

Strategy & Corporate Finance Practice

# War in Ukraine: Twelve disruptions changing the world

The war is devastating lives and roiling markets. Here we track the disruptions that seem likely to shape lives and livelihoods, beyond the immediate crisis.

*by Olivia White, Kevin Buehler, Sven Smit, Ezra Greenberg, Mihir Mysore, Ritesh Jain, Martin Hirt, Arvind Govindarajan, and Eric Chewning*



**On March 17, 2022**, we wrote about the war's extraordinary toll on lives and livelihoods. At that time, we set out the 12 short- and mid-term disruptions that had the most potential to reshape industries and economies. Those disruptions are gathering force. In this article, we offer 12 charts to illuminate the potential strength and direction of these shifts and their effects on lives and livelihoods. Some of these charts use the macroeconomic scenarios we laid out in our first article that provide guidance on the range of potential outcomes. We see two critical dimensions: the scale and duration of disruption, and the impact of government policy, consumer, and business responses. See sidebar "More on our scenarios."

## We see two critical dimensions: the scale and duration of disruption, and the impact of government policy, consumer, and business responses.

### More on our scenarios

**In this article**, we refer frequently to two scenarios, one milder and one more severe:

- **Scenario 1B: Contained disruption with moderate policy response.** In this scenario, the end of hostilities occurs within a few more weeks. Sanctions do not escalate further and may even be scaled back; energy exports from Russia to Europe keep flowing. Before the end of 2022, natural-gas prices in Europe fall to about \$30 per million British thermal units (MMBtu); Brent crude returns to \$70 to \$80 per barrel. GDP growth (and thus jobs and incomes) across the eurozone reverts to its precrisis trend, albeit with a first-quarter slowdown, reflecting the shock of the invasion. Inflation expectations remain elevated relative to prepandemic norms but are stable, and the European Central Bank continues to reduce monetary stimulus. Consumer confidence reverts to its prepandemic level, and businesses continue their COVID-19-exit investment plans through most of the eurozone by the second quarter of 2022.
- **Scenario 3C: Severe, escalating disruption with restrained policy response.** In this scenario, protracted conflict intensifies the refugee crisis in Central Europe. Western countries and Russia further extend sanctions, leading to the shutdown of oil and gas exports from Russia to Europe. European gas prices rise to about \$50 per MMBtu in mid-2022, from their already-high level of about \$30, and Brent crude jumps to \$135 per barrel. Eurozone headline inflation spikes to more than 7 percent on the year. The continent can replace some of its natural-gas shortfall in part by buying on the spot market and in part by slowing the shift away from coal. Producing and consuming nations can build new liquefied natural gas (LNG) export/import infrastructure over time, but in the near term, higher prices, lower real incomes, and reduced consumer spending will result in some demand destruction. Central banks move assertively to combat inflation, with potential risk to economic growth.

For more on the full set of scenarios, see "War in Ukraine: Lives and livelihoods, lost and disrupted," McKinsey, March 17, 2022.

## The invasion of Ukraine is causing a massive humanitarian crisis

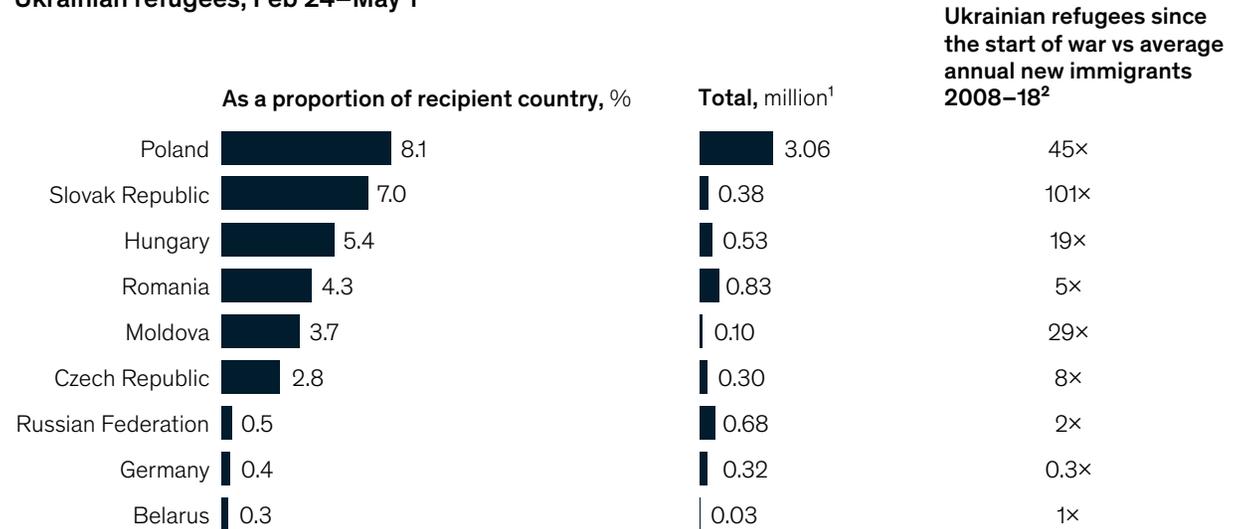
The war has displaced the most refugees in Europe since World War II. To date, 5.6 million refugees have fled Ukraine, and another 7.7 million have left home and sought shelter elsewhere in the country.<sup>1</sup> All told, the war has pushed nearly 30 percent of Ukrainians out of their homes. The war in Ukraine represents the second largest humanitarian crisis since the 1960s in terms of number of people who have fled or been displaced, and fifth in terms of fraction of the population this represents. And it could get worse: the UN estimates that 8.3 million Ukrainians could be refugees by the end of the year.

Neighbors and others are helping. Poland, where a large Ukrainian expatriate community already lives, has welcomed the most refugees, about 3 million. That's equivalent to an 8 percent gain in the country's population over the course of two months, and it's 45 times the typical annual inflow of migrants. Measured by the size of the influx relative to the historical average annual arrival of migrants, Slovak Republic welcomed the most, the equivalent of 101 times the annual historical inflow.

Countries' capacity to feed, shelter, and care for refugees varies. A well-organized, rapidly scaled international humanitarian aid program, such as the UN's Regional Refugee Response Plan, will surely help. And in the longer term, realizing the benefits of immigration hinges on how well new arrivals are integrated into the country's labor market and society.

## Ukrainian refugees have considerably increased the population of host countries.

### Ukrainian refugees, Feb 24–May 1



### Internally displaced people in Ukraine, Feb 24–Apr 21



<sup>1</sup>The cumulative number of Ukrainian refugees by country is higher than the total of refugees fleeing Ukraine since it double counts people crossing two borders (eg, between Romania and Moldova). Refers to the gross influx of refugees; ie, it does not take into account people who have fled Ukraine and then returned (1.2 million as of Apr 23).

<sup>2</sup>For Romania, refugees are calculated as a multiple of average annual new immigrants from 2013–18. Source: Eurostat; OECD; press searches; United Nations Office for the Coordination of Humanitarian Affairs

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<sup>1</sup> According to UNHCR. Includes internally displaced persons as of April 21, 2022, and refugees as of May 1. Note that approximately 1.3 million Ukrainians have reentered Ukraine as of May 1 but since the situation remains unstable and these people may not have returned permanently, this figure has not been subtracted from the overall refugee numbers, in line with the current UNHCR reporting.

## The vulnerable will suffer the most

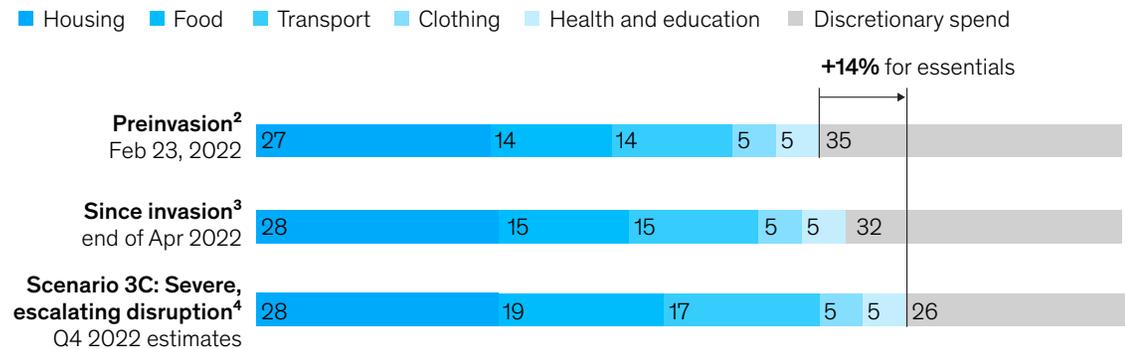
The war has sent prices soaring for the essentials. What's now at risk is the base of the Maslow hierarchy of needs: food, warmth, and shelter. The effects are universal but will be felt most acutely by the poorest, who already struggle to cover the cost of life's necessities.

Higher prices for food and energy, along with already high costs for rent, can push the poorest into impossible tradeoffs. The invasion of Ukraine has already raised the cost of living, as a spike in natural gas and oil prices have pushed heating bills higher. Similarly, the cost of transportation is moving higher as fuel becomes more expensive. If energy prices spike even higher (Scenario 3C), the compression of household budgets will get worse before it gets better. (See sidebar, "More on our scenarios.")

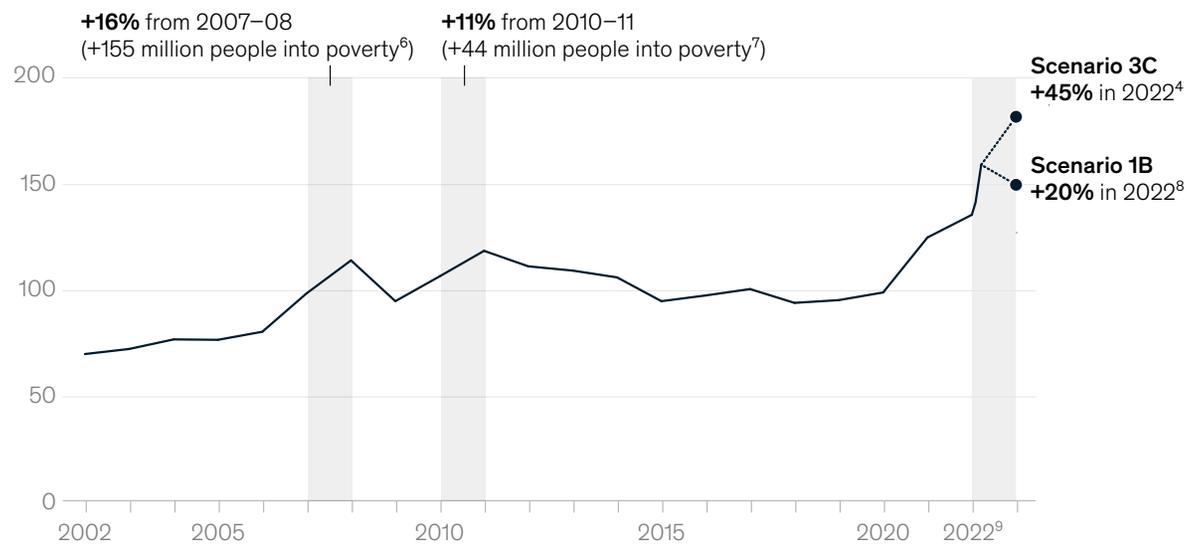
Pressures extend well beyond Europe. Our scenario analysis suggests that the United Nations' Food and Agriculture Office's index of food prices might rise by as much as 45 percent in 2022 (scenario 3C). Price increases of this magnitude have historically pushed millions of people in low- and middle-income countries into poverty. These countries are also susceptible to other potential ramifications of the war, including a slowdown in global trade, currency depreciation, and challenges in sustaining their debt loads.

## As people spend more on essentials, especially food, many European households could fall into poverty.

**Expenditures of poorest 20% of European households,<sup>1</sup> % of total annual expenditures**



**Food prices, 2002–22, indexed (100 = 2014–16)<sup>5</sup>**



<sup>1</sup>Poorest 20% European households, based on annual income.

<sup>2</sup>Based on most recent available data from Eurostat.

<sup>3</sup>Based on delta in food prices (Feb 2022 and Mar 2022), gas prices (Feb 23 and Apr 26), oil prices (Feb 23 and Apr 27) and coal prices (Feb 23 and Mar 31).

<sup>4</sup>Scenario 3C envisions a severe and escalating conflict with restrained policy response.

<sup>5</sup>Real prices. The Food and Agriculture Office (FAO) Food Price Index is the average of indexes for 5 commodity group prices (meat, dairy, cereals, vegetable oils, and sugar), compiled from 95 price quotations regarded by FAO specialists as representative of international prices.

<sup>6</sup>Rafael E. De Hoyos and Denis Medvedev, "Poverty effects of higher food prices: A global perspective," Policy Research Working Papers series, World Bank Group, July 2011.

<sup>7</sup>Food price watch 2011, World Bank Group.

<sup>8</sup>Scenario 1B envisions a contained conflict with moderate policy response. For more on McKinsey's scenarios, see "War in Ukraine: Lives and livelihoods, lost and disrupted," McKinsey, March 17, 2022.

<sup>9</sup>Apr–Dec 2022 are estimates.

Source: Eurostat 2015; Food and Agriculture Office of the United Nations; Haver Analytics; World Bank Group

## Energy policy is rotating toward secure access and source diversification

Over several decades, Europe has come to depend heavily on Russian energy sources: coal, crude oil, fuel oil, and, especially, natural gas. In 2021, the continent imported about 36 percent of the gas it used from Russia, along with 30 percent of its coal and 10 percent of its crude oil. Germany and Italy are particularly dependent on Russian energy supplies (for example, Germany imports 65 percent of its gas from Russia; the figure is 43 percent for Italy).

Europe uses gas to heat its homes and buildings, run its industries, and generate power. Hypothetically, European countries can act in the short term to lower their demand (for example, reducing heating in buildings and lighting in cities; reducing gas use in power generation); these could be put in place by the end of 2022 or early in 2023. Europe is also working urgently to increase gas supplies from countries other than Russia, by importing more liquefied natural gas (LNG) and generating more biofuel, among other moves.

Together these demand reductions and supply increases could reduce Europe's need for Russian gas within the next year from 36 percent of its total use to about 10 percent—which would leave the continent still importing roughly 30 billion to 40 billion cubic meters from Russia annually. The outcome will depend in part on the implementation of these levers—for example, how much LNG can be imported, and the tolerance of households and employees for reduced heating. If it comes to rationing, based on recent statements from government leaders, industrial users might see their gas supplies reduced before other users.

Sanctions escalated recently in Poland and Bulgaria; both countries seem confident that they can meet the new conditions imposed by Russia. The episode is a good illustration of the importance of alternative sources of supply, and the ability to reduce demand.

## Even after increasing supply and reducing demand, a significant portion of Europe's gas supplies from Russia is at risk.

Europe's<sup>1</sup> supply and demand in 2021, %



Europe's<sup>1</sup> supply and demand potential in Q4 2022 if short-term demand and supply levers are activated,<sup>4</sup> %



<sup>1</sup>Europe refers to the EU27, Norway, Switzerland, and the UK.

<sup>2</sup>Billion cubic meters of natural gas.

<sup>3</sup>Others include road, maritime, aviation, rail, heat generation, refining, hydrogen, and other sustainable fuel productions.

<sup>4</sup>Supply levers include storage withdrawals, increased liquid natural gas imports, or increased domestic production, etc. Demand levers include increased utilization of nuclear/fossil fuels, reduced heating by 1–2°C, or industry electrification, etc. Demand levers for industry/chemicals applied pro rata to their current demand split.

Source: Energy Information Administration; Eurostat; Haver Analytics; Intercontinental Exchange; New York Mercantile Exchange; McKinsey Energy Insights Global Energy Perspective 2022

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## Food security is on the agenda

The war in Ukraine has disrupted the global food production system. The two countries produce roughly a third of the world's ammonia and potassium exports, essential ingredients in fertilizer. And they are the breadbasket for much of the world, supplying about 30 percent of global exports of wheat and barley, 65 percent of sunflower seed oil, and 15 percent of corn.

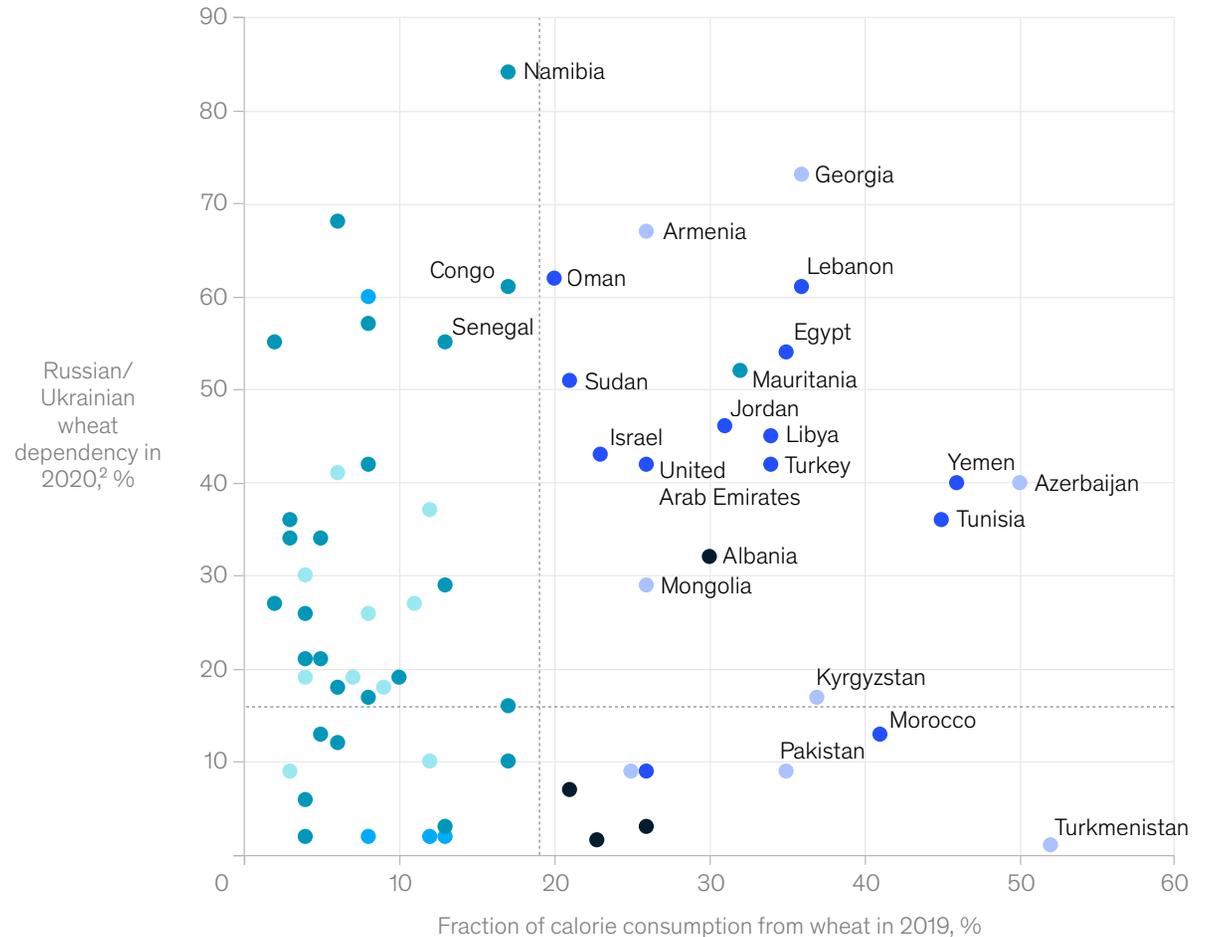
Soon after the invasion, prices for fertilizers and several food commodities rose by 20 to 50 percent. For example, wheat futures rose 40 percent from February 1 to April 1. As the exhibit shows, many countries rely heavily on wheat for their national diet, including imports from Russia and Ukraine. These countries are concentrated in Central and Western Asia as well as in the Middle East and North Africa. Syria and Yemen, already struggling with longstanding refugee crises and problems with food security, will likely be affected: both are highly dependent on wheat and thus exposed to higher prices and potential shortages. But all importing nations will be affected, unless they have longer-term fixed-price contracts with suppliers or robust hedges. The UN's World Food Programme will also be affected, as Russia and Ukraine contributed close to 20 percent of the total food commodities it procured in 2020.

The challenge will likely be severe. According to the UN's latest estimates, 30 to 40 percent of the autumn 2022 harvest in Ukraine is at risk, as farmers have been unable to plant. Global fertilizer shortages may also harm production. Governments are pursuing a range of options, including programs to direct more supplies to the most affected countries, levers to boost regional production, subsidies to consumers, and price controls.

## The war in Ukraine will mostly threaten the food security of the Middle East, North Africa, and Western and Central Asia.

### Wheat consumption and Russian/Ukrainian import by country<sup>1</sup>

● Europe ● Latin America ● Middle East and North Africa ● Southern and Eastern Asia ● Sub-Saharan Africa  
● Western and Central Asia --- Global average



<sup>1</sup>Exhibit does not show many European and North American countries, because the majority of these countries don't rely on wheat in their national diets, or import only a small percentage of wheat consumption from Ukraine or Russia (or none at all).

<sup>2</sup>Defined as  $(\text{Imports from Russia/Ukraine}) / (\text{Consumption})$ . Countries with less than 1% dependency ratios are excluded from the graph.

Source: Food and Agriculture Organization of the United Nations; United Nations; United States Department of Agriculture; World Bank Group

## The race for critical materials, equipment, and commodities intensifies

Well before February 2022, industrial materials of all kinds were in demand. Commodities in particular were booming. Many were at ten-year highs, though with considerable price volatility.

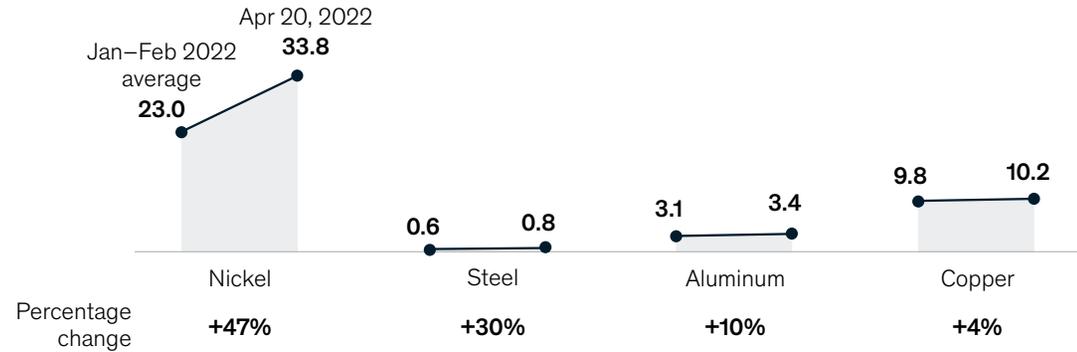
Then came the war, which hastened price rises of dozens of commodities that Russia and Ukraine export (for example, coal, steel, nickel); the two countries' combined shares of these markets range roughly from 10 to 50 percent. For example, the two countries are responsible for 48 percent of global trade in palladium.

These materials are critical in many industries. Given the threats to scarce commodities and price rises to date, automakers are particularly concerned; they're looking at spot-price increases of 15 to 25 percent due to price increases in key materials such as aluminum, copper, and steel. These are difficult blows to absorb for manufacturers. Car buyers too would find it difficult to pay substantially higher prices.

Prices of some of these materials seem to have stabilized recently. But more change may be in store. To be sure, this is only a short-term disruption for some materials such as iron ore. For others, such as anthracite, the war has provoked or exposed a supply vacuum, with sharply higher prices likely. And for still others—including the metals used in automaking—buyers and sellers are seeking a new global balance. In time, an equilibrium is likely, though at potentially higher prices than today.

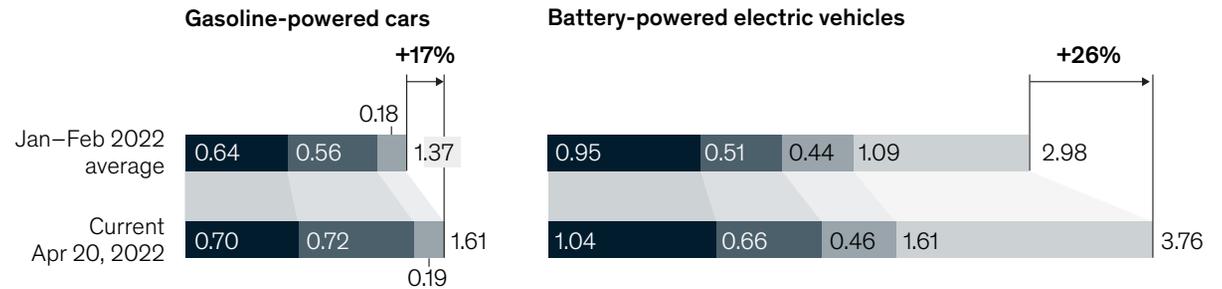
## As key commodities surge, automotive input costs could increase by about 15 to 25 percent.

Key commodity prices from Jan–Feb average to Apr 20, 2022, \$ thousand per ton



Estimated cost of materials for key commodities used,<sup>1</sup> \$ thousand per vehicle

■ Aluminum ■ Steel ■ Copper ■ Nickel



<sup>1</sup>Bill of materials is estimated based on requirements of key commodities in kilogram per ton. The four specified materials (aluminum, copper, nickel, and steel) make up an estimated 70–75% of a vehicle's weight.

Source: Bloomberg; London Metal Exchange; MB; Mysteel; SMM; McKinsey Center for Future Mobility

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## A new age of supply chain management has arrived

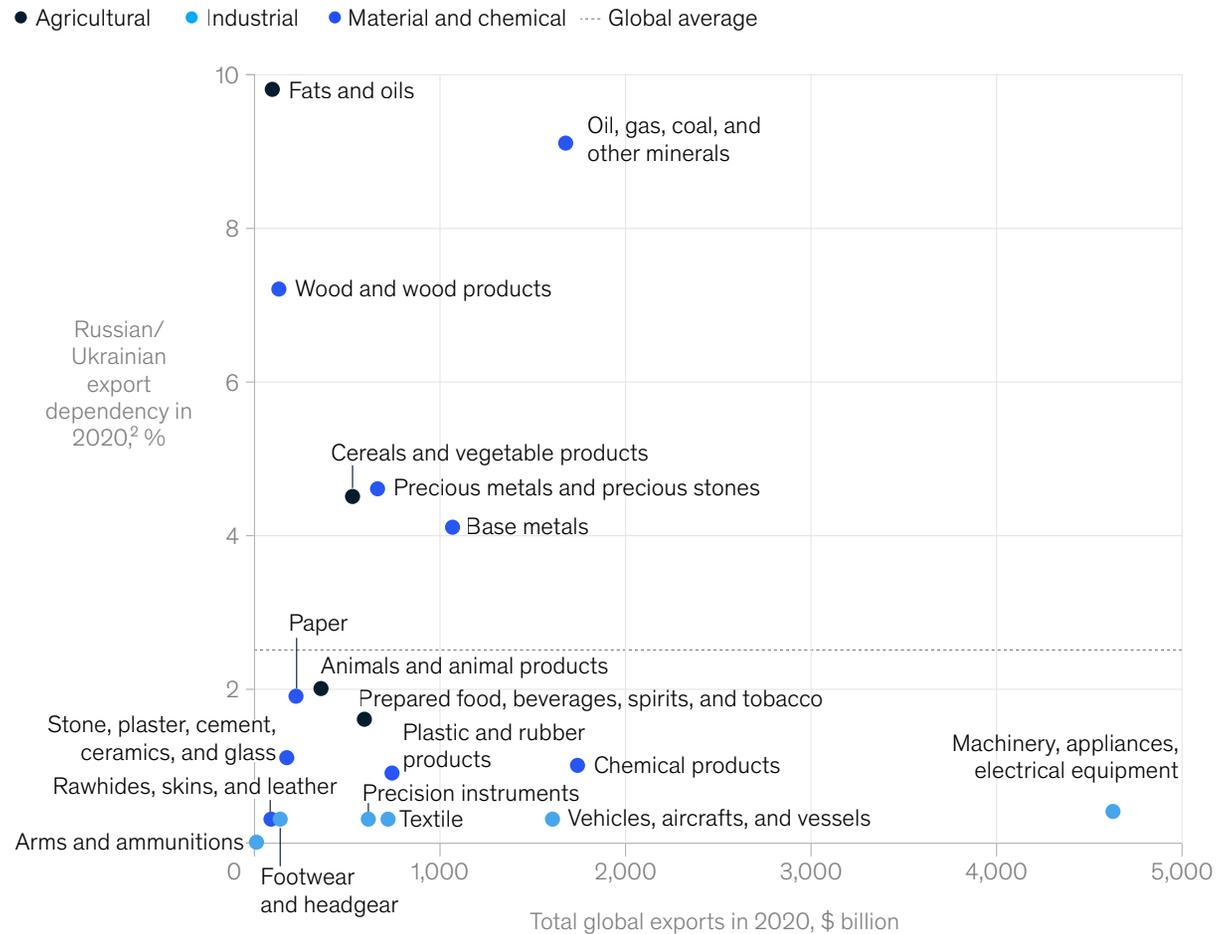
Even before the invasion, resilience was at the top of supply chain leaders' agendas. Having faced one problem after another—trade tensions, COVID-19 lockdowns, and the closure of the Suez channel—supply chain managers had begun to shift their focus from optimizing “just in time” delivery to preparing for “just in case” eventualities. In our June 2021 survey, about 60 percent of managers said they had increased inventories of critical products; a slightly smaller number had moved to dual sourcing of raw materials.

The war in Ukraine and subsequent sanctions are giving leaders yet more reasons to examine their sourcing capabilities. In our forthcoming survey of supply-chain leaders, the latest in a series, 80 percent of respondents said that as of March 2022, they have implemented “dual sourcing,” up from 55 percent a few months ago. Dual sourcing is set to become even more important, in light of the war. Russian exports represent about 2 percent of the \$19 trillion in annual global trade, but much higher portions of some key commodities—base metals, as mentioned earlier, and energy sources, fats and oils, cereals, and wood products, among others. Finding new sources of raw materials will be particularly difficult for industries whose supplies are currently concentrated.

Supply chains are thus being reconfigured yet again, as part of a long journey to resilience. It's possible that as spending shifts from goods to services, some of the pressure on supply chains will be relieved—but not all. In the meantime, as stress builds, nearshoring (especially in the high tech and construction industries) and onshoring are back on the table for discussion, joined by a new idea: “friendshoring” (which is, in the words of Janet Yellen, a commitment to work with countries that have a “strong adherence to a set of norms and values about how to operate in the global economy”). The war is accelerating a trend: in 2021, Canada and Mexico eclipsed China to become the largest trading partners of the United States.

## Global value chains depend on Russia and Ukraine mostly for agricultural and material and chemical products.

### Global exports and Russian/Ukrainian export dependency by products/commodities<sup>1</sup>



<sup>1</sup>Corresponding to Harmonized System (HS) sections from the World Customs Organization.

<sup>2</sup>Defined as  $(\text{Exports from Russia/Ukraine}) / (\text{Total global exports})$ .

Source: UN Comtrade; McKinsey analysis

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<sup>1</sup> “Remarks by Secretary of the Treasury Janet Yellen on way forward for global economy,” US Department of the Treasury, April 13, 2022, treasury.gov.

## Global technology standards are more likely to separate

There is no such thing as a global internet. True, many countries participate in a broadly shared system of information. But even before the war, several other countries had cordoned off a wide range of content services, limiting what residents can see and do. They had also taken steps to promote the technology standards they favored, as seen in recent battles over hardware standards and proposals to replace internet protocols. Similar frictions have long been present in other corners of technology, notably telecommunications.

The invasion of Ukraine may have pried these divisions wider. The West's new limits on finance and some technologies, and a broad-based departure from Russia by many leading Western companies, mean that Russia has essentially been excluded from a significant portion of the global high-tech value chain. About 80 percent of Western tech companies have exited Russia or are scaling back. Meantime more than 60 percent of big tech companies from other parts of the world are staying the course.

Ultimately, a splintered set of tech standards and policies means more expensive services for consumers and lower productivity growth globally.

## Most telecom, media, and tech companies from the United States and the European Union are leaving Russia or scaling back, while others are staying.

### Status of Fortune 500 telecom, media, and tech companies that were active in Russia before the Ukraine war, as of Apr 28, 2022, n = 42



Source: Fortune Global 500; Yale School of Management; McKinsey analysis

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## Financial-system effects are unpredictable

The direct impact of the war on the financial system seems limited. Markets have withstood the initial shock, though with some losses, to be sure. European banks may be among the most exposed, with about \$75 billion of assets at risk in Russia, equivalent to about 6 to 7 percent of their preinvasion market cap. However, financial institutions globally are strongly capitalized and fundamentally prepared to absorb losses.

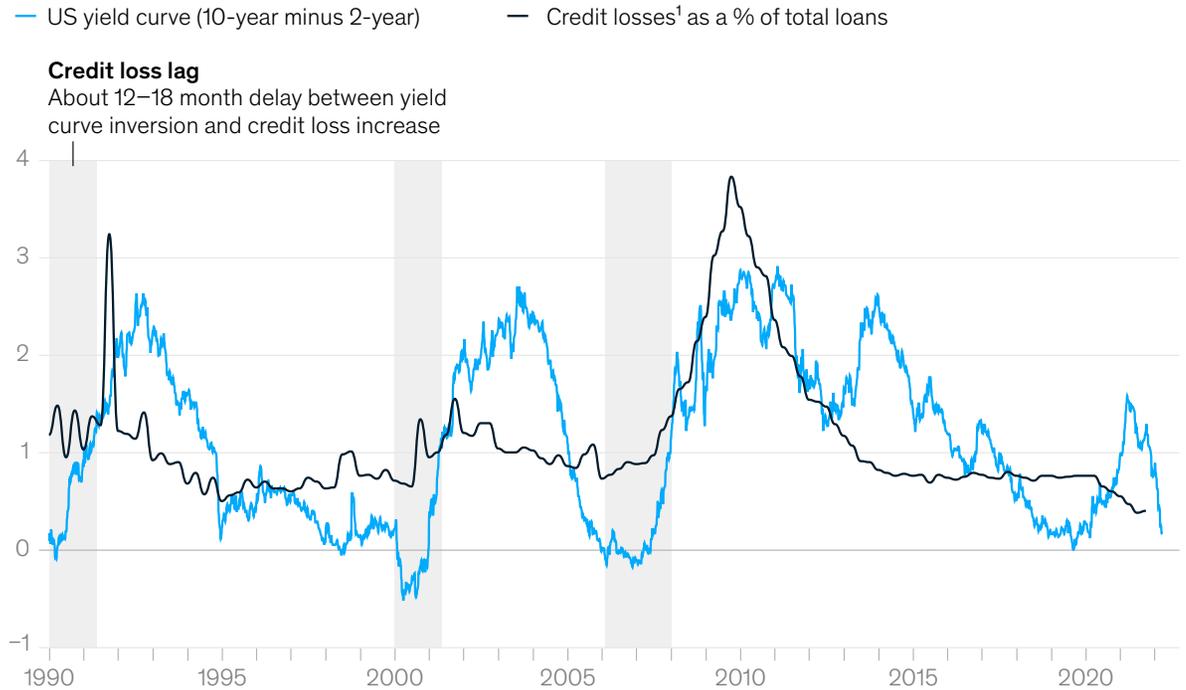
Beyond direct bank exposures, risks from wider ripple effects may materialize. The war is aggravating financial-system risks that first showed up in 2021, such as inflation-led recession; expanded borrowing by emerging-market countries, often denominated in dollars; a deflating bubble in China's property sector; gridlock in the payments system; and rising risk of default in the credit held by the shadow-banking sector. All represent threats to asset prices, to which banks and other participants in the financial system are variously exposed.

The first of these risks, a recession triggered by inflation, may be the greatest. US Treasury markets are flashing a warning: when the yield curve inverts, recession often follows within 12 to 18 months. With recession comes credit losses. That's bad news for banks, of course; many have started to reserve against this possibility. But the silver lining is that as rates tick higher, lending margins will likely expand, improving net interest income. Not all banks will benefit equally; those with big credit-card operations won't see much uplift from rising rates but could gain from increased volumes.

This sliver of good news for banks is also good news for consumers and industry, as banks will likely have strong, well-managed balance sheets from which they can continue to lend, should times get tough. Leading banks are already thinking about how they can support retail and commercial customers for the next few years, anticipating their changing needs.

## The US yield curve is close to inverting, which historically has been followed by credit losses.

### US Treasury yield curve and US bank credit losses, %



<sup>1</sup>Annualized.  
Source: Federal Reserve; S&P Global

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## Defense spending is rising

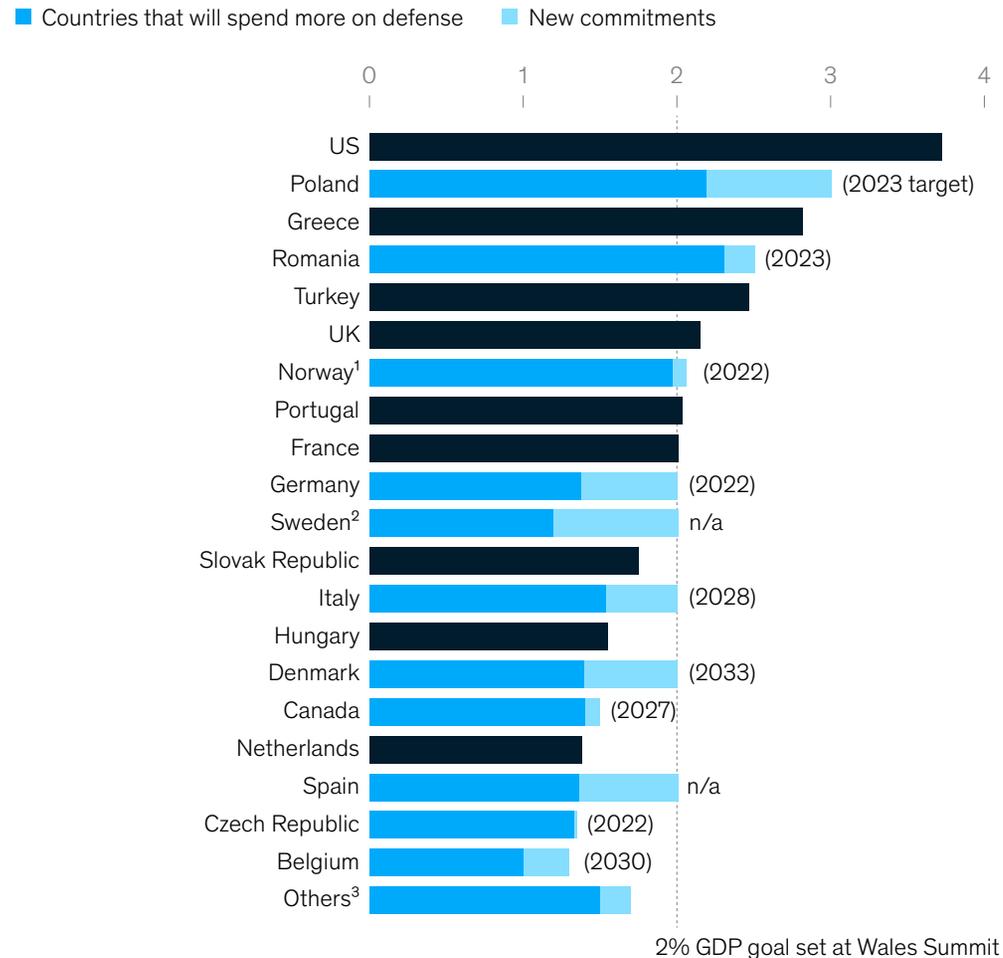
To date, 15 NATO countries and Sweden have announced increased defense spending following the invasion of Ukraine—and five (including Denmark, Germany, Italy, Spain, and Sweden) will breach the 2 percent target set at the 2014 NATO summit in Wales.

McKinsey analysis suggests that the increased spending in many countries would likely go to equipment, as many weapons programs have been scaled back and are running behind. If that happens, countries will have to choose between immediate or long-term investment. If they elect to spend the money now, they will likely buy off-the-shelf equipment from current defense suppliers. This could challenge these companies, which must contend with supply chain disruptions that would be made worse by rapid scale-up, and with potential shortages of materials such as titanium, platinum-group metals, and so on.

If they take a long-term approach, they might invest in R&D projects and, where needed, steps to build or strengthen the domestic defense industry.

## Fifteen NATO countries and Sweden have said they will spend more on defense; five countries will now meet NATO's spending goal for the first time.

**2020 defense spending and planned increases relative to 2020 GDP for NATO countries and others, as of Apr 29, 2022,<sup>1</sup>%**



<sup>1</sup>Norway's GDP is dependent on oil and gas; it will rise this year, and thus the country will likely not make the 2% threshold.

<sup>2</sup>Sweden is not member of NATO.

<sup>3</sup>Weighted average of other NATO countries; includes planned defense spending increases in five of these countries (Estonia, Latvia, Lithuania, Luxembourg, and Slovenia).

Source: *Defense News*; International Monetary Fund; NATO; Stockholm International Peace Research Institute

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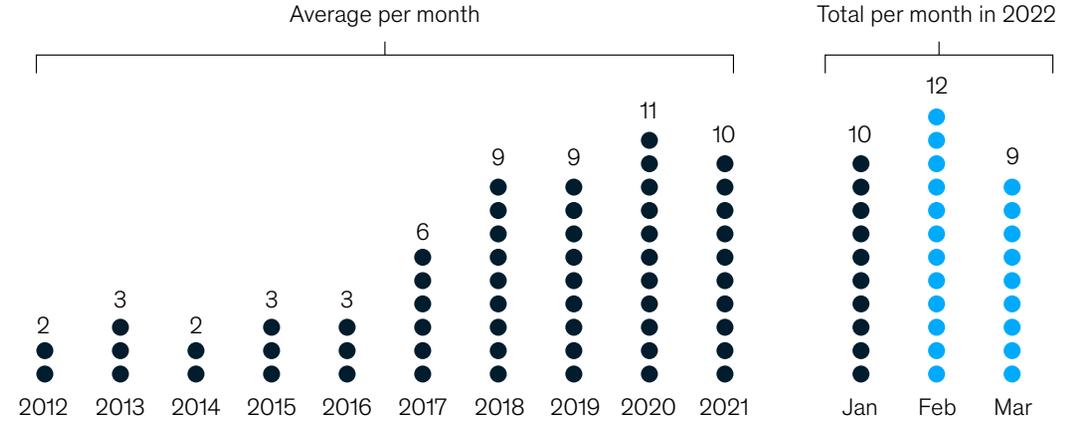
## Cyber is a stage for conflict

Cyberattacks continually disrupt societies globally by targeting critical infrastructure. On average, ten significant cyberattacks are recorded every month by the Center for Strategic and International Studies. On February 24, 2022—the day of the invasion—ViaSat’s internet service was disrupted across Europe for several hours, affecting 30,000 customers—including Ukrainian military communications. Since then, Ukrainian power systems and telecom networks have been taken offline for several hours and other Ukrainian government organizations have been hacked. Attackers have also targeted the public websites of several Russian government ministries.

Some attacks may have spillover effects far beyond their original targets, as the malware spreads. Depending on the trajectory of the war, one could expect the cyberthreat to continue. Companies and governments are staying vigilant about their exposure to cyberattacks, in particular to ransomware attacks and misinformation campaigns.

## Cyberattacks have been rising since 2017.

### Significant cyberattacks from 2012–22



Note: Significant cyberattacks are defined as cyberattacks on government agencies, defense, and high-tech companies, or economic crimes with losses of more than \$1 million.

Source: Center for Strategic and International Studies

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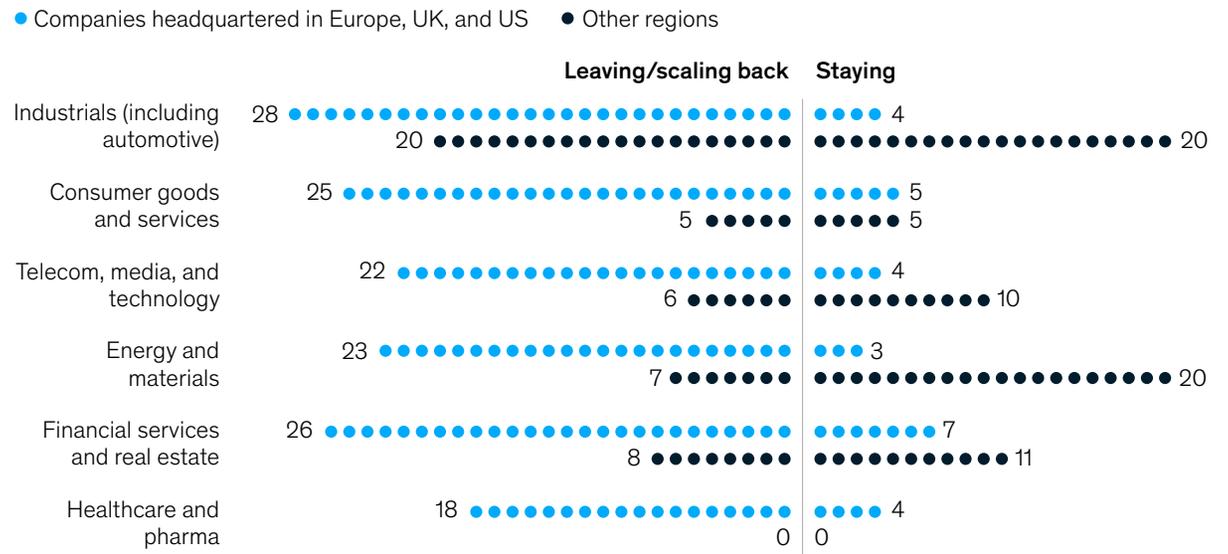
## Corporate actors are taking a stand

Of the 281 Fortune 500 companies that were present in Russia before the war, close to 70 percent have either scaled back or exited their Russian operations since the start of the war. Almost 85 percent of companies headquartered in Europe, the United Kingdom, or the United States have left or scaled back, against only 40 percent of those based in other regions. The exodus is not confined to any one sector.

The corporate reaction came swiftly. Some decisions were announced within days of the invasion and the first round of sanctions. More than ever, core management choices are being shaped by a broad set of stakeholders beyond investors, including employees and customers.

## Most European and US Fortune 500 companies have scaled back operations in or exited Russia.

Status of Fortune 500 companies with a presence in Russia, as of Apr 28, 2022, n = 281



Note: There are 219 companies in the Fortune 500 that were not present in Russia, and therefore excluded from the analysis. "Staying in" includes Yale's "Grade F – Defying Demands for Exit or Reduction of Activities" and companies present in Russia with no announcements on their stand; "scaling back or leaving" includes Yale's categories "Grade D – Holding Off New Investments/Development," "Grade C – Reducing Current Operations," "Grade B – Keeping Options Open for Return," and "Grade A – Clean Break – Surgical Removal, Resection." Source: Fortune Global 500; Yale School of Management; McKinsey analysis

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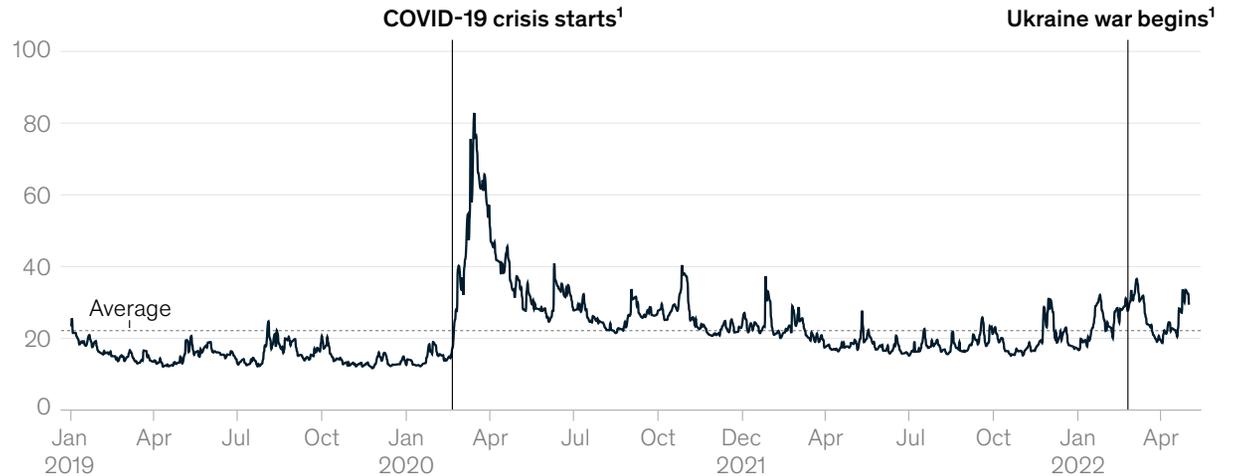
## Volatility, volatility, volatility

The war has increased economic volatility. The US volatility index (VIX) and the economic policy uncertainty (EPU) index have both risen, though not nearly as much as in March 2020, at the onset of the COVID-19 pandemic. This is in line with earlier research findings that economic volatility is surprisingly low during war and periods of conflict, likely because a rise in government spending makes a slice of corporate profits easier to predict.<sup>1</sup> Over time, this war may prove to be different, however, because of its effects on energy; volatility in energy sources and prices can produce dramatic effects throughout the global economy.

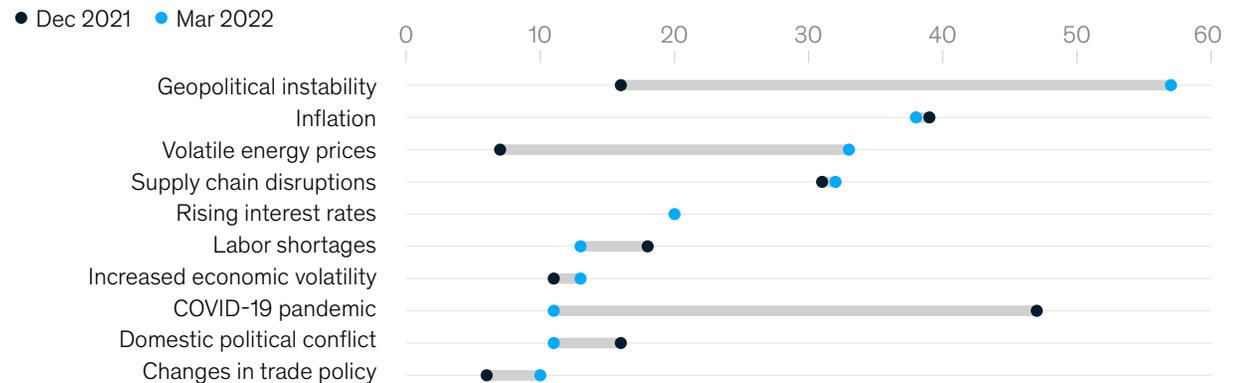
On another measure, according to a McKinsey Global Survey of executive sentiment, the war has introduced considerable volatility in the risks that business leaders see to economic growth. In our March 2022 poll, geopolitical risk displaced the pandemic and inflation as the biggest threat to growth.

## Volatility has increased since the war in Ukraine, yet significantly less than during the outbreak of COVID-19, while geopolitics is now seen as the biggest risk to growth.

### Capital markets US volatility index (VIX)



### Top 10 potential risks to growth in the global economy, % of global respondents<sup>2</sup>



<sup>1</sup>COVID-19 start of the crisis for US and eurozone countries: Feb 20, 2020 (first case in Italy); Ukraine war: Feb 24, 2022 (invasion of Ukraine).

<sup>2</sup>Multiple responses.

<sup>1</sup> Gustavo S. Cortes, Angela Vossmeier, and Marc D. Wiedenmier, *Stock volatility and the war puzzle*, National Bureau of Economic Research working paper, Number 29837, March 2022; G. William Schwert, "Stock volatility and the crash of '87," *Review of Financial Studies*, January 1990, Volume 3, Number 1.

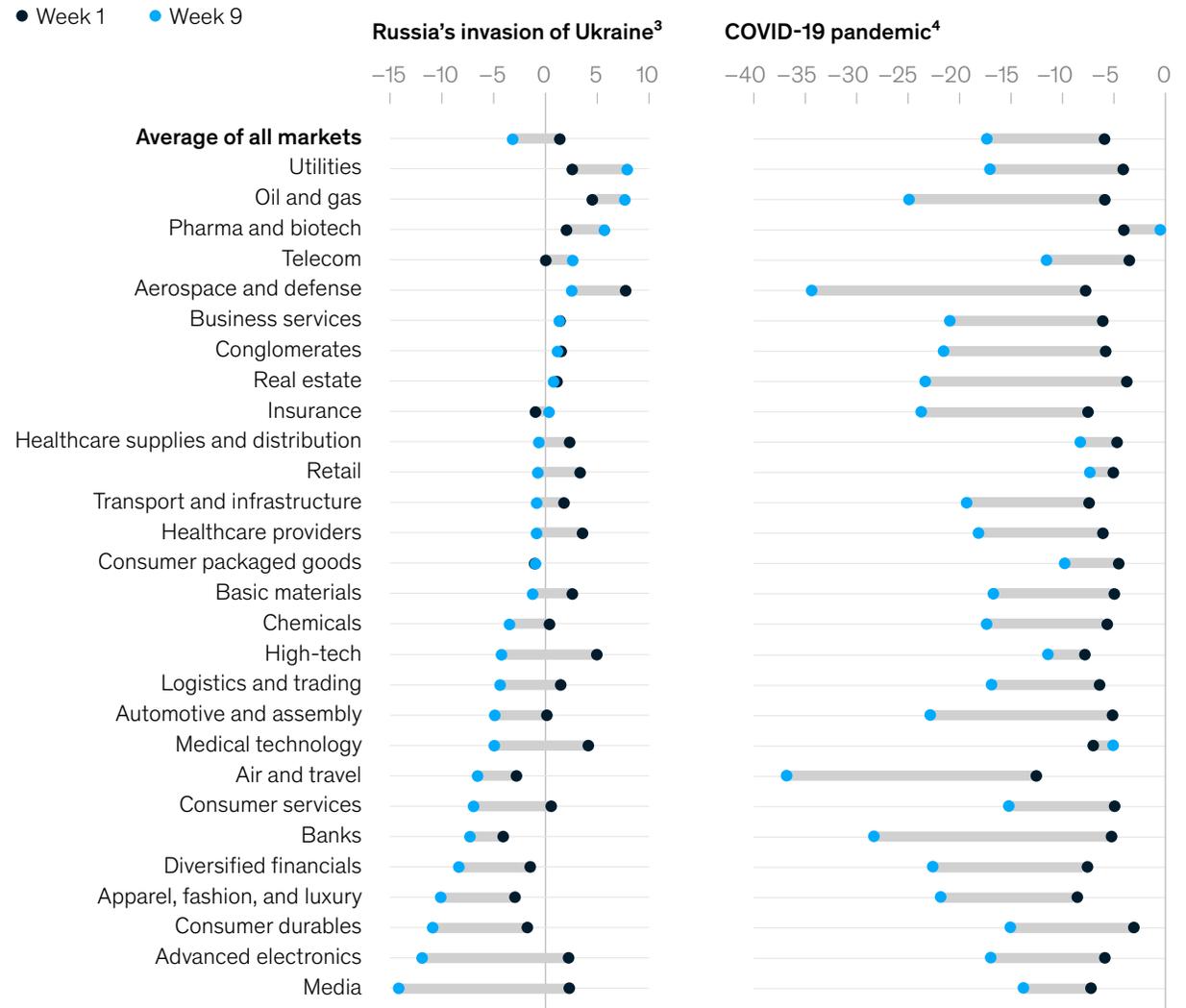
## Volatility, volatility, volatility (continued)

The markets have reacted differently to the war than to the COVID-19 outbreak, a reminder that this crisis requires a particular set of resilience capabilities. Companies need to think through the various aspects of geopolitical risk and their potential effects—on financing operations, organization, technology, reputation, and the business model itself—and build resilience on all these dimensions.

These disruptions are already affecting people's lives and livelihoods with potent force and should be part of every company's scenario planning. And the longer the war lasts, the more powerful and unpredictable these disruptions may become.

## Exhibit (continued)

Total shareholder returns (TSR) since pre-event peak by global industry, %



<sup>3</sup>From market close on Feb 23, day before invasion. Week 1 is week ending Mar 2, 2022. Week 9 is week ending Apr 27, 2022.

<sup>4</sup>From market close on Feb 19, the pre-pandemic peak. Week 1 is week ending Feb 26, 2020. Week 9 is week ending Apr 22, 2020.

Source: Corporate Performance Analytics; Haver Analytics daily data; S&P Global; McKinsey Economics platform; McKinsey survey of global executives

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