	0%	2%	1%	3%	1%
South Korea	15%	6%	1%	5%	1%	7%	1%
Lebanon	20%	311%	62%	374%	75%	562%	112%
Sri Lanka	44%	11%	5%	45%	20%	68%	30%
Lithuania	22%	1%	0%	22%	5%	33%	7%
Latvia	21%	2%	0%	17%	4%	26%	5%
Luxembourg	10%	1%	0%	5%	1%	8%	1%
Mexico	26%	7%	2%	12%	3%	18%	5%
Malaysia	30%	2%	1%	4%	1%	6%	2%
Nigeria	52%	20%	11%	18%	9%	27%	14%
Netherlands	13%	0%	0%	8%	1%	13%	2%
Norway	13%	-2%	0%	2%	0%	2%	0%
New Zealand	19%	3%	0%	6%	1%	10%	2%
Pakistan	35%	11%	4%	17%	6%	26%	9%
Philippines	38%	4%	2%	4%	1%	6%	2%
Poland	18%	-2%	0%	12%	2%	17%	3%
Portugal	19%	1%	0%	10%	2%	15%	3%
Romania	25%	0%	0%	2%	1%	3%	1%
Russia	32%	0%	0%	2%	1%	3%	1%
Saudi Arabia	19%	5%	1%	4%	1%	6%	1%
Slovenia	16%	0%	0%	11%	2%	16%	3%
Sweden	13%	0%	0%	7%	1%	10%	1%
Turkey	25%	74%	19%	425%	107%	637%	161%
Taiwan	25%	2%	1%	7%	2%	10%	3%
South Africa	19%	6%	1%	6%	1%	9%	2%
United States	8%	4%	0%	9%	1%	14%	1%

Source: Statistical offices, Macrobond, Refinitiv, Allianz Research.

Table 2: Consumer-oriented policy tracker

Country	Consumer Oriented Policies			
	Tax	Social Protection	Market	Disposable Income
Algeria				
Albania		✓	✓	
Argentina			✓	
Armenia				
Australia				
Belarus				
Bosnia and Herzegovina	✓			
Bulgaria				
Canada				
China				
Egypt			✓	
Ethiopia		✓		
France	✓			
Georgia		✓	✓	
Germany	✓	✓		
Ghana				
Hungary				
India		✓		
Indonesia			✓	
Iran				
Ireland				
Italy	✓	✓		
Japan				
Kazakhstan	✓			
Kyrgyzstan	✓			
Libya			✓	
Moldova (Republic of)			✓	
Morocco		✓		
Nigeria				
Peru	✓			
Russian Federation			✓	
Serbia (Republic of)				
Spain	✓	✓	✓	✓
Sweden	✓			
Switzerland				
Turkey				
The former Yugoslav Republic of Macedonia	✓			
U.K. of Great Britain and Northern Ireland	✓			
Ukraine				
United states of America				
Zimbabwe		✓		
Total	11	9	9	1

Sources: FAO, Refinitiv, Allianz Research.

These assessments are, as always, subject to the disclaimer provided below.

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