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World Outlook 2022-24: Over the Brink

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- Two shocks in recent months, the war in Ukraine and the build-up of momentum in elevated US and European inflation, have caused us to revise down our forecast for global growth significantly. We are now projecting a recession in the US and a growth recession in the euro area within the next two years.
- The war, which has transitioned into a stalemate that is unlikely to be resolved any time soon, has disrupted activity on a number of fronts. These include upheavals in markets for energy, food grains, and key materials, that have in turn further disrupted global supply chains. We assume that the critical flow of gas from Russia to Europe will not be cut off, keeping the crisis from substantially deepening costs to the European and global economies, but that remains a downside risk.
- Inflation in the US and Europe is now pushing 8%, well in excess of what was expected as recently as December. More troubling, especially in the US, are signs that the underlying drivers of inflation have broadened, emanating from very tight labor market conditions and spreading from goods to services. Inflation psychology has shifted significantly, and while longer-term inflation expectations have not yet become unanchored, they are increasingly at risk of doing so.
- The Fed, finding itself now well behind the curve, has given clear signals that it is shifting to a more aggressive tightening mode. We now expect the Fed funds rate to peak above 3-1/2% next summer, with balance sheet rundown adding at least another 75bp-equivalent in rate hikes. With EA inflation likely to be sustained at 2% or more, we see the ECB raising rates 250 bps between this September and next December.
- This tightening is expected to yield negative growth in the US for two quarters during the fall-winter of 2023-24 and to reduce EA growth to modestly above zero that winter. Growth is seen recovering thereafter as inflation recedes and the Fed reverses some of its rate hikes. We acknowledge huge uncertainty around these forecasts, but also note that the risks to the downside and of a deeper downturn are considerable.
- Our forecast has inflation receding to more desired levels over the next several years partly because we assume no further negative geopolitical or other supply shocks and partly because we assume that central bank action, while tardy, is just in time to keep inflation expectations anchored. Should either of these assumptions prove incorrect, the inflation pressure, central bank tightening, and economic downturns could all be more intense than in our baseline projection.

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- Lastly, our revision to global growth is from an above-trend rate to a path that is slightly below its post-pandemic longer-term trend in the low 3s. We see growth in some key emerging market regions picking up moderately over time and that in others being less sensitive to monetary tightening and economic slowdown in the US and Europe than they have been in the more distant past. This is another area of potential downside risk to our baseline forecast.

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I. Overview

Introduction

Forecasting is fraught in times like these. Because the global picture can change literally overnight, it is sorely tempting to sit back, wait, and see what happens next. But more than enough has now changed in just the past few months to say it is high time to take another snapshot of global prospects. When we last updated our view in early December, the global economy was entering perilous waters with storm clouds looming. At the time, we still saw reaching the safe harbor of a soft landing as the most plausible outcome, though just barely so. In the intervening months, the **storms have intensified dramatically** on two fronts, while easing moderately on a third. First, war has broken out in Europe with **Russia's invasion of Ukraine**—a development that has pushed energy prices significantly higher and disrupted a number of other key commodity markets and supply chains. Second and even more importantly for the economy further down the road, the **momentum of inflation has continued to build** at a surprising pace in the US, Europe and elsewhere, necessitating **more aggressive tightening of policy by key central banks.** Third and more favorably, the Covid-19 shock has increasingly transitioned from pandemic to more manageable endemic, though it continues to disrupt economic activity significantly in some key regions, most notably in China.

The net effect of these developments has been to move our outlook for the global economy in a stagflationary direction, with a significant slowdown in anticipated growth and another substantial step up in the projected path of inflation. The war in Ukraine has been another major supply shock to world activity on the heels of the pandemic shock, causing key commodity prices to surge and real income and spending growth to slow. More favorably, pandemic-related disruptions have been easing on balance in much of the world as vaccination immunity has spread and many countries have increasingly learned to live with the lingering virus. But renewed outbreaks and lockdowns in China have extended pressures on already stretched global supply chains, contributing further to price pressures. And inflation in the US and Europe has now reached levels that have forced the Fed and the ECB to pivot their monetary policy stances dramatically. As a result, **we now expect the US economy to be in outright recession by late next year, and the EA in a growth recession in 2024** with unemployment edging up. Our baseline view is that these developments will spill over to damp growth in much of the rest of the world and at the same time help to bring inflation back toward mandated levels, diminishing the risk of greater disruptions further down the road.

In what follows in this overview, we begin by outlining our assumptions about the progression of the war in Ukraine and its implications for key global commodity markets, including oil, natural gas, foodgrains, and other key materials. These issues are addressed in more detail in Sections II and III of this Outlook. Next, we turn to the inflation problem and the central bank reactions we expect it to induce. We then summarize our expectations for growth globally and in key regions, with a particular focus on the US and EA. As recession in the US is still far from being a consensus forecast, we review what we see as the strong fundamentals and indicators that are now pointing in that direction. We also consider risks that could skew the global economy toward an even more dire outcome than the one presented in our current baseline. Our forecasts for the various regions and financial markets are presented and analyzed in more detail in subsequent sections below and still more detailed analyses will be available in separate regional and market publications in the days to come.

War in Ukraine

The war in Ukraine has **reached a stalemate** on most fronts since mid-March. Following the failure of their initial campaign, the Russian forces have adjusted, focusing their efforts on striving to establish full control over the Donbas region in the East and consolidating a land bridge to Crimea in the south. For the Russians, achieving complete control of the Donbas would likely come at a high cost in blood, money, and time. This region is where many of the best-equipped and best-trained Ukrainian armed forces are concentrated. Redeployment of forces from other regions and the increasing arms supplies by the West should also boost the Ukrainians' defensive capacity. While Russia possesses clear superiority in military resources, intelligence reports have called into question its troop motivation, military equipment quality, and leadership ability.

Our baseline view is that **the war morphs into a frozen military conflict and a fragile ceasefire emerges** this spring. This would mark the end of the large-scale hot phase of the war but with flare-ups that continue for many months, if not years, likely with declining intensity over time. The current **gap in negotiations remains wide:** President Putin has an absolute need to consolidate territorial gains or achieve major political concessions that Zelensky/Ukrainians will absolutely not want to give up. Putin's ouster either from within his administration or by popular will in Russia seems very unlikely any time soon, even as the costs of the war mount, both financial and in lives lost. However, the deepening economic crisis will likely increase the risks to Russia's domestic political stability in the years to come.

Ukraine could well remain an active proxy battlefield for Russia and NATO for some time to come. The war therefore has some overtone of being the 21st century battlefield of democracy vs autocracy. In a more positive scenario than our baseline view, a desire on all fronts for greater stability in the region could push events to a negotiated settlement. While there have been more positive signals from the Ukraine-Russia talks, the bar for full resolution remains high. **Absent any such settlement, the situation will remain inherently unstable.** International sanctions on Russia will likely remain in place indefinitely. A full cutoff of the flow of natural gas to Europe is entirely plausible. Over the longer haul, President Putin would likely strive to undermine the efforts to turn a Ukraine west of the Donbas into a thriving democracy. The inherently contingent nature of war also leaves the risk of direct Russia-West confrontation, for instance, if President Putin resorted to using non-conventional weapons to prevent Russian troops from effectively being driven out of the Donbas. **The narrowing of Russia's immediate war aims,** including the withdrawal from the Kiev region, **may diminish some of the downside risks but these have far from dissipated.**

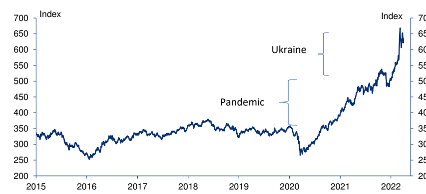
Economic implications of the war

The most important near-term implication of the war in Ukraine for the global economy concerns its impact on key commodities, including gas, oil, foodgrains, and some metals. Broad commodity prices have jumped another 20% with Russia's invasion, and under our baseline assumption, uncertainty premiums will persist for some time (Figure 1). **We assume that the critical flow of natural gas from Russia to Western Europe will continue, and that this will limit the overall economic damage to a "moderately" negative scenario.** Russia needs revenue to fund its war effort and does not have ample ready alternatives for gas exports. Europe is highly dependent on Russian gas for now and vulnerable to substantial economic disruption if it is cut off. Efforts to greatly reduce that dependency have been accelerated, but will take time and investment in alternatives. Russia will be more readily able to sell its oil on the global market to neutral parties, although at a discount given various financial and trade sanctions. We expect world oil prices to remain elevated in the near term but to begin to decline significantly next year as supply responds positively and global growth slows further, especially in the US and Europe. Russia and Ukraine also figure importantly in various **global foodgrain markets, where sanctions on Russia along with severe disruption of Ukrainian production and exports will likely keep prices elevated for much of the next year,** until crops can adjust elsewhere.

Three other important implications of the war for global activity warrant mention here—two negative and one positive:

- First, **the disruption of global supply chains** via both the interruption of the flow of materials like neon, palladium and platinum, which are essential to the production of microchips, and via the disruption of normal air traffic patterns over Russia between Asia and the West. Russia and Ukraine together account for a large majority of the world's neon production and purification. Semiconductor producers are estimated to have stocks of such materials sufficient to last up to a few months, but prolonged disruption could soon depress output and raise prices further in key sectors like autos.
- Second, the Russian economy itself will take a large hit as a result of sanctions. **We see Russian GDP declining 8% this year**—a markdown of more than 10pp from our December forecast. This is well over ten times the size of the hit felt by Western economies, and enough to reduce global growth by a couple tenths. In our below-consensus forecast, we expect to see Russia record a further y/y decline in 2023 (Figure 7 and Figure 8).
- Third, and more positively for growth, the war has moved Europe to devote significant additional resources to building up defense capabilities over the years ahead. We see this boosting fiscal spending in the EA by as much as 1/2% of GDP on a sustained basis, and along with investment in energy and other fiscal initiatives adding several tenths to GDP growth over the forecast period.

Figure 1: Bloomberg commodity price index



Source : Bloomberg Finance LP, Deutsche Bank

Inflation moves well beyond central bank mandate ranges

A year or so ago, we and others were warning that inflation could become a major problem for the global economy thanks to massive monetary and fiscal support for aggregate demand—especially in the US—in the face of increasing constraints on supply expansion. [1] **Those inflation risks have been realized at levels surpassing our worst fears.** Surprising developments have included: (1) **continued outsized demand for goods, with supply partly constrained** by persistent supply-chain disruptions struggling to keep up; (2) the speed with which **labor markets have tightened**, especially in the US, thanks in part to persistent constraints on labor supply (retirements and reduced immigration), and resulting in an impressive jump in wage inflation; (3) a wealth of anecdotes pointing to a general **shift in inflation psychology** and willingness to pass increases in costs along to buyers who are increasingly willing to accept them; and (4) the aforementioned war-induced additional commodity price shock, which is being passed through more fully thanks to the shift in psychology. These developments have resulted in a **broadening of inflation at elevated levels not seen since the latter stages of the great inflation in the early 1980s.** They may also have begun to lift longer-term inflation expectations, which historically have eventually been moved by trends in

1 See How to Pare Back the Fiscal Overshoot and Inflation: The defining macro story of this decade

actual inflation, a development that would be especially worrisome to central banks. Even Japan may have emerged sustainably from negative inflation, but not by enough for the BoJ to raise rates in the foreseeable future.

How central banks will respond

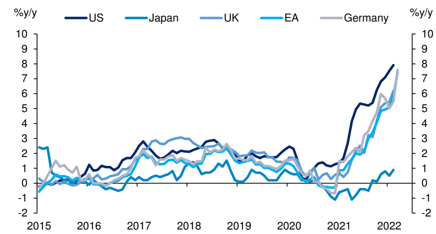
In recent months, we have made major changes to our calls for policy moves at both the Fed and the ECB. The inflation problem is more urgent in the US, where demand pressures have been stronger than in Europe where commodity price surges that are not expected to continue have been more important. We now see the **Fed raising rates by 50 bps in each of the next three FOMC meetings.** The goal is to begin to return to a more neutral (and eventually restrictive) level of rates as soon as possible. The **Fed funds rate is projected to peak above 3.5% by the middle of next year, with risks to the upside.** Added to this tightening is an expected nearly $2trn rundown in the Fed's balance sheet between this June and December 2023. This will add effective monetary tightening equivalent to another three to four 25 bps rate hikes and help move Fed policy from current near-pandemic emergency floor levels into at least a moderately restrictive range. We see the **ECB** moving with some alacrity as well, given that inflation is expected to be at least at its desired level over the years ahead. Policy rate liftoff there is expected by this September, with a total of 250 bps of hikes projected to move the level of the deposit rate from significantly negative territory currently to 2% by next December. (Figure 3.) The ECB is seen engaging in much less balance sheet contraction than the Fed. These central bank tightening projections are well above both current market expectations and the consensus (median) of private forecasters surveyed most recently by Bloomberg. (See further discussion in Sections III.A and B below.) We expect the Fed funds rate to begin to ease back to around neutral as unemployment moves up in late 2023 and early 2024.

Outlook for growth

Both the war in Ukraine and the more aggressive monetary policy tightening have caused us to mark down our forecast for global growth—by more than 1pp this year and 3/4pp next year (Figure 4 and Figure 7). **The EA and especially Germany are hit hard this year by the war** and surges in energy and other prices that have depressed household and corporate real incomes. China's growth has been marked down significantly as well, this year and next, primarily because of the disruptive effects of official measures including lockdowns to deal with the spread of the highly infectious Omicron BA.2 variant of Covid-19. The US economy is expected to take a major hit from the extra Fed tightening by late next year and early 2024. We see **two negative quarters of growth and a more than 1.5% pt rise in the US unemployment rate, developments that clearly qualify as a recession,** albeit a moderate one (Figure 5). The US slowdown does spill over to some extent to much of the rest of the world, with EA growth dipping briefly to about zero in early 2024 (Figure 6). US growth then picks up again later in 2024 after the Fed eases rates moderately. Given its timing around the turn of the year, the US downturn is masked in the annual growth numbers for 2023 and 2024 (Figure 7 and 8).

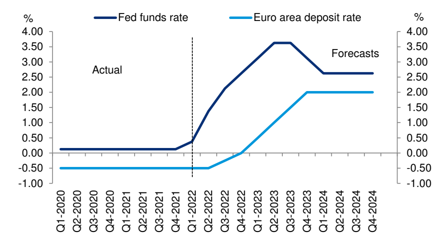
World growth in 2021 did moderately better than our December Outlook for above-trend performance estimated. The new April forecast sees **global growth this year and next at or slightly below its 3 to 3-1/4% trend rate**, which leaves unemployment rates little changed on average (Figure 9). This view is **nearly 1/2pp weaker than the latest Bloomberg consensus forecast**. Peering out further into 2024, we see global growth slowing only modestly as China and India are expected to pick up despite the slowdowns in the US and Europe.

Figure 2: Headline consumer price inflation



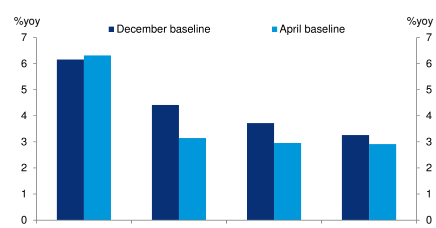
Source : BLS, MIAC, ONS, SOEC, Statistisches Bundesamt, Haver Analytics, Deutsche Bank

Figure 3: Central bank rates with forecasts



Source : FRB, ECB, BoE, Haver Analytics, Deutsche Bank

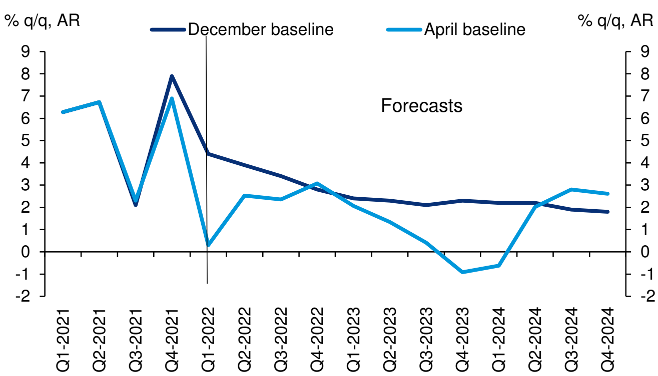
Figure 4: World real GDP growth



Source: Deutsche Bank

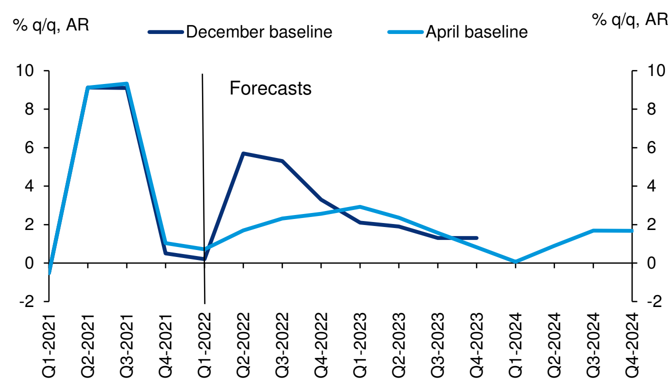
Emerging market regions generally appear less exposed to Fed tightening cycles that are recession inducing at home than they have been in the past. This reduced sensitivity owes to a combination of more freely floating exchange rates, smaller external imbalances, and better developed domestic financial markets, including better regulation of domestic banking and financial sectors. That said, risks to many of these economies remain weighted to the downside as we look out a couple years, especially if commodity prices take a larger hit from the slowdown than we have built into our forecast.

Figure 5: US real GDP growth



Source : Deutsche Bank

Figure 6: EA real GDP growth



Source : Deutsche Bank

Figure 7: DB growth projection revised down to below consensus

Real GDP	2021	2022	2023	2024	2022	2023	2024	2022	2023	2024
		% YoY April baseline			% YoY December baseline			% YoY Bloomberg 4-Apr-22		
World	**6.3**	**3.1**	**2.9**	**2.9**	**4.4**	**3.7**	**3.3**	**3.5**	**3.3**	**NA**
US	5.7	3.0	1.8	0.7	4.6	2.6	2.1	3.4	2.3	2.1
Euro Area	5.3	2.8	2.3	1.0	3.8	2.8	1.4	3.1	2.5	1.9
Germany	2.9	2.3	3.0	0.8	4.0	3.0	1.0	2.5	2.8	1.6
UK	7.5	3.8	0.7	1.3	3.5	1.7	1.4	4.0	1.8	1.6
Japan	1.7	1.5	1.3	0.6	2.8	1.4	0.9	2.4	1.7	1.1
China	8.1	4.4	4.7	5.3	5.1	5.5	5.2	5.0	5.2	5.0
India*	8.3	7.0	6.0	6.5	7.6	6.1	6.5	7.7	6.4	NA
Canada	4.6	3.9	2.9	2.2	4.5	3.4	0.7	3.9	2.8	2.0
Australia	4.7	4.8	2.5	2.0	5.0	3.4	2.3	4.4	2.9	2.6
South Korea	4.0	2.6	2.1	1.6	3.3	2.3	1.7	3.0	2.6	2.4
Russia	4.7	-8.0	-2.5	2.0	2.4	2.1	1.9	-8.8	-1.5	1.2
Turkey	11.0	3.0	3.3	3.6	3.5	5.5	5.5	3.2	3.4	3.9
South Africa	4.9	2.0	2.2	1.8	2.3	2.6	2.4	1.8	1.8	1.7
Brazil	5.0	0.6	1.4	2.2	0.8	2.1	2.3	0.5	1.7	2.2
Mexico	5.0	1.8	1.9	2.0	2.2	2.1	2.3	2.0	2.1	2.3

*India numbers are fiscal year numbers as reported in Bloomberg. Source : Bloomberg Finance LP, Deutsche Bank

Figure 8: Global growth lifted over time by China and India

GDP growth (% qoq)	2021-Q4	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023 %Q4/Q4	2024 %Q4/Q4
World	**1.3**	**0.5**	**0.5**	**0.5**	**0.7**	**2.8**	**3.1**
US	1.7	0.1	0.6	0.6	0.8	0.7	1.7
Euro Area	0.3	0.2	0.4	0.6	0.6	1.9	1.1
Germany	-0.3	-0.2	0.6	1.2	1.0	2.2	0.5
UK	1.3	0.9	-0.2	0.4	0.0	1.0	1.4
Japan	1.1	-0.1	0.7	0.6	0.5	0.6	0.9
China	1.6	0.8	0.9	1.3	1.4	4.4	5.5
India	1.8	1.6	3.4	-0.5	1.1	5.6	7.0
Canada	1.6	0.6	1.1	1.0	0.9	2.3	2.2
Australia	3.4	1.5	1.2	0.7	0.6	2.2	2.0
South Korea	1.1	0.4	0.6	0.7	0.7	1.3	2.3
Russia	0.9	-1.2	-8.7	-3.1	-1.5	3.9	1.5
Turkey	1.5	0.0	0.2	0.3	0.1	5.0	2.6
South Africa	1.4	1.3	-0.1	0.5	0.6	2.3	1.6
Brazil	0.5	0.5	0.0	-0.3	-0.3	3.3	1.4
Mexico	0.0	0.6	0.9	0.8	0.5	1.6	2.0

Source : Deutsche Bank

Figure 9: Outlooks for unemployment and fiscal policy

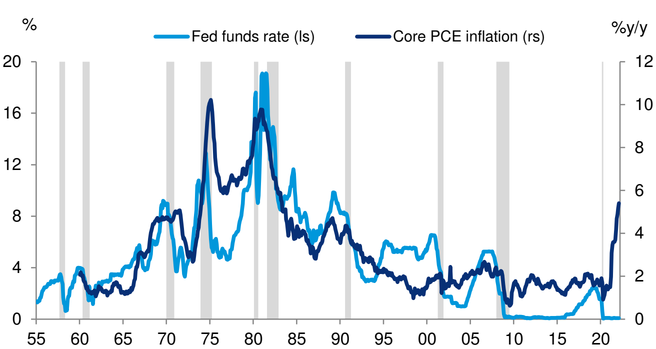
			April Baseline			
Unemployment (%)	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
US	3.7	8.1	5.4	3.5	3.9	4.9
Euro Area	7.6	8.0	7.7	6.5	5.8	6.0
Germany	3.2	3.8	3.6	3.0	3.0	3.0
UK	3.8	5.2	4.1	3.9	4.1	4.0
Japan	2.4	2.8	2.8	2.6	2.6	2.8
Budget deficit (% GDP)	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
US	4.6	15.0	12.5	5.5	4.3	4.9
Euro Area	0.6	7.2	5.7	4.6	3.7	3.7
Germany	-1.5	4.3	3.7	3.3	2.8	3.0
UK	2.4	14.8	5.4	4.2	2.2	1.8
Japan	2.9	8.9	7.0	4.6	4.0	3.7
China - official budget deficit	4.9	3.6	3.2	2.8	2.8	2.8
China - augmented fiscal deficit	8.2	14.1	8.5	11.0	10.0	9.5
India (Consolidated)	7.2	13.9	10.6	10.0	8.7	8.0
Government debt (% GDP)	**Q4**	**Q4**	**Q4**	**Q4**	**Q4**	**Q4**
US	78.6	100.6	102.8	99.0	97.3	99.0
Euro Area	83.6	97.3	96.7	95.6	94.3	95.0
Germany	58.9	68.7	68.2	68.0	66.6	67.4
UK	82.7	94.0	95.6	95.7	94.5	92.1
Japan	237.9	255.9	261.0	262.8	261.0	259.1
China - central government debt	17.0	20.6	20.3	21.2	22.1	23.0
China - augmented public debt	74.8	84.2	83.6	86.9	91.8	95.5
India	72.1	88.3	87.2	86.3	85.2	84.1

Source : Deutsche Bank

The case for a US recession

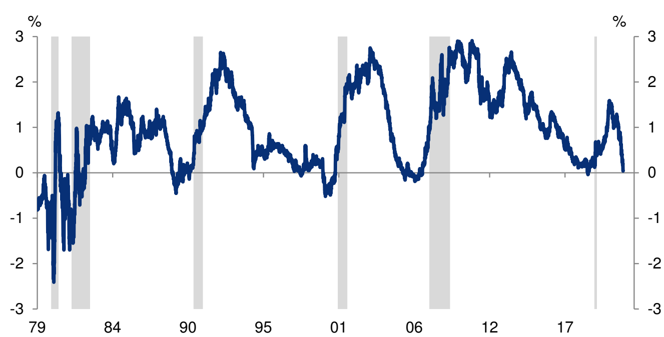
Our call for a recession in the US next year is currently way out of consensus; we expect it will not be so for long. We acknowledge that calling recessions is extremely difficult, especially so far in advance. This is generally not done until the downturn is all but upon us. But rarely have fundamentals based on historical experience and conventional recession indicators lined up so well to point toward this outcome. We base this view on two observations. First, the case for an aggressive Fed tightening cycle moving policy significantly into restrictive territory is strong. To keep inflation from getting truly out of hand, the **Fed finding itself now well behind the curve has to move aggressively.** On just two occasions in the past seven decades has the Fed been able to raise rates by 300 bps and put/keep inflation on a downward trajectory without causing a recession—in the mid-1980s and the mid-1990s (Figure 10). On both occasions the labor market was a good deal less tight than it is today and inflation was generally trending lower. Also, the policy tightenings were weaker than we expect this time around. On all other occasions, **significant Fed rate hikes were followed within a year or two by recessions** (which are indicated by the shaded bars in the charts).[2] Second, yield curve inversion has been a relatively reliable leading indicator of recessions in the US. **Every time the 10-year 2-year Treasury yield curve has gone negative, recession has followed roughly within a year or two (Figure 11).** The yield curve slope has dropped sharply in recent months and is about to turn negative as investors see rates likely to rise less in the longer term (as the economy slows) than they rise in the near to medium term as the Fed drives short-term rates higher. As discussed further in Section III.A below, a number of recession probability models now put the likelihood of a recession one to two years out in the 50-75% probability range. In any event, we hold to the view that a **mild recession will be needed to take sufficient steam out of the economy and labor market to bring inflation back down.**

Figure 10: Fed tightening cycles



Source : BEA, FRB, Haver Analytics, Deutsche Bank

Figure 11: 2y10y spread



Source : FRB, Haver Analytics, Deutsche Bank

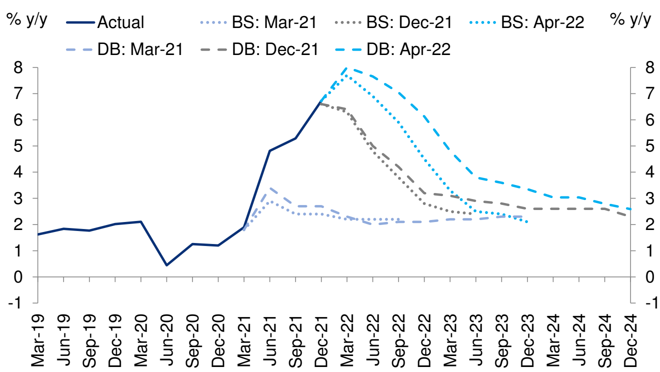
Inflation still expected to recede

The markets and macro forecasting professions have been notably wrong in their inflation forecasts over the past year and a half—our own modestly above-consensus projections included (Figure 12 and Figure 13). The pandemic shock and policy responses to it represented a regime change, especially on the supply side, that standard inflation models were not able to deal with. This was a sobering development that gives one pause in considering whether to have confidence in any particular inflation forecast. Our own forecasts for the US and EA have now moved well above the consensus of macro forecasters (Figures 12-14). Even so, **we still see**

2 The Fed did raise rates significantly in the mid-1960s, well ahead of the next recession in 1970. But on that occasion the increase was just barely enough to keep pace with rising inflation. The failure of the Martin Fed to act more aggressively to stem inflationary pressures at the time was seen as an important factor in the germination of the great inflation. In other episodes, unlike that one, policy rates were lifted significantly in real terms.

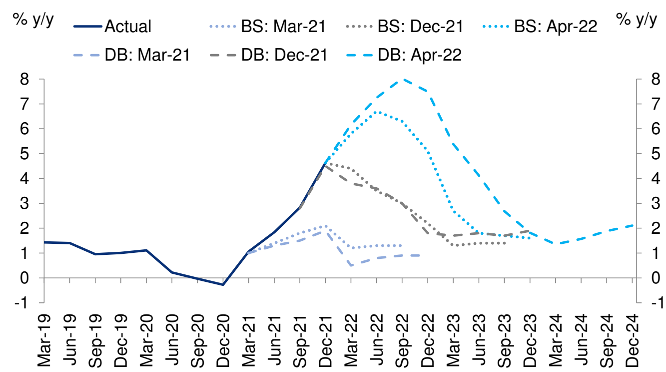
inflation eventually falling back close to central bank objective ranges, albeit a good deal more slowly than previously. This view is based on two key assumptions. First, we **assume that there will be no further major geopolitical or other supply shocks** (a worse-case scenario for the war in Ukraine is an obvious candidate there). This means oil, gas, grain and other commodity prices will likely not continue to rise at strong rates, but rather will recede from current elevated levels as supply adjusts upwards over time, thereby subtracting from headline inflation. Second, **we assume that central bank tightening, tardy as it is, will be just in time to keep inflation expectations from becoming unanchored.** The sustained anchoring of expectations should in turn help bring actual inflation back down.

Figure 12: US headline CPI forecasts



Note: BS=Bloomberg consensus survey of forecasters median, DB=Deutsche Bank World Outlook forecast. Source: Bloomberg Finance LP, Deutsche Bank

Figure 13: Euro Area HICP forecasts



Note: BS=Bloomberg consensus survey of forecasters median, DB=Deutsche Bank World Outlook forecast. Source: Bloomberg Finance LP, Deutsche Bank

Figure 14: DB inflation forecast revised up substantially to well above consensus

Headline CPI	2021	2022	2023	2024	2022	2023	2024	2022	2023	2024
			% YoY			% YoY			% YoY Bloomberg 4-Apr-22	
			April baseline			December baseline				
World	**2.8**	**5.0**	**3.4**	**2.5**	**3.3**	**2.6**	**2.5**	**4.6**	**2.5**	**NA**
US	4.7	7.2	3.9	2.9	4.7	2.8	2.5	6.2	2.6	2.2
Euro Area	2.6	7.2	3.5	1.7	3.0	1.8	2.0	5.9	2.1	1.8
Germany	3.2	7.0	4.0	2.1	3.0	2.3	2.1	5.7	2.2	2.1
UK	2.6	7.7	4.5	1.9	4.4	2.0	1.8	6.7	3.1	2.0
Japan	-0.2	1.7	1.2	0.9	0.8	0.9	0.8	1.3	0.9	0.7
China	0.9	1.5	2.3	2.1	2.1	2.3	2.1	2.2	2.2	2.1
India*	5.1	5.8	5.5	5.2	5.2	5.0	5.2	5.5	4.8	NA

**India numbers are fiscal year numbers as reported in Bloomberg. Source : Bloomberg Finance LP, Deutsche Bank*

The failure of either of these assumptions could result in more persistent inflation at a higher level. This would necessitate even more aggressive central bank tightening and deeper economic slowdown/recession. The **Phillips curve** (i.e., the sensitivity of inflation to unemployment) is a crucial lever that central banks have to move inflation. This curve **has flattened** greatly in recent decades, a development that helps when inflation is low: the central bank can thereby allow unemployment to go ever lower without an excessive rise in inflation. But when shocks have moved inflation too high, it **means the central bank has to work harder and raise unemployment more in order to bring inflation back down.**

Faced with this unsavory trade-off between bringing inflation down and pushing unemployment up, observers have asked if the **Fed might not choose instead to be**

more accepting of higher inflation. Our view is that this will not happen, for several reasons. First, **elevated inflation is politically unpopular,** albeit perhaps less so than elevated unemployment. Second, by allowing inflation to drift higher, the **Fed would lose a lot of the hard-won credibility** it gained in the wake of the last great recession—credibility that enabled it to anchor inflation expectations at a desirably low level. Third, the Fed also remembers well the lessons of the great inflation when then Fed chair Arthur Burns found ways to be more accepting of higher inflation rather than bite the bullet and do what was needed to rein in excessive inflation. As a result, inflation rose persistently to levels that required far more painful corrective action when **Paul Volcker was finally brought in to tackle the issue.** Lastly, we expect that chair **Powell will want his legacy to be much closer to that of Volcker than Burns.**

Implications for the markets

Our views on prospects for financial markets can be summarized briefly as follows (they are addressed more fully in Section IV below): We expect longer-term interest rates to peak by late this year, with the 10-year Treasury yield reaching 3.3%, and bunds following at 1.75% (Figure 15). Rates then begin to recede by next spring (with the yield curve inverting further) as economic downturn approaches. On equity markets, we see earnings growth performing well through mid-2023 when US growth starts to slow. The market generally peaks 3-6 months prior to the onset of a recession, so stocks would be correcting with a transitory decline on the order of 20% by the summer of 2023. Credit markets in the US and Europe would follow similar patterns, with spreads beginning to widen in the spring of 2023 and more forcefully over the balance of the year. The dollar is projected to lose ground steadily against the euro, reaching 1.25 by late 2023 and 1.30 a year later.

Figure 15: Financial and commodity market forecasts

Financial variables	2021-Q4	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023-Q1	2023-Q2	2023-Q3	2023-Q4	2024-Q4
Fed Funds Rate	0.125	0.375	1.375	2.125	2.625	3.125	3.625	3.625	3.125	2.625
ECB Deposit Facility Rate	-0.50	-0.50	-0.50	-0.25	0.00	0.50	1.00	1.50	2.00	2.00
BoJ Policy Rate	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
10Yr US Treasury (spot)	1.51	2.34	2.95	3.05	3.30	3.30	3.25	3.10	2.95	
10Yr German Bund (spot)	-0.18	0.55	1.00	1.20	1.55	1.75	1.70	1.65	1.60	
S&P 500 (spot)	4766	4530	5000	5150	5250	5350	5450	4500	5600	
STOXX 600 (spot)	488	458	510	530	550	560	570	470	585	
US HY (spot)	310	343	350	360	380	400	500	600	850	
US IG (spot)	98	122	115	115	120	125	140	150	210	
EUR HY (spot)	330	400	380	390	400	425	500	600	850	
EUR IG (spot)	98	129	115	120	125	130	140	150	210	
EUR/USD (spot)	1.14	1.10	1.10	1.14	1.17	1.20	1.22	1.24	1.25	1.30
Commodity Prices	**2021-Q4**	**2022-Q1**	**2022-Q2**	**2022-Q3**	**2022-Q4**	**2023-Q1**	**2023-Q2**	**2023-Q3**	**2023-Q4**	**2024-Q4**
WTI (avg.)	77.1	93.0	91.0	91.0	95.0	95.0	91.0	87.0	82.0	77.0
Brent (avg.)	79.7	95.0	95.0	95.0	100.0	100.0	95.0	90.0	85.0	80.0
Oil surplus (deficit) kb/d		(1600)	(900)	(1000)	(900)	400	400	400	400	

Source : Deutsche Bank

David Folkerts-Landau

Peter Hooper

II. Special sections

A. Geopolitics

- The war in Ukraine entered a new phase in late March, with a narrower but attritional focus by Russia. Tentative diplomatic progress may reduce some of the downside risks, including of direct Russia-West confrontation, but obstacles to a stable negotiated outcome remain high. Our baseline envisages a frozen military war and a semi-stable ceasefire emerging.
- The Ukraine war will have fundamental geoeconomic consequences – emergence of power blocs, global decoupling, rise of alternative payments and changing global savings dynamics, to name a few. We also consider important regional implications across Europe, CEEMEA and Asia.

Taking stock of the conflict – war and diplomacy

Russia's military focus shifts after failure of its initial strategy Monday marked Day 40 of Russia's invasion of Ukraine. With the conflict reaching a stalemate on most fronts around mid-March, the past two weeks have seen a shift in Russia's military strategy. This was already becoming visible on the ground in the second half of March, and was followed by the Russian military announcing a shift of its focus to a primary objective of "liberating Donbass". The past week saw confirmation of Russian forces substantively withdrawing from the north of Ukraine, with Ukrainian military gaining full control of the Kiev region.

Western and Ukrainian officials are sceptical of Russia's official position that withdrawal in the north represents a step to "bolster mutual confidence" in the diplomatic talks. Indeed, it is more credible that the Russian shift represents a forced revision of Russia's immediate war aims following the failures of its initial campaign and a shift of resources to concentrate on narrower objectives. The shift in focus to the south east of Ukraine may combine a number of interlinked goals for Moscow: (1) defeating the Ukrainian "Joint Forces Operation" in Donbass, which pre-war contained Ukraine's best-equipped and best-trained troops; (2) establishing control of the full territory of the Donestk/Luhansk administrative regions, thereby de facto implementing the separatists' territorial claims; and (3) securing a land bridge to Crimea.

The extent of Moscow's ability to achieve these aims, and whether they may be followed by larger objectives, remains uncertain. The Russian military's shift towards a focus on the south-east of Ukraine has been accompanied by continued targeting of critical infrastructure across Ukraine with missile and air strikes. This action is likely primarily aimed at hindering Ukraine's capacity to resist Russian advances in the south-east, but it also leaves the door open for more maximalist Kremlin objectives to resurface. Whether Russia's shift in strategy represents a permanent narrowing of its war aims or a temporary refocusing will likely depend on military events on the ground as well as the state of play on the diplomatic front.

Progress on talks but reaching comprehensive solution remains difficult Last week's talks between Ukrainian and Russian delegations sent some positive signals, with a sense of some common ground being found on a potential future neutral status of Ukraine and prospects for a Putin-Zelensky meeting rising. The shift away from Russia's initial public focus on "demilitarisation" and "denazification" of Ukraine could also help foster some goodwill, although these were always very ambiguous terms.

Still, the barriers to a stable negotiated solution remain high. On neutral status, details of security guarantees that would be acceptable to all sides will be difficult to align. On the territorial questions, while the status of Crimea could be left more easily until after an initial ceasefire, the status of Donbass is very directly linked to the state of play in the war and neither side appears likely to give in as things stand. On the Ukrainian side, the success in curtailing Russia's offensives and deepening anger towards Russia will limit the willingness to accept a solution that substantially undermines Ukrainian sovereignty or territorial integrity. From the Russian perspective, we have thus far heard very little on the extent of compromise that President Putin is willing to accept. A diplomatic outcome that is acceptable to Ukraine would represent a major climb-down compared with the Kremlin’s maximalist initial aims. For Russia, giving up on territorial gains made in the south and east of Ukraine without getting major political compromises from Kiev, could also threaten to undermine the ability to sell the “special operation” as a success domestically.

Lastly, sequencing is a challenge. Western and Ukrainian officials question Russia’s motivations for a possible ceasefire (which could be used to prepare for a renewed offensive), and hence expect to see troop withdrawals first. Meanwhile, Kiev’s plans for a referendum to approve any peace deal would leave uncertainty whether any political compromise between leaders would actually be approved.

Baseline Scenario

Our **baseline scenario envisages that the war morphs into a frozen military conflict and a semi-stable ceasefire emerges** during the course of Q2. This would involve Russia making some further military progress in the south-east of Ukraine around Donbass in the coming weeks (while Ukraine is likely to take back control of some territory in other areas), but for this advance to be slow in the face of continued Ukrainian resistance, with a new military stalemate emerging. This may mark the end of the large-scale hot phase of the war, but it would not represent a fully stable negotiated outcome and flare-ups may continue for many months, if not years. As discussed above, despite some narrowing, the current gap in negotiations is wide and a comprehensive peace settlement that would genuinely stabilize the situation remains difficult to achieve.

On the sanctions front, the vast majority of international sanctions on Russia will remain in place indefinitely. Some further steps and a focus on stringent sanctions enforcement by the West are to be expected. In the absence of materially more negative war news, the flow of natural gas from Russia to the EU will continue and a full oil embargo will likely be avoided. However, the semi-voluntary shift away from Russian oil will persist and Europe will actively implement plans to reduce reliance on Russian gas. Amid sanctions and popular pressure, activity of Western companies in Russia will continue to decline. Within Russia, near-term risks to the stability of the Putin regime are likely very limited, but could rise in the coming years (see more in H. Russia).

Upside and downside risk scenarios

Given the inherently contingent nature of war and lack of visibility on the Kremlin's aims, uncertainty around the eventual outcome remains high. There are both upside and downside risks to our baseline.

An **upside scenario** would involve a comprehensive and stable negotiated peace agreement between Ukraine and Russia, that addresses all the key issues and sustainably ends the conflict. This would largely be based on the current Ukrainian proposals as well as finding a solution on territorial questions that addresses some of Russia's demands but does not unduly undermine Ukraine's territorial sovereignty. Achieving this outcome would require further compromises by Moscow on its current demands, in turn requiring a full recognition that the political aims it may have had at the outset of the war are not achievable.

Insofar as this scenario would involve withdrawal of Russian troops, it would also see a material easing of Western sanctions, although this would take place in a gradual and conditional manner. On the energy side, Europe remains on course to move away from Russian fossil fuels in the long-run but the short-run pressure to minimise imports from Russia eases. Western companies will still avoid new investment in Russia but maintain most current operations. These two factors would partially reduce the extent of the economic downside in Russia and Europe relative to our baseline.

Downside scenarios centre on stronger aggression by Russia driving a major step up of the Western response in terms of sanctions and military support to Ukraine. One path through which this could transpire is if Russia, after making military progress around Donbass then aims to take larger swathes of territory in the south and east of the country. Another path is one where further military underperformance by Russia leads it to resort to even more indiscriminate use of conventional forces or, in a less likely worst case, non-conventional weapons.

Direct Russia-West confrontation may occur both militarily and via hybrid means (cyber attacks), although risks of full scale West-Russia war (and nuclear escalation) will likely remain contained. The sanctions regime would be further intensified, including the EU pursuing a full energy embargo against Russia. The West would also stringently use the threat of secondary sanctions and financial coercion to pressure other countries from substantively undermining the sanctions' aims. The withdrawal of Western companies from Russia will be near absolute. Russian authorities can no longer contain the economic crisis, which becomes comparable with the early 1990s, while Europe enters a recession (see Commodities and B. Euro Area sections for more). Even if underlying war escalation is avoided, reports of atrocities committed by the Russian side will increase the political pressure in the West for a stronger response and may lead to moderate downside risk outcomes (such as a partial European oil embargo).

Paradigm shifts in global geoeconomics

The world had entered an era of power politics already before the Ukraine war. The shift towards an economic order where rules matter less, and power matters more has already been going on for a few years. Big economic powers have begun to proactively manage their respective economic-financial vulnerabilities with China shifting towards "dual circulation" and the US limiting supply-chain risks[3] . But the war served as a wake-up call for those countries (i.e., Germany) that still believed in operating in a world where economic interdependence supports multilateral politics. Moving forward, energy, industrial and investment policy will be tied much more closely to security policy.

How global power will be distributed by the end of this decade cannot be answered by solely extrapolating potential real GDP growth rates. It also depends on the mix (and interplay) of the main players' technological supremacy (AI and Green-tech),

3 DGAP, Designing a Geo-economic policy for Europe, March 2022

regulatory power of setting standards, leverage over critical infrastructure and commodities, military capabilities, domestic stability and financial leadership (e.g., currency status). The key difference to the cold war is that the power blocs are economically much more interlinked which means that episodes of economic coercion (e.g., sanctions, tariffs, etc.) are more likely to occur.

Tensions between power blocs to rise but not a purely bipolar world. A key result of this crisis will be a more fractured and less globalised world, with growing tension between a US-led western bloc and an ideologically opposed China-led bloc that includes Russia and a few smaller countries. But there will also be a nonaligned group trying to chart a way between the two blocs and important inter- and intra-regional nuances to consider (which we discuss later in this section).

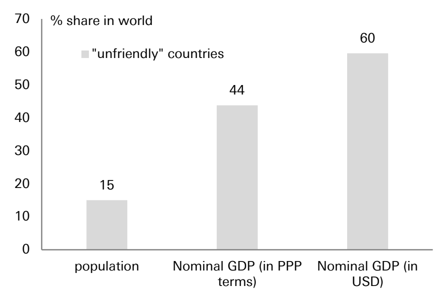
While 141 countries, a clear majority, voted to condemn Russia's aggression in the UN in early March, it is only Western countries and their Pacific allies that have introduced sanctions. Many others, while critical of the Russian invasion, oppose the use of extreme sanctions. A key part of Russia's attempts to adjust its economy to Western sanctions will be to improve its bonds with China as well as 'neutral' countries that have mutual interests or inter-dependencies with Russia. These moves will partially mitigate but not prevent severe economic pain. Although the "unfriendly" countries sanctioning Russia represent only 15% of the global population, they account for 60% of global GDP (FFF).

The war serves as a catalyst for selective decoupling. The Ukraine war is another episode of supply-chain disruption, which has become more frequent recently. Past episodes include the US-China trade war, blocking of Suez Canal and the pandemic. In order to minimize supply-chain risk, companies are now likely to bring production on-shore, near-shore operations, stock up inventories and/or diversify their suppliers (China plus one strategy). Corporate strategies by MNCs to adapt to tech decoupling include parallel systems or flexible architecture[4]. Meanwhile, the severe banking sanctions, including SWIFT shutoff, imposed on Russia will likely serve as an incentive for other countries, including China, to accelerate development of alternatives to the USD-denominated trade and payments system.

EU open strategic autonomy is no longer a pure buzzword. Even before the war hit, the EU had started to step up its defenses with respect to trade and investment policies (e.g., Investment Screening Mechanism and proposal for a new anti-coercion tool), to reduce asymmetric trade dependencies (e.g., with respect to rare earths), and to pursue a more active industrial policy (see cloud computing, microelectronics and battery production). EU open strategic autonomy has been filled with more life since the start of the war by upgrading its toolbox (e.g., RE-Power). Despite its recent push for strategic autonomy, the EU's balancing act in the China-US rivalry might become untenable at some point.

A regime shift away from global savings glut. Another de-globalisation consequence, which comes from freezing the CBR reserves, is the ramifications for reserve management, as countries may come to question the desirability and allocation of central bank reserves. As with payments, greater independence in relations with the West will also be a consideration beyond the narrow China-Russia bloc. This process will take time to play out. There are currently no comparable international alternatives to the dollar (and, to a lesser extent, the euro). From

Figure 16: Countries that have sanctioned Russian ("unfriendly" countries) account for only a fraction of the global population but a majority of global GDP



Source : Russian Ministry of Foreign Affairs, IMF, Deutsche Bank

4 Merics, Decoupling, 2021 https://merics.org/sites/default/files/2021-01/Decoupling_EN.pdf

China's perspective, the incentives for greater RMB internationalisation and achieving reserve currency status will need to be weighed against the preference for current account surpluses, which help to underpin financial stability in China. Still, together with the further fiscal regime shift under way in Europe, recent developments add to a turning point in global excess savings dynamics that had dominated during the 2000s and 2010s. In turn, this should imply higher global real neutral rates in the long-run.

Shortening supply chains add to inflation risks from commodity prices. The most immediate economic impact of the war has been the sharp commodity price shock – for energy, food and other raw materials – as we discuss in next section. But the war will also lead to higher inflation via supply-chain effects. First, the main impact of diversification of value chains and near-shoring will be not de-globalisation of trade but higher inflation. Shortening and diversification of global value chains might actually lead to increasing intra-regional trade and investment links (i.e., intra-EU flows, or EU-US). Increased resilience via shortening and diversification of global value chains is likely to come at an economic cost, i.e., a loss in efficiency and higher inflation.

The evolving face of ESG. The Ukraine war has also added to new perspectives to the already fast-developing theme of ESG. First, higher scrutiny for investments in high-risk jurisdictions. The formal sanctions and self-sanctioning that we have seen towards Russia will result more broadly in a higher level of scrutiny on "social" criteria for investing in higher risk regions. Second, there is a renewed debate on whether defence industries can fit in ESG portfolios. The results of a DB research survey published last week (see link) showed that while there is still a lot of nervousness, a sizable chunk of investors are open to it. Third, is energy. Our recent survey found that 28% of investors think that as a result of Russia/Ukraine war, exclusionary policies against nuclear energy should shift to now allowing it. Furthermore, the current episode is another tailwind for alternative energy.

Not the end of multilateralism (yet). To end on a positive note, although multilateralism has taken a severe hit, common global challenges (like anti-terrorism or climate change) will require global coordination and joint action. The German G7 presidency will show whether the establishment of a global climate club is a pipe dream or multilateral cooperation on selective topics is still possible.

Beyond these key global implications of the conflict, there are important regional angles to consider. We discuss these next.

EU open strategic autonomy: buzzword being filled with life

The war has led to a re-priorization of EU strategic goals, putting a stronger focus on energy security and defense, and injected life into the buzzword of EU open strategic autonomy. Using existing instruments, EU policymakers have taken swift (supersonic by EU standards) action in several policy fields (sanctions, migration, state aid, defense). While the EU-27 displayed unity in the face of the crisis, this unity might falter the higher the domestic political and economic pressure gets on governments, e.g., in case of a supply shock with respect to Russian energy.

Looking beyond the immediate crisis response, the EU will have to upgrade its toolbox much faster and more rigorously as we seem to have shifted more towards a world of power politics. This would also require a redesign of EU decision-making processes, which seems unlikely for now.

Security and defense policy: long road from soft towards hard power. Europeans will have to shoulder a larger share of their security burden, acting through both NATO and the EU[5] . The just-released EU Strategic Compass is a common threat analysis that sets out EU ambitions, which needs to be turned into action. While national governments are already stepping up defense capabilities, we are also likely to see new momentum for EU coordination and collaborative capability projects.[6] While unanimity in foreign and security policy decisions still favours lowest-common denominator policies, the "coalition of the willing" format could be used more often if a union-wide consensus is not attainable.

Energy policy: Focus on joint procurement instead of intervening in electricity markets (for now). With Re-Power EU, the EU unveiled its energy security proposals and updated its toolbox on how to address rising energy prices (e.g., allowing price caps at a national level). Proposals at the end-March summit focused on revising EU regulation requiring gas storage and setting up a platform for joint purchasing of gas. The Spanish push for an overhaul of the wholesale electricity pricing model was met with strong resistance from Northern member states. But the question of how to socialize higher energy prices is likely to resurface. In terms of energy infrastructure, there will also be increasing focus on how to create a truly integrated EU energy market (linking the Iberian Peninsula).

Trade policy: Tools of economic coercion are gaining in importance. Even before the war hit, the EU had started to step up its defenses with respect to trade and investment policies, to reduce asymmetric trade dependencies and to pursue a more active industrial policy (e.g., battery production). If tools like the new anti-coercion tool are implemented, the EU will become a more capable actor in the geoeconomic era[7] . But the question of how to address asymmetric shocks resulting from such policies will also come to the fore.

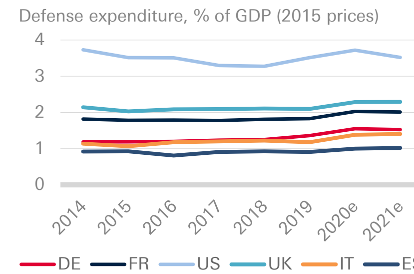
Migration policy: Question of burden-sharing might create divisions. By unanimously activating the Temporary Protection Directive for the first time, the council has given refugees a residence permit and access to employment and social welfare for at least one year. However, the debate on how to support those countries bearing the brunt of the refugee-related costs (esp. Poland) has just started and might create divisions in the EU-27 and test societal resilience.

CEEMEA: Hugely differentiated response and implications

The CEE region faces a multiplicity of shocks, with the hit to inflation, falling export demand, raw material shortages and an unprecedented refugee crisis. Thanks to already strong domestic demand; a tight labour market; and fiscal support preceding the war, the region is starting on a strong base. However, the influx should put upward pressure on already elevated inflation in the near term, which would magnify the shock to disposable income.

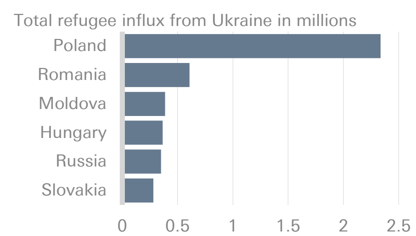
An unprecedented refugee situation. Over four million people have left Ukraine (Figure 18) [8] . As a share of population, the burden is particularly heavy for Poland dwarfing those experienced by Germany and Turkey during the height of the Syria crisis (Figure 19). Besides the unprecedented macro shock, near-term fiscal costs

Figure 17: Several large EU member states still falling short of the 2% NATO commitment



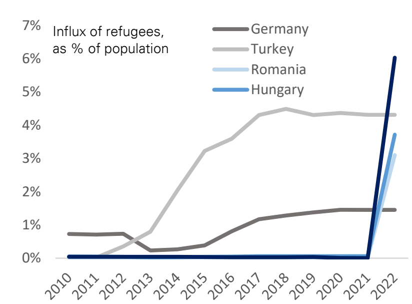
Source : NATO, Deutsche Bank

Figure 18: Poland sees largest refugee influx



Source : UNHCR, Deutsche Bank

Figure 19: The Ukraine refugee inflow into CEE has been much sharper than the earlier migrant crisis



Source : UNHCR, National statistical agencies, Deutsche Bank

5 CER, Russia's assault on Ukraine and European Security, March 2022
6 E.g. EDF for funding defense R&D, EDIDP to strengthen the EU defense industrial base, PESCO for procurement cooperation, CARD for a coordinated review of national capabilities.
7 DGAP, Designing a Geo-economic policy for Europe, March 2022
8 BBC 30th March 2022

have been estimated at over EUR 20bn by the Polish government for this year alone[9] . More medium term, the inflow of refugees could in theory help to ease labour market shortages and increase potential growth. Much will depend on the effectiveness of the policy response of CEE governments – and the EU – in integrating refugees.

Shift towards increased military spending raising fiscal consolidation risk. Critically, as the frontline against Russia, governments across the CEE should see shift towards higher military budgets, which are unlikely to be a temporary phenomenon. Poland could raise defence spending to 3% of GDP by 2023, while in Romania, an increase to 2.5%. The Czech government also voted to add an additional CZK1bn to the defence budget for this year. It is now unlikely that 2022 budget targets will be met in any of the CEE countries, given the refugee costs, increases in defence spending and also the increase of certain social benefits/tax cuts, aimed at mitigating the commodity price shock.

Poland leading the bloc on "de-Russification". This includes an aim to end Polish dependence on Russia for its coal and gas needs by end-22. Poland imported 72% of its solid fossil fuel and 55% of natural gas from Russia in 2020 – the magnitude of the targeted shift is huge. Draft legislation on freezing assets of bodies that support Russia is also underway. Romania has also taken steps to wean itself off Russia supplies. The Czech government decided to withdraw from the two Soviet-era banks that it had stakes in.

United front conceals Hungary's dovish leanings. Though relations with Western Europe are better than in the recent past, this is more so in Poland than in Hungary. In a bid to project a united front, CEE has rallied behind the EU position, supporting all sanctions so far on Russia. However, Hungary has refused to allow transit of weapons and suggested it would veto any sanctions on energy trade. Admittedly, the refugee crisis has pushed the rule of law concerns against Hungary and Poland to the backburner for now. This implies that RRF plans for Poland and Hungary are probably closer to being approved than they were at the start of 2022, but this should happen relatively quicker for Poland than for Hungary.

Turkey has opted to play a mediating role to end the Russia/Ukraine war, while maintaining a neutral stance as a NATO member. Turkey pledged to maintain relations with both Ukraine and Russia. In this context, Russia-Ukraine delegation talks in Istanbul at end-March delivered material diplomatic progress. That said, Turkey referred to the invasion as "war", and closed its straits to Russian warships under the 1936 Montreux Convention at end-February. The upside could be a greater degree of political unity with Western allies for Turkey, as their long-standing geopolitical disputes may be put on hold for the near future. On the other hand, the war will affect Turkey's inflation and current account negatively, via rising energy and food price bills and a potential decline in tourism revenues (Russian/Ukrainian tourists accounted 25% of visitors, and 14% of tourism revenues).

In Sub-Saharan Africa, most nations condemned the invasion, while South Africa, due to its BRICS ties, remained neutral. The war could, however, raise significant competition between Russia (even China) and the West within the region. With Russia's presence growing in the unstable Sahel region, Nigeria and Ghana for example, have already lobbied for support from the US and EU to quell

9 FT 25th March 2022

the situation. Trade ties could also strengthen given the abundance in raw materials, including Algeria and Nigeria in both oil and gas markets. In the interim, inflation will rocket, particularly for food, fuel and fertilizer with high import content. The negative spin-off effects will hit fragile nations with high government debt ratios, though higher inflation rates could be to their advantage. South Africa will not be spared, but it enjoys strong terms of trade gains from being a critical supplier across a spectrum of metals, coal and gemstones.

Asia’s emerging fault lines

Russia’s invasion of Ukraine **brings into question the sustainability of strategic ambiguity policies** for many Asian countries, especially given China’s rising ambition in Asia and its “no limits” partnership with Russia that raises questions over Russia’s reliability as, for some, a chief provider of military equipment.

For some countries in Asia, Russia's invasion of Ukraine has created “a very dangerous precedent”, threatening the very foundation for sovereignty and territorial integrity of smaller nations. There is no ambiguity as far as countries like Japan, Singapore and South Korea are concerned as they have imposed comprehensive sanctions on Russia. In contrast, for others, their preference is to avoid bringing about unwanted troubles, especially given their historical (military) relationship with and dependence on Russia and its economic relationship with China, as tensions over disputed territories remain high.

India has opted for now to stay on a path of “**strategic ambivalence**”, abstaining from the UN GA resolution that condemned Russia, along with a few others in Asia that either have a strategic relationship with Russia or rely heavily on it for defence equipment. For example, about two-thirds of military hardware imports by India came from Russia since 2010 and it could be left vulnerable in terms of its military readiness vis-à-vis Pakistan and China if arms from Russia were to stop. During the Cold War, India and the USSR had a strong strategic, military, economic and diplomatic relationship. Russia inherited it, with both calling their relationship a "special and privileged strategic partnership". Vietnam too has a long “strategic” history with Russia, although never becoming as close as during the Cold War. Russia was the source of three-quarters of military equipment imports by Vietnam over five years from 2015, although Hanoi has also sought to diversify its defence relationships. Russia has also sold weapons to Indonesia, Malaysia, Thailand, and the Philippines. Although India’s stance on Russia’s invasion of Ukraine has not been an issue enough to shake the Quad or the Indo-Pacific strategy thus far, it raises the **urgency for the US and allies to help India and others in Asia wean themselves off from its arms dependence on Russia**.

There is **no sign of China’s stance on Russia changing although it would be careful not to provoke secondary (comprehensive) sanctions**. China’s strategic relationship with North Korea has also drawn much attention amid the latter’s increasing brinkmanship. Since March, US Customs and Border Protection has detained merchandise produced by a Chinese firm for using North Korean workers in its supply chain. On the other hand, there are questions over the West’s willingness to impose comprehensive sanctions on China given the large economic interdependencies. Regardless, for China, one important lesson from Russia’s invasion of Ukraine is clear: China will seek to further reduce its dependence on the world, especially in critical technologies such as semiconductors while trying to maintain the world’s dependence on Chinese production.

Peter Sidorov, Marion Muehlberger, Danelee Masia & Juliana Lee

B. Commodities - Natural gas, agriculture and crude oil

In line with our base-case scenario on the war in Ukraine we see a limited likelihood of returning smoothly to the status quo ex ante in regard to the key drivers behind disruption to commodity trade flows. First, we describe the common factors inhibiting commodity supply generally, before exploring the specific dimensions of disruption affecting each of European natural gas, agricultural production, and lastly crude oil and petroleum products.

Taxonomy of commodity supply impacts

We can **classify the impact to commodity supply and prices under four headings**: a) the risk of commodity trade being directly sanctioned either by the US, EU and its allies or the Russian Federation, b) the indirect effect of financial sanctions and Swift de-linkage, c) the operational difficulty associated directly with the war, and d) the private sector embargo whereby companies seek to limit reputational risk.

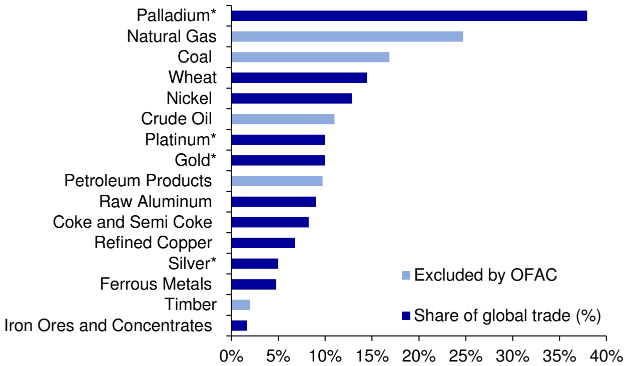
Under the first heading of **direct sanctions**, this risk appears to have peaked in the first half of March during a rapid escalation phase. This included the coordinated US and EU sanctions widening from individuals to financial institutions and lastly the Central Bank of Russia and the exclusion from Swift. Simultaneously, a Russian 'blank check' decree introduced special economic measures on foreign trade. Since that time, the US and EU have included specific exclusions for energy trade, while remaining ambiguous for other commodities, while the Russian decree has been exercised in only very limited fashion.

Under the second heading, **indirect financial effects** have arisen as banks restricted activity in commodity trade finance and lending involving Russia and Ukraine in mid-February. Banks also stopped issuing letters of credit shortly thereafter. This came as commodity traders' need for credit rose with higher margin requirements at exchanges. Efforts to counter this effect includes exporters like Surgutneftegaz no longer requiring letters of credit, and an Indian government inter-ministry committee examining alternative payment mechanisms for oil.

The third heading of **operational difficulty** includes port closure, shipping companies not servicing Black Sea ports, and insurers demanding higher premiums or not offering insurance at all. This was associated with Black Sea vessels facing mines and artillery, and shortage of local navigators. Agricultural operations in Ukraine have been impacted by the diversion of fuel to military operations, disruption of fertiliser and pesticides, unavailability of workers and some direct artillery attacks.

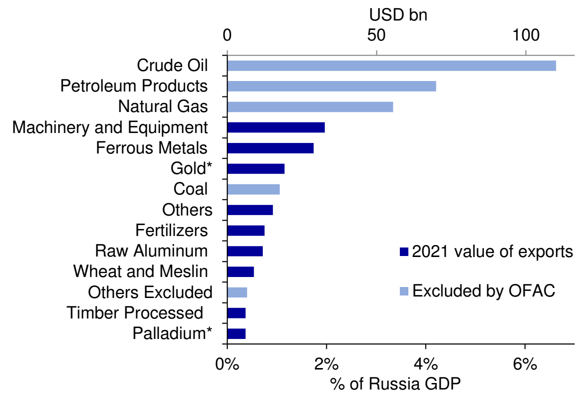
The last heading of **private sector embargo** is exemplified by public criticism of Shell by Ukraine's minister of foreign affairs, after the purchase of Urals crude from Trafigura. Shell, BP, ExxonMobil, TotalEnergies, Equinor, ENI & Repsol are among the major oil companies exiting joint ventures and projects in Russia, and either halting oil purchases or winding down by the end of the year.

Figure 20: Russian commodity exports by share of global trade



Source : Federal Customs Service, Haver Analytics, OEC, World Gold Council, World Platinum Investment Council, Silver Institute, Deutsche Bank
**by share of global production*

Figure 21: Russia commodity exports by share of Russia GDP



Source : Federal Customs Service, Haver Analytics, Deutsche Bank

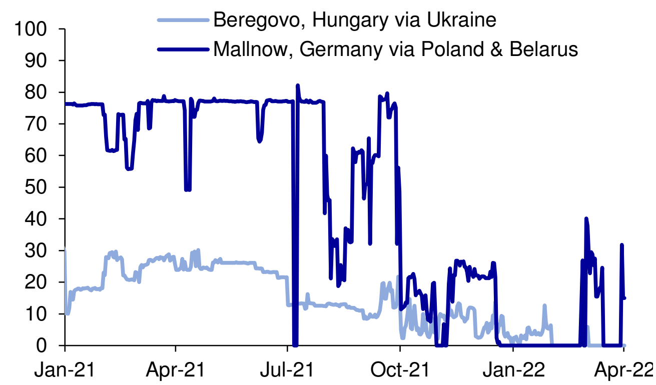
Turning point in European gas policy

The Ukraine war marks a **turning point in European energy policy** with the REPowerEU plan to reduce import dependence on Russia. Europe's supply dependence is highest in natural gas, and has long been decried as a strategic vulnerability by national security specialists, visible, for example, in long-standing US opposition to the Nordstream 2 project. Europe depends more heavily on Russia for natural gas (38%, Figure 24) than oil and petroleum products (23%, Figure 28), while Russia depends more heavily on oil and petroleum products for export revenue (11% of GDP) versus natural gas (3% of GDP), Figure 21.

The European market's pricing clearly reflects natural gas supply is at risk, which appears to emerge from a **Russian policy of supply ambiguity** while Gazprom comports with its minimum contractual obligations at the same time. To be sure, the tightening of European natural gas fundamentals last year had multiple causes (Link), among which underfilling of Gazprom-owned European gas storage was only one. However from October 2021, **two signs of clearer Russian causes** took the form of halted spot gas sales on Gazprom's Electronic Sales Platform (ESP), and much lower transit volumes via the Belarus route into Germany's Mallnow, indeed at zero for much of Jan and Feb, Figure 22. Meanwhile, flows through Nordstream have remained at capacity (Figure 23), and Gazprom argued it had done everything within its capabilities to meet requests for gas.

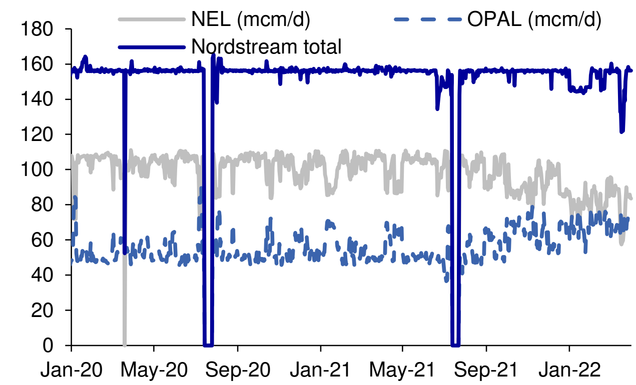
We think this fits broadly with a **moderate shock scenario** in the sense that discretionary supply is limited, and a market risk premium is supported. In mid-February, we proposed that such a scenario (Focus Europe) would come attached with a 50% rise in European hub prices and since then Dutch TTF is higher by 63% to EUR 110/MWh. More recently, the Russian demand for natural gas payment in rubles has sustained worry over Russian supply, although President Putin has stated that Russia "will continue to supply gas in the volumes and at the prices set down in the current long-term agreements."

Figure 22: Belarus and Ukraine transit routes saw lower Russian flows since October (mcm/d)



Source : Bloomberg Finance LP

Figure 23: Nordstream flows at capacity (mcm/d)



Source : Bloomberg Finance LP

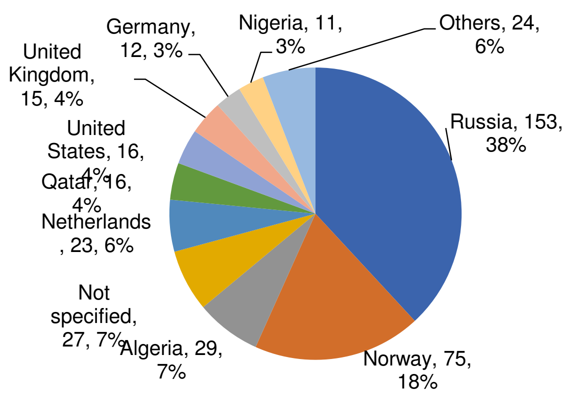
Good progress so far on REPower EU

The EU plans to **reduce dependency on Russian natural gas supply**, termed REPowerEU, beginning with a 2/3rds reduction of imports from Russia this year, followed by independence from Russian fossil fuels well before 2030. European imports of Russian gas amounted to 153 bcm in 2020 and an estimated 155 bcm in 2021, or 38% of total inland consumption of 400 bcm in 2020, Figure 24. For 2022, 50 bcm of the 100 bcm reduction is to be accomplished through increased LNG imports. Already the US has committed to providing 15 bcm of this volume, and year-to-date European LNG imports are higher by an annualised pace of 30 bcm, Figure 25.

There is a simultaneous challenge of meeting the requirement that European gas storage facilities be filled to 80% of capacity by 1-Nov (and to 90% of capacity in future years). Since the start of the year, European gas storage has done well to narrow the negative gap to the 10y average from -18% to -9%, Figure 26.

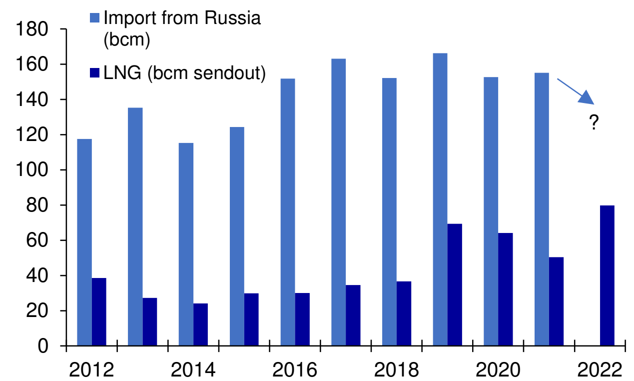
In terms of price formation, the **increased dependence on LNG** means that European natural gas hub prices are likely to display ever greater adherence to global spot LNG prices, already evident since 2019 when European LNG imports nearly doubled and German hub prices declined together with spot LNG, Figure 27. Further, we would also observe that US "Henry Hub plus" LNG prices are on par with Russian oil-indexed contracts, around EUR 26/MWh. Given Europe's inclination since late last year to seriously pursue collective purchasing arrangements, and the cooperative US stance, it would logically serve both Europe's geostrategic and economic goals to sign long-term LNG contracts with US suppliers at Henry Hub plus indexation.

Figure 24: EU-27 natural gas and LNG imports by country in 2020 (bcm, %)



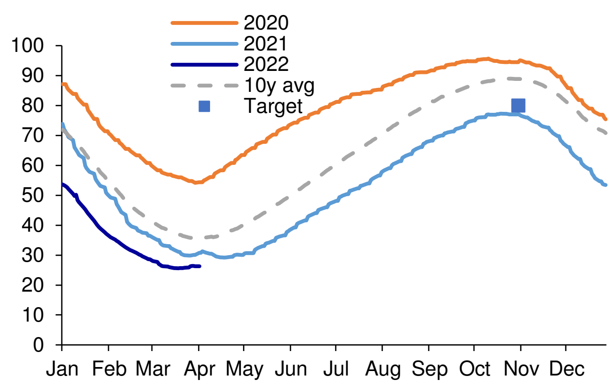
Source : Eurostat

Figure 25: European annualised ytd LNG imports up by 30 bcm in Q1-2022



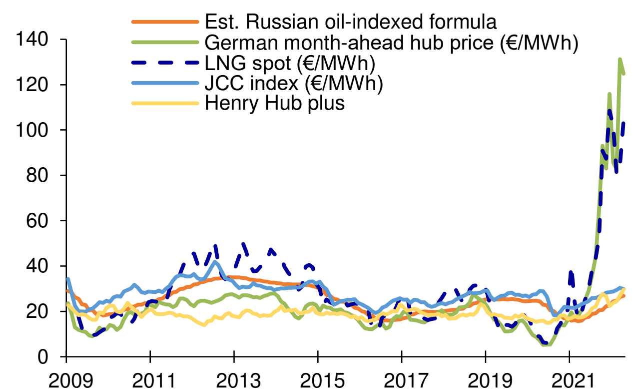
Source : Bloomberg Finance LP, Eurostat

Figure 26: European gas storage utilisation with 80% target (% of capacity)



Source : GIE, Bloomberg Finance LP

Figure 27: European gas price shows more adherence to global LNG price since 2019



Source : Bloomberg Finance LP, Deutsche Bank

Ukraine and Russia are major food exporters

Global food markets are expected to face higher prices as a consequence of tighter supplies and unmet demand in the wake of disruptions caused by the ongoing war in Ukraine. Ukraine and Russia are both major exporters of agricultural products. The four crops for which Ukraine and Russia combined make up a significant share of world exports are wheat, maize, barley and sunflower seed. Russia is the top global wheat exporter with a share of 18% of exports worldwide in 2021, while Ukraine ranks fifth with a share of 10%, according to a recent FAO report. With nearly 40% of the export share, Ukraine is the largest exporter of sunflower seeds oils.

Scale of disruption uncertain but likely significant

While Russia faces mostly sales difficulties, Ukraine will have to deal with a multitude of challenges. First, the military conflict is **directly disrupting the harvesting and sowing seasons** in the affected regions. Even if active fighting has moved on from a region, mines can make it impossible to get on with fieldwork. Second, **labour, pesticide, fertiliser and fuel shortages** impede the work even in regions that are not directly affected by the conflict. Third, shortages of necessary supplies are likely to endure and exports are expected to face constraints as

transport disruptions persist. Train lines were damaged and ports remain closed for now. 70% of Ukraine's exports and imports are shipped by sea and around 75% of these goods go through the ports in the South West in and around Odessa. Ukraine's Maritime Administration closed the ports in the Black Sea as well as in the Azov Sea once the invasion started and confirmed that they would remain closed until the end of the conflict. Additionally, several shipping companies decided independently to suspend sailings to Ukraine's ports to avoid putting their employees in harm's way.

When putting it all together, the FAO expects that 20-30% of the areas that are used for growing winter cereals, maize and sunflower seed in Ukraine will either not be planted or remain unharvested this season. This number is echoed by the Ministry for Agriculture that sees risks of the invasion leading to a **30% reduction in cultivated areas** across the country.

These disruptions will affect the importers of Ukraine's agricultural exports directly. With regard to wheat, in 2021 Ukraine's exports went to Asia (55%) and Africa (41%) with many countries especially in North Africa (e.g., Egypt) and Western Asia (e.g., Lebanon) relying heavily on Ukrainian wheat.

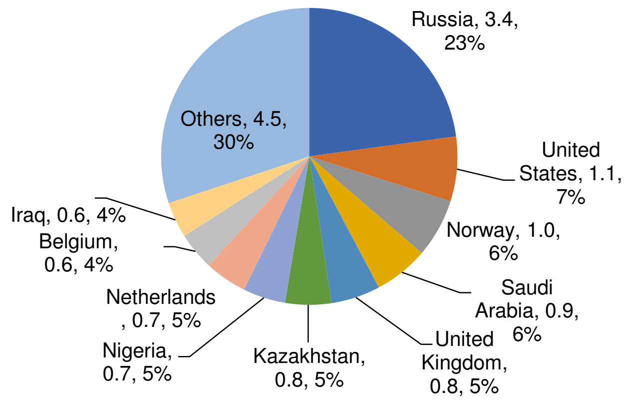
Food prices are expected to increase and remain elevated

Apart from the impact on direct importers, limited exports from Ukraine and Russia will lead to a further increase of already elevated food prices. The FAO presents two scenarios: First, a moderate shock whereby combined wheat and maize exports from the two countries undergo a 10m tonne reduction each and their exports of other coarse grains (barley, oats, rye and sorghum) were reduced by 2.5m tonnes and those of other oilseeds (rapeseed, sunflower and ground nuts) by 1.5m tonnes. And second, a severe shock that would encompass a 25m tonne reduction in their combined exports of wheat and of maize in 2022/23 accompanied by a 5m tonne decrease of other coarse grains and a 3m tonne decrease of other oilseeds.

In the short term, the FAO expects wheat prices to increase by 8.7% under the moderate scenario and by 21.5% under the severe shock. For maize the increases would be 8.2% and 19.5%, respectively, for other coarse grains 7% and 19.9% and for other oilseeds 10.5% and 17.9%.

In the medium term, prices are likely to remain elevated in response to lower export levels. Wheat prices are expected to increase by 10% in the moderate and by 19% in the severe shock scenario by 2026/27 compared with current baselines values. For maize prices, these increases are expected to be 8.5% to 14% depending on the severity of the shock. As elevated food prices are likely to affect prices in related sectors like livestock via feed prices as well, an increase of 3% - 6% is expected for livestock prices under the moderate scenario and 5% - 10% under the severe scenario by 2026/27.

Figure 28: EU-27 crude oil and petroleum product imports in 2020 (mmb/d, %)



Source : Eurostat

Disruption of Russian oil hits already-low inventory

Tight oil market conditions preceded the Ukraine conflict. Steadily declining commercial oil inventory broke below the bottom of the five-year range last year, and prospects for restocking are low. The bullish shift was driven first by a retrospective +900 kb/d re-rating of petrochemical industry demand, second by Jan/Feb inventory data indicating a -1.7 mmb/d market deficit (Figure 30), and third by the disruption of Russian exports. While there is scope for Asian absorption of Russian supply, we still expect a net tightening of the supply-demand balance. Market deficits are likely to persist, moderated by accelerated strategic stock release from May to November and weaker demand growth. Put together with OECD inventory at 55 days, a level not seen since 2008 (Figure 31), these drivers indicate the Brent USD 95-100/bbl level could be sustained into early next year.

Non-OPEC strategic reorientation vies against price incentive

The persistence of higher oil prices for the next year as we see it, is partly a function of **non-OPEC reluctance to expand investment in productive capacity**. For one, the US tight oil sector which had been so briskly rising in 2012-14, is now more constrained, in part because of equipment and crews. Although the sector adheres to the ethos of capital discipline established since 2014 industry consolidation, we do expect tight oil supply growth of 900 kb/d this year and 600 kb/d in 2023. A more conservative investment profile is also reflected in some IOC long-term plans with a more evident ESG motivation since 2020, building on 2014's 'value over volume' proposition.

The strategic reorientation will now vie against today's price environment, which is sufficiently high to add considerably to non-OPEC producers' operating budgets. A USD 20/bbl increment spread over non-OPEC production for 6 months, for example, would be enough to fund the entire USD 233 bn shortfall in 2021 investment versus the 2013 peak, Figure 32. Also, the long-term price incentive for producers as measured by the Brent forward curve, has moved up from USD 59 to 72/bbl in the past six months. This is now toward the upper end of incentive costs, making the vast majority of new oil developments economic through 2040, Figure 33.

OPEC has one less battle to fight

The reorientation of non-OPEC investment leads on to a second rationale for higher prices, which is that **OPEC may perceive less urgency to defend market share** by suppressing the price incentive as it did in 2014. This would help explain the reluctance to deviate from the predetermined schedule of supply increases. Limited non-OPEC growth suggests OPEC has more freedom to reap the rewards of 2020 supply discipline while also regaining market share. A unilateral Saudi/UAE release would unfairly attenuate those rewards for other members, while faster quota increases might throw underproduction into sharper relief. OPEC also desires to maintain the OPEC+ partnership with Russia, which affords the coalition control over 57% of global crude oil production rather than 35%. There may also be some interest in not running down spare capacity to a thinner margin, seen in Iraq's statement that "additional releases could actually harm the market" (9 Mar).

A rapprochement between the US and Arab League countries emerged after the Israel summit (27-28 Mar), but does not apparently raise OPEC's inclination to exercise spare capacity. On the potential lifting of Iran sanctions, the JCPOA deal no longer seems as imminent as it was in February, while the US sanctioning of ballistic missile activities (30-Mar) may have made matters more difficult. Additionally, the Iran JCPOA deal may be taking a back seat as the strategic focus pivots to "a new regional architecture [that] deters our common enemies, first and foremost Iran and its proxies" (Israel Foreign Minister Yair Lapid).

Demand downgraded

A prospective downgrade of global growth from 4.2% to 3.4% would suggest **end-2022 oil demand from 500-1,000 kb/d lower than previously expected**. On a global basis, the long-run regression with elasticity of 61% implies a 500 kb/d downgrade, while conditionality on real Brent prices above USD 60/bbl implies a 700 kb/d downgrade. This overlaps with lower Chinese demand beginning in March with Covid-19 restrictions taking hold, and extension likely into the second quarter. Shandong refinery runs alone indicate demand may have dropped by 500 kb/d versus the start of the year, Figure 34.

From a price elasticity point of view, the market has begun to enter a neighborhood where this become a concern, with Brent at USD 110/bbl implying a burden of 3.5% of GDP, relative to 5% in 2008 and 2011-13, Figure 35. As US average gasoline prices have risen above the USD 4/gal mark, behavioural changes could include carpooling, combining trips and reducing discretionary trips.

Looking into the longer term, EV penetration in new auto sales may rise to 22% by 2025 and 41% by 2030, slowing transport sector demand growth across China, European Union and the North America. Given OPEC's long-term planning horizon, this could play into a preference to keep global inventory toward the lower half of historical ranges.

Russian net tightening of 1 mmb/d in Q2

Late March data on Russian exports indicates a decline of 1.3 mmb/d in crude oil and 500-600 kb/d in refined products, making for a 1.8-1.9 mmb/d gross decline as a result of the private sector embargo, financial sanctions and other operational difficulties for buyers. Expected supply diversion to Asia so far appears limited to 400 kb/d in India, which may be further helped by government efforts to establish a payment mechanism with Russia. For now, there appears no Chinese appetite for diverted Russian exports as demand may easily be 700 kb/d lower on Covid-19 restrictions, and Chinese financial institutions display greater caution on sanctions. This means a net tightening of 1 mmb/d is likely, almost certainly putting the Q2 market in deficit before considering any persistence of Q1 deficits.

The **likelihood of an EU embargo on Russian oil and refined product**, first feared in early March, now appears higher once again. A phased approach varying by country, could raise the Russian disruption over time from the above-mentioned 1.8-1.9 mmb/d toward an estimated total of 3.9 mmb/d of European imports of crude oil and refined product from Russia. This would likely put the magnitude of disruption out of reach of the Asian capacity to absorb diverted supply, and threaten Brent prices above the USD 120/bbl level.

US SPR release aims at 1 mmb/d rate

Against the Russian net tightening, the release from the US Strategic Petroleum Reserve appears significant but not obviously driving the market into surplus considering the potential for Jan/Feb deficits to bleed into Q2 to some degree. Note the ongoing US SPR release rates were already 218 k/d in January, 358 kb/d in February, and 437 kb/d in March as a result of previously announced releases. Therefore, the net increase is likely to be around 600 kb/d versus March, with 90 mmbbl over May-July (20 mmbbl of which was already scheduled), and 90 mmbbl from August into October.

Much of the 180 mmbbl announced on 31-Mar may have come from a bringing-forward of already-approved releases over the 2023-28 period. [10] This may result in bringing SPR inventory down to the 340 mmbbl minimum level established in April 2018, leaving 90 mmbbl still available to withdraw down to the 252.4 mmbbl minimum established in 2021. Starting from next year, the **market may anticipate gradual restocking of the US SPR**, with a notional planned repurchase price of USD 80/bbl, according to the FT, time-shifting market tightness from 2022 into 2023 or later.

Altogether we see first quarter supply-demand deficits extended by a net reduction in Russian exports, despite a demand downgrade, strategic stock releases, and supply growth from OPEC and the US among others (Figure 36). This sustains pressure on already-low commercial oil inventories for the rest of the year, keeping Brent prices supported near the USD 95-100/bbl level (Figure 37).

Michael Hsueh & Anna Friedemann

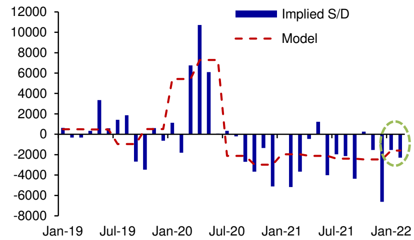
Figure 29: Oil price and supply-demand forecast

	Q1-2022	Q2-2022	Q3-2022	Q4-2022	Q1-2023	Q2-2023	Q3-2023	Q4-2023	2024
WTI (avg.)	93	91	91	95	95	91	87	82	77
Brent (avg.)	95	95	95	100	100	95	90	85	80
Oil surplus (deficit) kb/d	(1,600)	(900)	(1,000)	(900)	400	400	400	400	

Source : IEA data from Monthly Oil Data Service © OECD/IEA 2021, www.iea.org/statistics, Licence:www.iea.org/t&c; as modified by Deutsche Bank

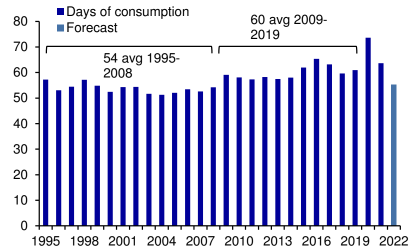
10 Strategic Petroleum Reserve: Mandated Sales and Reform, https://sgp.fas.org/crs/misc/R45577.pdf

Figure 30: Inventory implies oil market undersupplied by -1.7 mmb/d in Jan/Feb



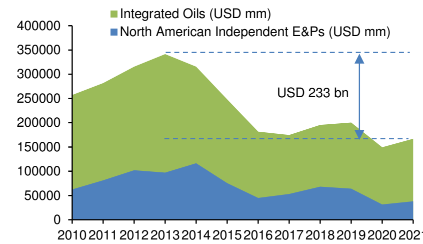
Source : IEA data from Monthly Oil Data Service © OECD/IEA 2021, www.iea.org/statistics, Licence:www.iea.org/t&c; as modified by Deutsche Bank

Figure 31: OECD commercial inventory may drop to 55 days, last seen in 2008



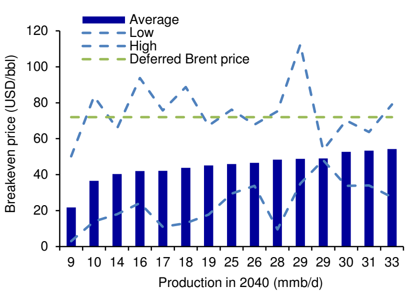
Source : IEA data from Monthly Oil Data Service © OECD/IEA 2021, www.iea.org/statistics, Licence:www.iea.org/t&c; as modified by Deutsche Bank

Figure 32: A USD 20/bbl, 6 month rise in oil prices on non-OPEC production equals the capex shortfall vs 2013



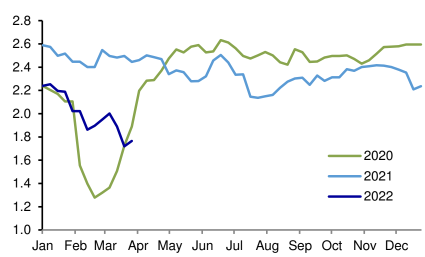
Source : Bloomberg Finance LP, Deutsche Bank

Figure 33: Deferred Brent price of USD 72/bbl is near upper end of project cost curve to 2040



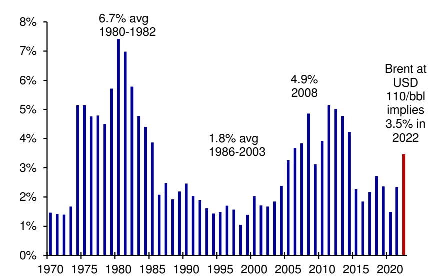
Source : IHS Markit

Figure 34: China independent refinery runs indicate demand at least 500 kb/d lower (mmb/d)



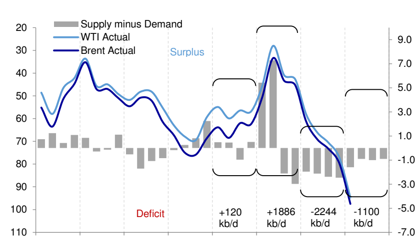
Source : Bloomberg Finance LP, Deutsche Bank

Figure 35: Oil burden on global economy has risen but smaller than 2008-13 years



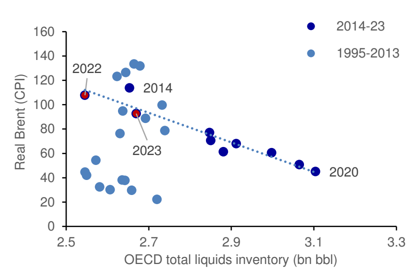
Source : IEA data from Monthly Oil Data Service © OECD/IEA 2021, www.iea.org/statistics, Licence:www.iea.org/t&c; as modified by Deutsche Bank, World Bank

Figure 36: Continued undersupply implies upside pressure for oil prices (lhs USD/bbl, rhs mmb/d)



Source : IEA data from Monthly Oil Data Service © OECD/IEA 2021, www.iea.org/statistics, Licence:www.iea.org/t&c; as modified by Deutsche Bank, World Bank

Figure 37: OECD commercial inventory to real Brent price regression



Source : IEA data from Monthly Oil Data Service © OECD/IEA 2021, www.iea.org/statistics, Licence:www.iea.org/

III. Outlooks for major economies

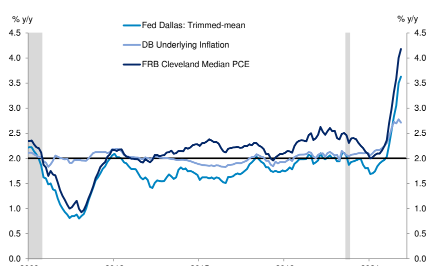
A. United States: Fed tightening fallout

With inflation persistently above the Fed's target and the labor market remaining historically tight, the Fed will undertake a much more aggressive tightening cycle. In particular, the Fed funds rate is likely to peak at 3.6% next year, which along with QT will amount to more than four percentage points of monetary tightening. This tightening will likely tip the economy into a recession towards late 2023, helping to drag inflation back towards target by end 2024.

Inflation: Higher for longer

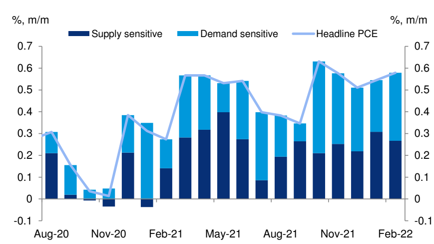
Inflation in the US is currently running at four-decade highs, and there are a number of reasons to believe it will remain well above the Fed's target unless demand is meaningfully dented. First, price pressures have broadened, with various measures of trend inflation reaching multi-decade highs. Second, high inflation has become more evenly balanced between supply- and demand-driven forces, with our decomposition suggesting at least half of the recent overshoot is due to demand. Third, a tight labor market has produced accelerating wages, with key gauges around the highest levels in thirty to forty years. Importantly, wage gains are exceeding productivity growth, leading to an uptrend in unit labor costs.

Figure 38: Measures of underlying inflation have accelerated briskly



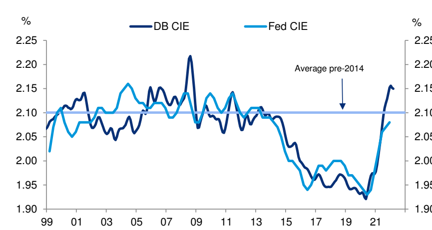
Source : FRB Dallas, FRB Cleveland, BEA, Haver Analytics, Deutsche Bank

Figure 39: Demand-driven items have accounted more for recent high inflation prints



Source : BEA, Haver Analytics, Deutsche Bank

Figure 40: Tentative evidence of CIE peaking



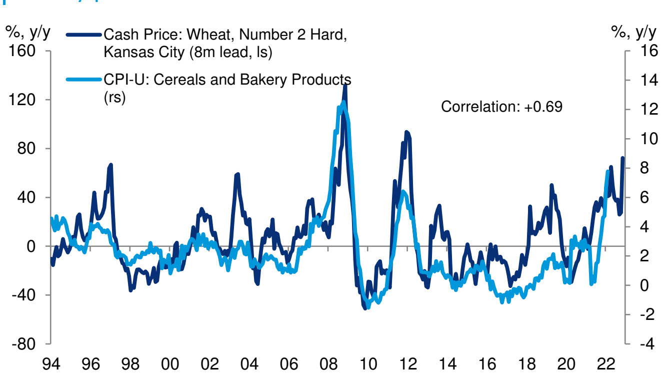
Source : FRB, Deutsche Bank

So far at least, long-run inflation expectations (LRIE) have not unanchored but they are at risk. Although many measures of LRIE have risen and reversed much of the decline that occurred alongside the 2014 oil price collapse, they have generally stabilized in recent months at levels not far from the pre-2014 norms. However, we remain cautious about the peak in inflation expectations given the tendency for these measures to be adaptive to actual inflation, particularly when it is generated by energy price movements. It is in this context that the invasion of Ukraine could lead to longer-lasting effects on inflation dynamics beyond producing a near-term surge in prices for energy and other global commodities.

Looking ahead, we expect inflation to recede modestly but remain well above the Fed's target through next year. At the component level, the most important piece of evidence is in shelter inflation. Based on leading indicators, we now expect that primary rents will rise to around 6.5% in year-over-year terms this year, with owners equivalent rent (OER) approaching 5.8%. When combined with historically tight labor markets, firming underlying inflation, and risks to inflation expectations, very elevated shelter inflation makes it clear that inflation should remain well above the Fed's target for some time to come. **Despite this persistence, there are a few compelling reasons inflation should fall from recent levels.** First, particularly severe base effects from last year – driven by prints in the 75bp to 85bp range for core CPI – should begin to roll off the year-over-year comparison. Second, price pressures in the auto sector are abating as auto dealers rebuild their inventories. Indeed, used car prices should turn sharply negative over the coming months, according to wholesale prices. However, the downward price pressures in vehicles have not yet filtered into other durable goods categories, where the risk remains to the upside with several extant factors, such as the invasion of Ukraine and the recent Covid-19 lockdowns in China, that could disrupt key inputs for production of durable goods.

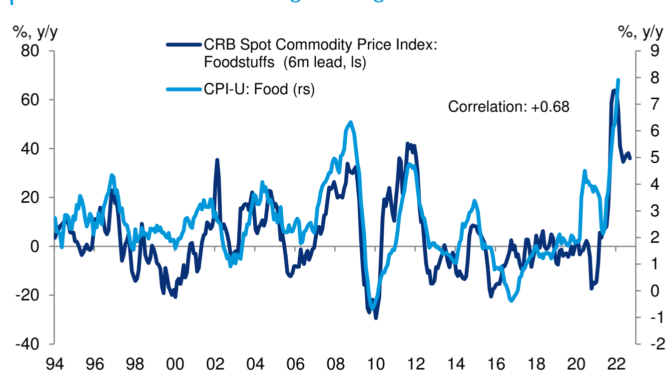
The invasion of Ukraine adds to existing price pressures, particularly in energy and food. As noted earlier in this report, energy and food commodity prices have soared. This has had the most direct impact on our energy forecast, which should increase by over 11% through this year. As to food inflation, the greatest impact has been on wheat commodity prices, which have a decent leading relationship with cereals and bakery products. However, at only 8% of the overall food basket (1% of headline), the direct impact from the crisis should be somewhat minor in terms of food inflation as a whole. That said, in an environment in which overall commodity food prices are elevated because of supply-chain issues, changing relative demand for food at home versus food away, and a very tight labor market, producers are able to pass along increased costs in an environment of generally rising prices. As such, we project food prices to rise by about 9% over this year and 6% next year.

Figure 41: Wheat prices lead the CPI for cereals and bakery products



Source : BLS, CRB, Haver Analytics, Deutsche Bank

Figure 42: Overall commodity food prices are elevated, which should feed through to higher food CPI



Source : BLS, CRB, Haver Analytics, Deutsche Bank

Taken together, we expect headline CPI this year to be 7.2% (annual/annual) and just above 6% (Q4/Q4), while core CPI is likely to be 5.6% annual/annual. While some improvements on the supply side should eventually lead to lower inflation, we anticipate that inflation pressures will prove to be persistent until demand softens materially. As such, we expect core CPI inflation to remain at or above 3% until 2024. Core PCE inflation is set to end this year near 4.5% (Q4/Q4) and fall to near 3% by end-2023 likely only closing in on something more consistent with the Fed's target in 2025 following a recession (more on this later).

Labor market: Record tightness on sky high demand, constrained supply

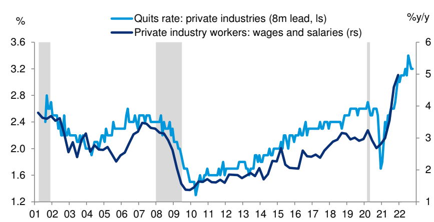
The US labor market is historically tight due to record job openings and

constrained labor supply. Indicators that are consistent with this historic tightness include: job openings are near record highs with 1.8 job openings per unemployed individual; the vacancy yield (hires relative to job openings) is at record lows; the quits rate is just below record highs; and the unemployment rate has fallen briskly to 3.6%. As a result of this tightness, wage growth according to a variety of metrics is the highest in several decades. On the supply side, labor force participation for the 55+ age group remains more than one percentage point below its pre-pandemic rate, driven by nearly 500k excess retirements relative to the pre-pandemic trend. The foreign-born working age population is about 2mn below its pre-2019 trend. Lastly, caregiving needs rose sharply along with the pandemic, which reduced the prime age participation rate, particularly for parents.

Figure 43: Record job openings relative to unemployed individuals

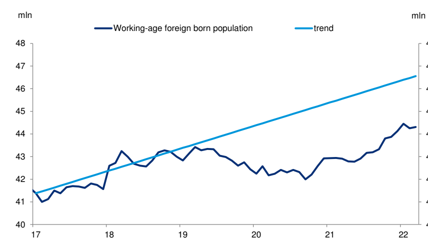
Source : BLS, Haver Analytics, Deutsche Bank

Figure 44: Elevated quits rate points to persistent wage pressures



Source : BLS, Haver Analytics, Deutsche Bank

Figure 45: Working age foreign born population about 2 million below trend

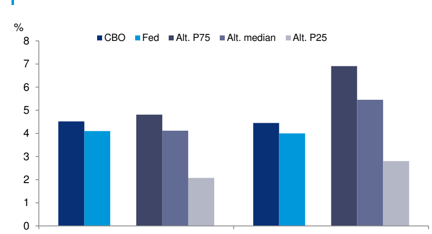


Source : BLS, Haver Analytics, Deutsche Bank

This picture of the labor market combined with that of inflation presented in the previous section suggests that NAIRU may be higher, at least in the short-run, than either the Fed median projection (4.0%) or even the Congressional Budget Office (4.45%) estimate it to be. Our alternative estimates derived from a variety of other key labor market indicators, such as the quits rate, prime age labor force participation rate, and others, suggest that NAIRU is around 5.5%. As such, the labor market is tighter than standard measures of slack would indicate, at least in the short term.

We see the labor market tightening further in the early portions of next year, with the unemployment rate falling below last cycle's lows. However, there is some early evidence of some relief on the supply side as well. Excess retirements have more than halved in recent months. Prime age participation has risen by 1.2 percentage points since late 2020, and is back to mid-2019 levels for all but the 45-54 age group. Further progress on these fronts should help to ease some labor shortages and wage pressures, though a return to normal levels of the foreign-born population may not be forthcoming.

Figure 46: Alternative labor market indicators more consistent with a higher NAIRU and a tighter labor market



Source : CBO, FRB, Deutsche Bank

Midterms likely to lead to "gridlock"

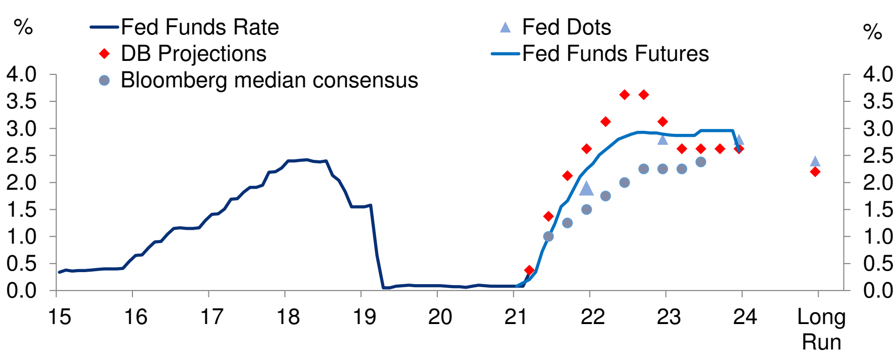
With President Biden's approval rating hovering around 41% – roughly where President Trump's approval rating was in 2018 before losing the House – **historical precedent and recent projections suggest that Democrats are likely to lose their 5-seat majority in the House**. Given the particular seats up for grabs in the Senate, forecasting the party that will control the Senate is a much closer call with Democrats' 1-vote majority (by virtue of VP Harris casting the deciding vote), very much at risk. Our base case is that Republicans retake the House and Democrats retain their slim majority in the Senate. However, even if Republicans are able to take control of the Senate, they will not be able to achieve a super-majority (2/3 of Senate seats) needed to override a presidential veto.

As both the House and the Senate must pass identical legislation before sending a bill to the President to sign into law, **the most likely outcome is legislative "gridlock" with neither party able to advance major priorities**. Though it is possible that Republicans could tempt a debt ceiling showdown with the Biden Administration in 2023 in order to push for more dramatic fiscal austerity, this seems unlikely. Given that all pandemic-related fiscal stimulus measures will have ended, we are essentially left with the tax and spending structure of the Trump Administration. Moreover, the Biden Administration's FY 2023 budget already calls for over $1trn of deficit reduction (over 10 years) while at the same time boosting defense spending – two Republican priorities. In short, government spending will likely remain a meaningful drag on growth next year – another reason why we now see recession as the base case.

Fed: Plotting an expeditious path to restrictive policy

Given the historic tightness in the labor market and elevated underlying inflation, the Fed will need to tighten much more aggressively to tame price pressures. Consistent with our belief that the Fed needs policy to catch up to the economic backdrop just outlined, **we now anticipate that the Fed will raise rates by 50bps at each of the next three meetings in May, June and July**. We expect them to follow those increases with additional 25bp moves at the remaining meetings this year, which would put the Fed funds rate at 2.6% by year-end, just above the Fed's median view of nominal neutral in a normalized inflation environment.

Figure 47: DB fed funds rate projections well above market, consensus and Fed



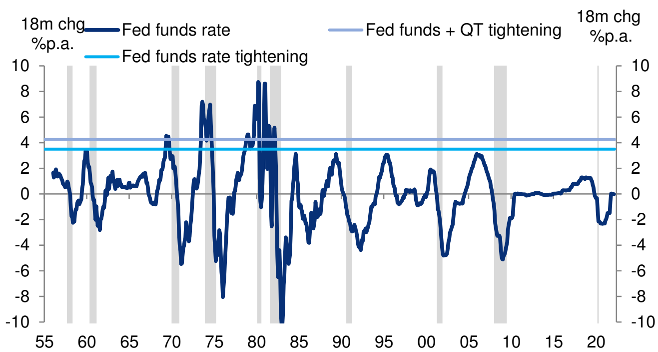
Source : FRB, Bloomberg Finance LP, Deutsche Bank

The terminal Fed funds rate will likely have to reach 3.5% or more next year. Historically, late in the cycle the Fed has had to push the real Fed funds rate into positive territory and above r-star estimates to trigger a downturn. However, the magnitude by which rates have overshot neutral has sequentially declined over time. Taking account of this historical regularity, along with our baseline estimates for r-star around zero, we conclude that, at the very least, the real Fed funds rate needs to get into positive territory next year. Under our baseline inflation forecast we anticipate that the nominal Fed funds rate will rise to 3.6% by June 2023. This would allow the real Fed funds rate to peak around +50bps in the third quarter of next year. If inflation were to prove to be more persistently elevated, the terminal Fed funds rate would likely need to be higher, and vice versa.

We also anticipate the Fed will substantially reduce its balance sheet (i.e., QT).

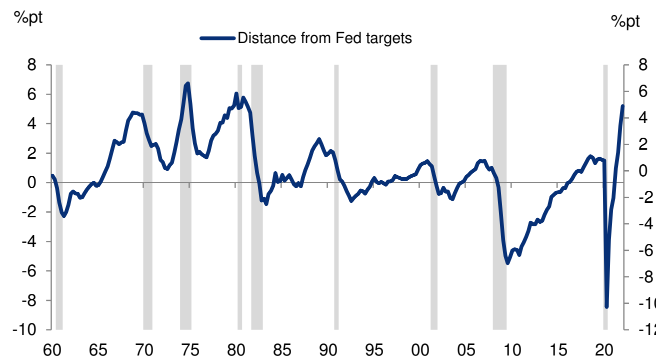
Although we will learn more about the Fed's plans for unwinding its portfolio with the release of the minutes to the March FOMC meeting, our baseline is that balance sheet runoff would equate to nearly \$800bn this year and \$1.1tn next year if it proceeded throughout the entire year, for a total of nearly \$1.9tn of reduction. In our view, this is roughly equivalent to another three to four rate increases (see "QT update: The sooner the better").

Figure 48: The fed funds rate is likely to rise 3.5pp over eighteen months



Source : FRB, Haver Analytics, Deutsche Bank

Figure 49: Inflation and unemployment furthest from Fed targets in 40 years



Note: The chart shows the sum of core PCE inflation minus 2% and NAIRU minus the unemployment rate. The latest data point is estimated for Q1 using our adjusted view of NAIRU near 5.5%. Source : BLS, BEA, CBO, Haver Analytics, Deutsche Bank

Growth: Recession is now a base case

The growth outlook can be broken into two stages: In the near term, growth should remain resilient, but we now anticipate a recession occurring towards late 2023. So far, the underlying momentum in the US economy has been impressive despite significant volatility in the data and the presence of a number of headwinds. Activity has continued to benefit from the tailwind of massive fiscal stimulus in 2021 and the reopening of the economy as the pandemic has improved, and the labor market has experienced impressive momentum. While Q1 real GDP looks set to be close to zero, the weakness in the headline figure is due solely to an unusually large swing in net exports, which is expected to subtract roughly 3.5 percentage points from Q1 inflation-adjusted output. Indeed, final sales to private domestic purchasers is projected to expand around 3.8% annualized, mostly due to robust consumer spending (+3.6%).

Although we have taken down 2022 growth, we expect activity to run above potential over the next few quarters. Relative to our most recent forecast, we have downgraded our growth outlook this year by about 50bps in Q4/Q4 terms, from 2.6% to 2.1% (3.0% in annual/annual terms). Aside from the temporary collapse in growth in Q1, this downward revision is mostly due to two factors. First, we expect a 10 to 20bps drag from the spike in energy prices that resulted from the invasion of Ukraine. If gasoline prices remain elevated near current levels, US consumers will be spending roughly \$165bn more on energy, all else being equal. Second, the more aggressive Fed tightening we expect this year is likely to shave another 30 to 40bps off of 2022 growth.

A solid consumer should keep growth sturdy in the near term. Though the household saving rate is projected to fall well below the pre-pandemic trend as the last of the fiscal stimulus measures end, strong labor income growth and a \$2.4trn reservoir of excess savings should continue to buoy real PCE, which is expected to expand 2.9% (Q4/Q4). At the sector level, we continue to expect real services spending to recover toward its pre-pandemic trend as the economy continues to reopen and adapt to an environment in which Covid-19 has more limited sustained effects on economic activity. On the other hand, real goods spending this year will likely be flat, as a rise in spending on autos – which we expect will be up 10% this year with sales rising to a 16.5mn SAAR rate as supply-chain disruptions ease – offsetting negative real spending on goods ex-autos.

Beyond the near term, however, a recession has become our base case. Engineering a soft landing is never easy. This historical fact is particularly acute in the current environment of four decade high inflation, a labor market well beyond maximum employment, and a global economy that is experiencing a meaningful commodity price shock. Similarly, timing a recession is not easy. There is considerable uncertainty around both the exact quarters of the contraction and the magnitude of the downturn. However, the presence of a variety of shocks that have historically been associated with downturns, such as have occurred recently with oil prices, and the need for the Fed to clearly achieve a restrictive policy stance to bring inflation much closer to target, suggest that at least a mild recession should be the base case for the economic outlook.

We expect growth to slow materially in H2 2023, with negative quarters in Q4 2023 and Q1 2024. In terms of the anatomy of the downturn, we anticipate that after growing modestly below trend in H1 2023, the economy decelerates sharply in the second half of the year as Fed tightening begins to bite more forcefully. The downturn is led by the cyclical sectors, with consumer spending contracting in Q4 by -1.5% annualized driven primarily by the goods sector which, as noted previously, is already well above trend. Residential investment also contracts by about 1% as nonresidential investment slows sharply in the back half of the year. These dynamics follow through into the first quarter of 2024, which we expect to contract by 0.6 percentage points annualized.

Recession signals are emanating from the yield curve and consumer sentiment. The presence of elevated recession risks over the next two years is consistent with the signals from a variety of indicators we track. Yield curve measures, regardless of which one is in focus, point to elevated recession risks over a two-year horizon (see "Which curve signal to trust: The party in the front or business in the back"). These signals are co-signed by our preferred consumer sentiment recession indicator, which has recently fallen to a record low level. Its latest depressed reading would be consistent with 50% recession probability over the next year.

The mild recession we anticipate should lead to a meaningful rise in unemployment, which peaks at above 5% in 2024, about 1.7 percentage points above its low point. This contraction in aggregate demand and loosening of the labor market in turn allows inflation to fall much closer to target by 2024, with core PCE ending the year around 2.2% (Q4/Q4). With the unemployment rate falling only slowly following the peak, ending 2024 near 4.75%, inflation would continue to moderate, falling to the Fed's 2% objective in 2025, which is beyond our forecast horizon at this point.

Matthew Luzzetti & team

B. Euro Area

The Ukraine war has amplified the stagflationary dynamics in the euro area. A recession is possible if the flow of Russian energy is disrupted. This could stall ECB liftoff but a disruption to the flow of energy is not our baseline. Given the rising threat of sustained high inflation, we expect ECB liftoff in September and a terminal rate of +2% by end-2023 as the ECB pushes for a moderately above-neutral policy rate. We expect ECB tightening and the Fed-induced US slowdown/recession to pull growth in Europe down sharply by the end of 2023. A less tight monetary stance than the Fed – including ongoing stability purchases by the ECB – and more loose fiscal stance than the US should stop the euro area from contracting, but it is a close call.

Growth: Headwinds from Ukraine and monetary tightening

The growth outlook has weakened sharply since the last WO in December, partly due to Ukraine and partly due to inflation and expected monetary tightening. We have framed the impact of the Ukraine war on Europe between 'moderate' and 'severe' shocks, differentiated by the degree of rise in energy prices. In the moderate shock scenario, we assume Brent oil at USD110/bbl and European gas at EUR115/MWh on average in 2022. In the severe shock scenario, we assume Brent oil at USD140/bbl and European gas at EUR150/MWh on average in 2022.

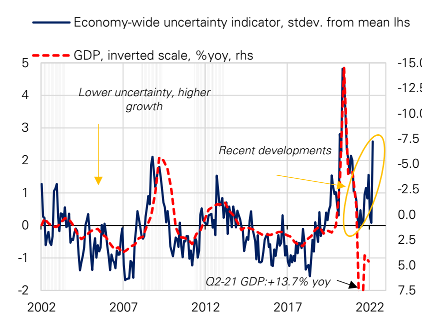
In this WO we adopt the Ukraine 'moderate' shock scenario as our new baseline. The costs are determined by energy prices, trade, supply chains, financial conditions and uncertainty. Current energy prices are close to the moderate shock assumptions. We had previously estimated a total cost in the moderate scenario of about 1.5pp of GDP growth and in the severe scenario of 3-3.5pp of GDP growth (for more on the scenarios and costs, see here).

Pre-Ukraine, the outlook for 2022-2023 was strongly supported by a post-pandemic rebound and delayed stimulus (absorption of excess savings, disbursement of NGEU funds). The starting point for the growth trajectory has also improved. Pre-invasion, we expected a temporary stagnation in Q1 2022 because of tight supply chains, rising gas prices and Omicron disruptions. The latest data imply GDP might expand 0.2% qoq in Q1. Inventory rebuilding adds additional upside risk in early 2022. This is consistent with new buffers being built against supply-chain disruption.

We expect GDP growth in 2022 of 2.8% (3.8% previous WO). Post-Ukraine, the outlook is weaker. Our recession model says the probability of recession increased from 10% pre-invasion to 25% post-invasion, mostly due to rising energy prices; economic uncertainty enters the model with a lag and the jump in uncertainty in March could add 20pp to the probability of recession in Q2 if maintained (for more on the model, see here). The assumed Q2 recovery will be much slower than we had previously estimated (0.4% qoq vs 1.4% previously). Rather than all the Ukraine shock being concentrated in Q2 – the concern we had in our initial scenario analysis – we now expect a smaller immediate shock but the costs are now seen lingering into H2. The Ukraine shock is somewhat mitigated by fiscal easing as governments shield economies from the costs of higher energy prices and spend more on energy independence and defence (see here). We expect the euro area fiscal deficit to rise to 4.6% of GDP this year and remain above the Maastricht 3% level in 2023-2024. This increases the probability that the escape clause from the EU fiscal rules will be extended beyond 2022.

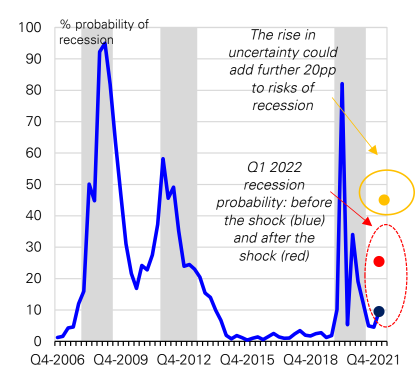
We expect euro area GDP to grow 2.3% in 2023 (2.8% previous WO) and 1.0% in

Figure 50: Ukraine war impact – economic uncertainty has spiked higher



Source : Deutsche Bank, Eurostat, Macrobond

Figure 51: Recession probabilities

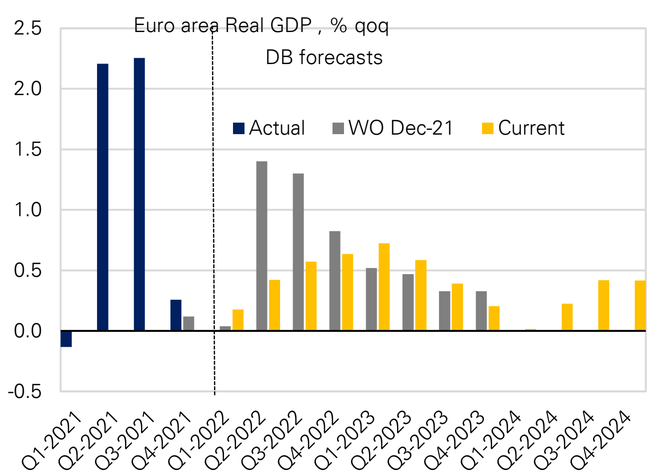


Source : Deutsche Bank, Eurostat, Macrobond

2024 (1.4% previous WO). We expect the Ukraine crisis to remain a moderate drag on growth next year. Despite the additional fiscal easing, there are likely to be persistent costs from higher energy prices and uncertainty relative to the pre-invasion outlook.

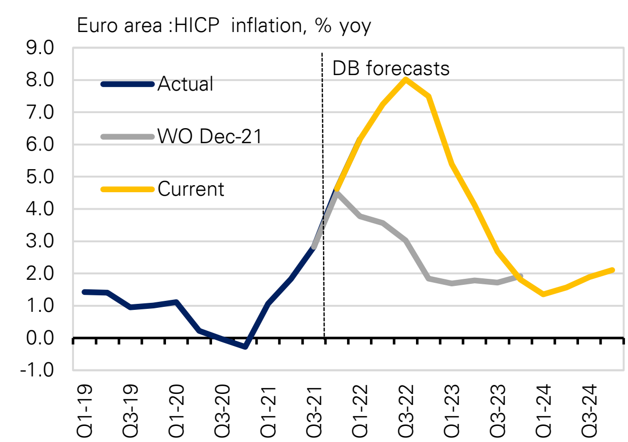
Even before the Ukraine crisis, inflation was rising more rapidly than we had expected in the last WO and central banks were moving more rapidly to the exit. The additional monetary tightening will likely weigh on growth next year. Fed tightening is expected to slow US growth to the point of recession at the end of next year. Europe will likely import the slowdown. We also now expect the ECB to raise policy rates to a restrictive level in 2023. Together, we expect these forces to slow euro area growth from 0.7% qoq in Q1 2023 to the point of stagnation in early 2024. Compared with the US, euro area monetary and fiscal policy won't be as tight. As the US economy begins to rebound in 2024, European growth should also pick up modestly too. The euro area unemployment rate, already at a record low of 6.8%, is likely to fall below 6% in 2023 — increasing our confidence that wage inflation will pick up to 2.5% in 2022 and 3.0% in 2023 (excluding the impact of the German minimum wage hike) — before rising back to 6% in 2024.

Figure 52: GDP growth to come close to contraction in early 2024



Source : Deutsche Bank, Eurostat, Haver Analytics LP

Figure 53: HICP inflation forecasts have been marked up significantly



Source : Deutsche Bank, Eurostat, Haver Analytics LP

Inflation exiting low pre-pandemic regime, warrants monetary tightening

Inflation at multi-decade highs and rising. Our latest estimates put euro area HICP at 7.2% yoy in 2022 (3.0% previous WO) and 3.5% yoy in 2023 (1.8% previous WO). We now expect HICP to peak at 8.0% yoy in Q3-2022. **Our latest forecasts are significantly above consensus expectations**. Half of the upward revision in 2022 is linked to stronger energy inflation while the rest is equally shared between higher food and core inflation.

We now expect core HICP in 2022 at 3.5% yoy (2.0% previous WO). In the last 6 months core inflation and core goods in particular have shown extremely strong and unusual momentum, similar to what has been observed in the US or UK but with a lag. Based on the persistence of the global supply-chain shock in the US/UK and new concerns about supply disruptions caused by lockdowns in China and the

Ukraine invasion, we now expect this exceptional momentum to continue for another six months.

Two-thirds of the upward revision in 2023 is driven by core inflation, which is now expected to average 3.2% yoy (1.6% previous WO), while food and energy account for the rest. The strong revision to 2023 core is mostly the result of base effects from strong prints in H1-2022. We expect core HICP to fall from above 3.5% yoy in Q1-2023 towards 2.5% yoy by end-2023.

ECB justified in hiking rates to a moderately above-neutral level until medium-term inflation falls back to 2%. The record high inflation rates are pushing inflation expectations further up at a time when the unemployment rate is at historically low levels (6.8% in January 2022). This should accentuate the second-round effects and the persistency of the inflation shock beyond the coming year. Our core HICP forecasts have been revised up in 2024 to 2.2% (from 1.9% previous WO) while the reversal of the food and energy inflation shock drags down HICP to 1.7% yoy. In 2025, we expect core HICP at 2.0% yoy with HICP at 2.2% yoy as the green transition continues to push headline inflation about 20bp above core inflation.

We are confident HICP forecast can hold at c.2.0% in the medium/long term. This means a persistent exit from negative policy rates and 'stimulus' QE (APP) is now warranted. Pre-pandemic, our medium-term HICP forecast was c.1.2%. In the last World Outlook we explained that this regime-shift in inflation was a consequence of the Covid-19 shock. The Ukraine shock reinforces our view that the euro area has escaped the pre-pandemic low inflation regime. We view the drivers of the structurally higher inflation regime as follows: a 0.2pp contribution from persistent frictions in the global supply chain for goods, 0.2pp from the green transition/ carbon pricing, and 0.4pp from an assumption that the relationship between unemployment, wages and services prices converges back towards its pre-GFC setting.

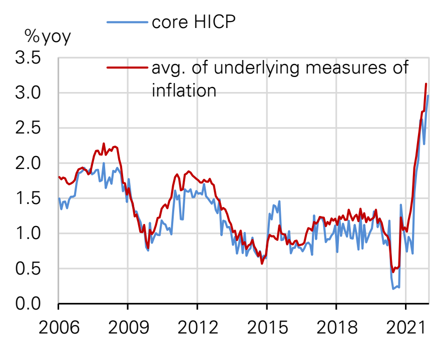
ECB to liftoff in September and reach terminal rate of 2% by end-2023

In January, we brought forward ECB liftoff into 2022; we continue to expect policy rate liftoff in September. GDP expectations have been reduced since the last WO, but inflation forecasts have been revised up sharply and this will dominate the policy decision. Our baseline view is that the APP purchases will end in July and policy rate liftoff will occur in September with a 25bp hike. We expect another 25bp hike in December, ending the period of negative policy rates that has persisted since 2014.

The ECB says monetary policy will be data dependent. The key data are inflation and financial conditions (see here). If underlying inflation continues to surprise to the upside and financial conditions do not tighten excessively, there is a risk that the ECB ends the APP purchases in June. This would open the possibility of liftoff as soon as July if the Ukraine risk was subsiding.

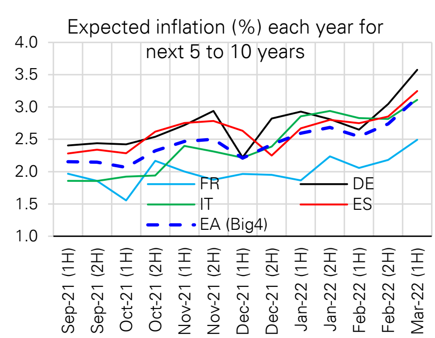
We are accelerating the speed of ECB tightening and raising the terminal rate. We previously expected the ECB to raise rates to a high of 1% in mid-2024. We are raising the ECB terminal rate to 2% and we expect this to be reached at the end of 2023. First, inflation is expected to remain at a higher level for longer driven by a number of dynamics, for example, because of faster de-globalisation and a tighter labour market. Raising policy rates to a neutral level won't be sufficient to stabilise medium-term inflation at target. Monetary policy will need to be moderately restrictive. Second, unexpected public spending on energy independence and

Figure 54: Underlying inflation is far above the highs from the credit bubble period in 2007



Source : Deutsche Bank, Eurostat, Haver Analytics LP

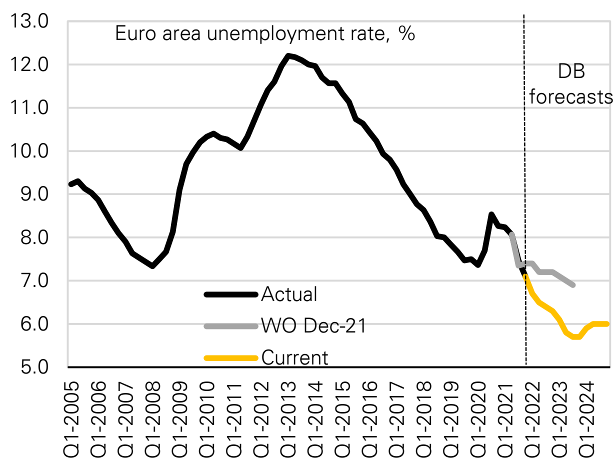
Figure 55: dbDIG – long-term inflation expectations trending higher across the euro area



Source : Deutsche Bank dbDIG Survey

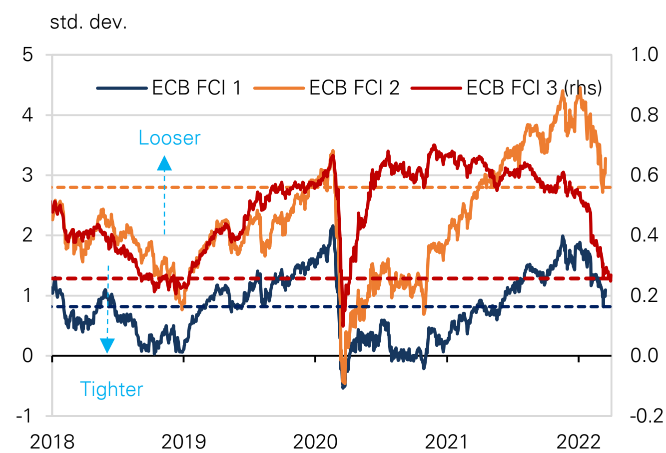
defence reinforces the argument that the fiscal regime has changed post-pandemic. This helps push the neutral rate higher. A probable post-Ukraine trend towards a smaller global savings glut (less FX reserve accumulation at the same time as more green transition investment) could also push the neutral rate up. This means **our previous assumption that the nominal neutral rate is c.1% might be too low.**

Figure 56: The labour market has improved remarkably



Source : Deutsche Bank, Eurostat, Haver Analytics LP

Figure 57: Financial conditions have tightened, but not enough to dissuade the ECB from announcing a conditional exit



Note: the horizontal lines indicate the level of each of the ECB financial conditions indices (replica of indices use by ECB speakers) at the time of the 10 March Governing Council meeting. Source: Deutsche Bank,ECB, Bloomberg Finance LP

To reach a deposit rate of 2% requires 250bp of tightening between September 2022 and December 2023. Assuming the deposit rate has reached zero at the end of 2022, this implies a **25bp hike at each of the eight ECB meetings in 2023**, not just the four staff forecast meetings; alternatively, the ECB could hike in larger increments (50bp) at one or more forecast meetings. Because of the threat of market fragmentation, the ECB is unlikely to engage in QT for some time, putting more pressure on policy rates to achieve the required tightening of the policy stance (see here). In the 2005-2008 tightening cycle, the pace of ECB tightening accelerated from once every three months initially to once every two months for a period. We expect the policy rates corridor to rise in lockstep with the deposit rate (see here).

2% policy rates will require a new instrument for stability purchases. In December, the ECB made a pledge to be flexible with the implementation of policy as it pursues price stability. Our interpretation was that APP or stimulus purchases will end before policy rate liftoff but stability purchases, unconstrained by the capital key, could continue after liftoff if required to maintain a smooth transmission of the monetary policy stance across all member states (see here). PEPP reinvestments are the first line of defence to deal with market fragmentation. However, with policy rates now expected to rise above neutral, it is even more likely that PEPP reinvestments will be insufficient to maintain stability. As such, we now expect as a baseline that the ECB will have to announce a new instrument for stability purchases.

We expect the deposit rate to remain at 2% in 2024 and fall back to 1.50% in 2025. As inflation converges to target, policy rates can converge back to neutral.

Risks and alternative scenarios

Earlier in this WO we presented three scenarios for the evolution of the Ukraine crisis: a negotiated and sustainable peace deal (upside), a semi-stable ceasefire or stalemate (baseline) and ongoing military conflict (downside).

In the case of the relatively quick **negotiated peace deal,** there would be some upside to our GDP forecast. We think of this as relatively limited. Lingering uncertainty could be a persistent cost from the Ukraine crisis. Lower energy prices would reduce headline inflation, but there is sufficient underlying inflation momentum to expect ECB policy rates to become restrictive. As such, growth would still be visibly weaker than the pre-war estimates for 2022-2023.

In the case of **ongoing military conflict** the severe shock scenario we previously outlined should remain a good guide for expectations. In the severe scenario, we estimated the cost at 3-3.5pp of GDP growth. This estimate included a cost from curtailed energy flows and energy rationing for several months (0.4-0.8pp of GDP growth). However, disrupting the flow of energy is an inherently non-linear shock to the economy and difficult to estimate. **The severe scenario is consistent with outright recession**, and this could give the ECB the basis to stall liftoff (for more on the Ukraine scenarios and costs, see here; for more on the bases within the new monetary policy strategy that could allow the ECB to stall liftoff, see here).

The EU recognises the threat that **curtailed flows and energy rationing** imply for the economy. We expect the EU to avoid actions that precipitate the curbing of Russian energy flows. However, it cannot be excluded that the flow of energy is threatened, even in our baseline scenario. While Russia's push for gas buyers to pay in RUB does not appear to present an imminent risk to gas supplies, the EU's plan to move away from Russian energy over time is unlikely to be fully orderly. Distressing war headlines could raise the pressure for at least a partial energy embargo. And with a semi-stable ceasefire as the baseline, periodic flare-ups and geopolitical tensions could be a source of ongoing volatility for the recovery.

In general, we see the risks to growth skewed to the downside. A 2% terminal rate is appropriate given the inflation outlook. However, despite the expected growth in income because of higher employment and wages, the potential for fiscal easing and the degree of excess savings, the real income shock from higher inflation is large. The real income shock and the drag from slower US growth could stop the ECB tightening cycle before the end of 2023. Our latest inflation forecasts are now significantly above consensus for 2022-2023. There could be further upside risks to inflation if the flow of Russian energy into Europe was to be restricted.

There are **other reasons why the ECB might be prevented from getting all the way to a 2% terminal rates**. First, unless the ECB has implemented a strong new instrument to deal with market fragmentation, financial conditions could tighten in a disorderly fashion. Second, commodity prices could decline more rapidly after the Ukraine war and pull headline HICP inflation and inflation expectations back below the ECB target.

Mark Wall & team

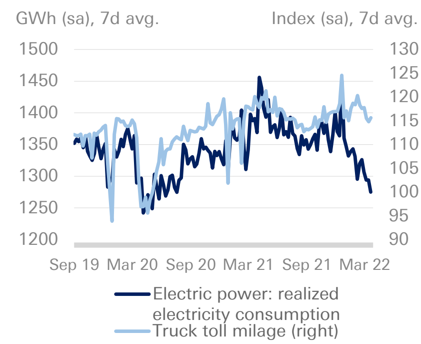
C. Germany: Highly exposed

- Only muted spring rebound, annual GDP growth cut to 2.3%
- Inflation surge to curtail consumption recovery
- Only small fiscal impulse, despite relief packages

Germany seemed to be destined for a strong rebound in 2022, given the expectation of receding supply problems enabling industry to work off its record high order books and consumers' pent-up demand partly financed by excess savings. Of course, underneath this positive outlook was quite some uncertainty about how exactly these two factors would play out over time. Still, annual GDP growth of 4% seemed a realistic forecast, despite an expected technical recession in the winter half (2021/22).

The Ukraine war has delivered another shock to consumer and corporates at a time when they hoped to finally let behind Covid-19, which has dominated economic developments for two years. Up until February external and domestic indicators showed that the economy was indeed on track for a strong rebound. **With the Ukraine war, exactly those demand components expected to propel growth, private consumption, exports and investment are facing severe headwinds**. The slump in March confidence surveys and real time data is probably just the beginning.

Figure 58: German real-time data point to slowing activity

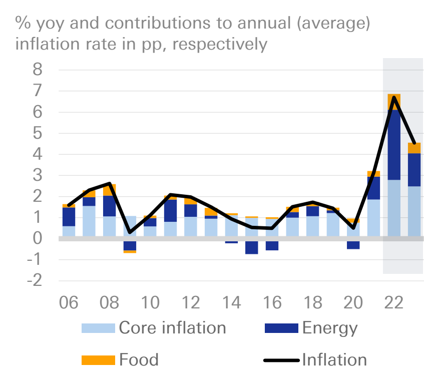


Source: Federal Statistical Office, Federal Network Agency, Deutsche Bundesbank

Consumption growth squeezed by 6.7% inflation surge

Private consumption will likely suffer the biggest blow. Although we expect the labour market to hold up and tighten even further in 2023 – with any disruptions being absorbed by short-time work – surging inflation will likely erode households purchasing power. **In 2022, we expect headline inflation (nat. def.) to average at around 6.7% - in the coming months the yoy rate could touch 8%**. The impact from energy prices should ease during 2023 after rising by 1/3 in 2022, but wage increases (4%) will keep core inflation at around 3%, so that headline CPI should increase by another 4.5%, also since the 0.4 bp reduction in inflation due to government measures (abolition of the EEG-surcharge, temporary petrol tax reduction, subsidized rail tickets) will drop out. Real disposable income in 2022 will probably fall even more than in 2021 (-1.2%), meaning that the leeway for consumption increases has to come from a lower savings rate. Indeed, at 15% the 2021 savings rate stood 4.5pp above its long-term average. **While the confidence shock might keep the rate at elevated levels in H1, it should fall strongly in H2, financing consumption growth around 3.0% in 2022.**

Figure 59: Outlook consumer price inflation



Source: Federal Statistical Office, Deutsche Bank Research

Exports hit by sanctions and weaker CEE growth

Given the sanctions, German exports to Russia will probably fall by more than 75%. However, exports to Russia have already come down to barely 2% (of total German exports) after the Russian annexation of Crimea, limiting the loss of total German exports to around 1 ¾%. **German exports to other economies in the CEE region – receiving about 18% of total German exports – will suffer, too, given the region's integration into German companies' value-creation networks**. Weaker growth and weaker currencies will likely lower German exports in this region, which could reduce overall export growth by about 1%. Lower growth in other Eurozone countries is expected to shave a further 0.5pp from Germany's export growth. Due to carry-over of almost 4%, exports should still expand by 6 1/2%.

Investment – held back by uncertainty and supply problems

With a gradual normalization of sourcing issues and the expectation of strong global and domestic demand, investment spending was expected to accelerate substantially in 2022. **With the March slump in business expectations, likely to worsen further in April, corporate investment spending will be hit** (see chart). Given the massive underinvestment during the last 10 quarters (investment in machinery & equipment in Q4 2021 was still 11.7% lower than in Q2 2019) the slump could, however, be less than historical correlations suggest. But the war in Ukraine has already caused several German car producers to slow output, given, for example, missing car wire harnesses from Ukrainian suppliers. A major part of German truck traffic is processed by Eastern European trucking companies, employing a considerable number of Ukrainian truck drivers, who are no longer allowed to leave their country. Logistics organisations are concerned that the already biting lack of drivers might reach a level that could break supply chains. **These supply-chain problems will not only weight on industrial output, which we have revised to 3% (from 5%), but also impair investment spending.**

Despite relief packages only small fiscal impulse

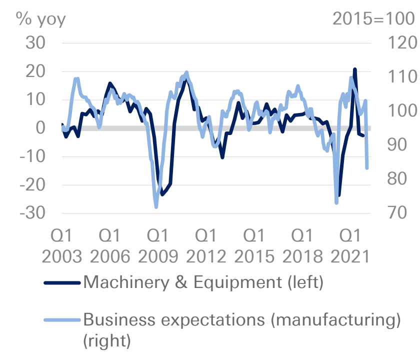
The government has already launched two fiscal relief packages to cushion the impact of higher energy prices for private households, each worth about EUR 15bn, i.e., together a good 0.8% of GDP. Another EUR 15bn can be expected in 2022 to come from enhanced military spending financed by the EUR 100bn multi-year special "Bundeswehr" fund. The government also wants to further accelerate the transition towards CO_2 neutrality. However, as the bottlenecks are caused by the planning process and the lack of qualified workers, spending is unlikely to increase strongly – at least not in the short run. If energy prices stay at current levels for a longer time, another relief package for low-income groups is likely. Furthermore, government spending might rise by about EUR 10bn given expenditures for Ukrainian refugees. All in all, these measure could add up to c.1½ % of GDP. However, at the same time measures related to the Corona pandemic – which added c.1½% to the structural deficit in 2020 and 2021 are phased out. **Resulting in an overall fiscal impulse of about 1/4% of GDP.**

2022 GDP forecast cut to 2.3%, downside risks dominate

We have cut our GDP forecast to 2.3% from 4% at the beginning pf the year. This implies a small technical recession in the winter half 21/22, although the 0.3% drop in Q4 2021 might actually disappears after the next revision. This forecast crucially depends on the assumption that the Ukraine war and energy prices will not escalate further. **Under more severe assumptions, Germany would almost certainly fall into a severe recession, especially in the event of a shutoff from Russian natural gas.**

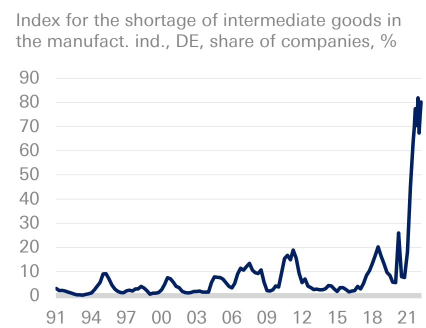
Stefan Schneider, Sebastian Becker, Marc Schattenberg

Figure 60: M&E investment & manu. expectations



Source : Eurostat

Figure 61: Shortage in material near record level



Source : ifo Institute

D. United Kingdom: near stagflation with rising recession risks

The UK outlook remains as cloudy as ever. Reflecting the new realities of an intensifying cost of living crisis and sustained geopolitical tensions, the hit to UK GDP will be slightly more than we previously anticipated, fully offsetting the effects of added fiscal support and a stronger Q1. We still see UK GDP growth expanding by 3.8% in 2022. Beyond 2022, we expect GDP growth slow further to 0.7%, bringing inflation down from a peak of ~8.5% y-o-y to a little over 2% by late 2023/early 2024.

Three months into 2022, good news on Q1 will most likely be offset by stronger headwinds, pushing the economy into near stagnation for the remainder of the year.

A better starting point. A stronger end to 2021 should add 0.3pp to our Q1-22 quarterly growth projection. More importantly, we now know that 'Plan B' restrictions had a more limited impact on output than we previously anticipated. With January GDP expanding by near 1% m-o-m, our nowcast models point to quarterly growth of 0.9% (previously: 0% q-o-q) given the strength of hard and soft data seen to date. Furthermore, the Chancellor's added fiscal support has added around 0.3% of GDP to our annual growth projection (for 2022).

But, stronger headwinds to send the UK economy into stagflation. There are four main headwinds facing the economy. This, we think, will broadly offset any of the gains made by the UK's stronger Q1 and fiscal policy.

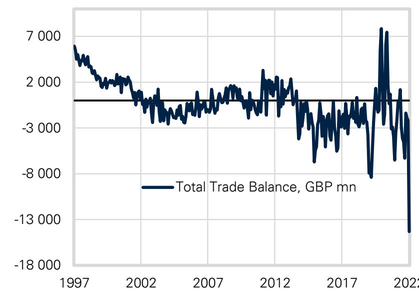
First, higher inflation. We now expect inflation to peak later in the year, given the jump in gas and electricity forward prices, which should lift the Ofgem price cap by another 30% in October 2022. We now see CPI peaking over 8.5% y-o-y in April and October 2022 (last World Outlook: 6.5% y-o-y in April). And we see more inflationary pressures on the horizon, with wage growth picking up steam, housing costs firming, core goods pressures proving more robust, and food prices soaring. We now expect 2022 CPI to average close to 8% y-o-y for the year (7.7% y-o-y), before slowing to 4.5% in 2023. This would mark some of the highest inflation readings we've seen since the 1970s.

What does this mean for households? One of the worst cost of living squeezes in recent memory. Combined with planned tax rises from 1 April, we now expect real wage growth to shrink by close to 3.5%. The result? Even weaker consumer confidence, with current data already descending into recessionary levels.

Second, a bigger terms of trade shock**.** The current import shock is likely to be larger than we previously assumed. Sanctions on UK exports to Russia alone could wipe out nearly 0.2% of GDP. And higher energy imports in the form of oil and gas should weigh further on the UK's net trade balance. Indeed, January trade data marked the largest monthly trade deficit on record. Moreover, the weakening external backdrop, from higher global costs and tightening financial conditions, should weigh on export demand. Overall, we see the UK net trade balance weighing on GDP by around 1.2pp.

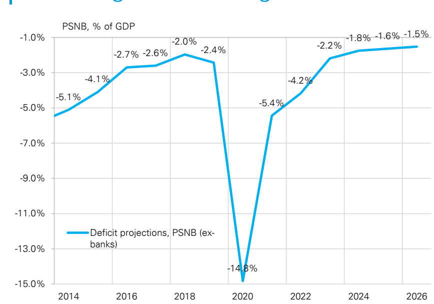
Third, weaker investment. Given still elevated supply-chain issues and uncertainty

Figure 62: UK trade balance seeing record falls to start the year



Source : Deutsche Bank, ONS

Figure 63: More fiscal tightening projected, but the Chancellor easing policy a little to partially offset the unfolding cost of living crisis



Source : Deutsche Bank, OBR

from the Russia-Ukraine war, we now expect higher cost pressures and elevated geopolitical tensions from the Russia-Ukraine war to prolong supply-chain bottlenecks, and raise business uncertainty. This should dampen the UK's (public and private) investment outlook. Indeed, the Chancellor's recent Spring Statement wiped out over GBP 10bn in capex plans for 2022/23 (and over GBP 20bn in 2021/22). And falling business sentiment, should start to weigh on near-term capex plans.

Fourth, we now expect a higher economic cost from the June Bank holiday. Based on updated assumptions on how the extra Bank holiday will impact the economy, we now expect June GDP to shrink by a little over 1% m-o-m. This in itself should see Q2 GDP register its first contraction coming out of the pandemic (-0.2% q-o-q).

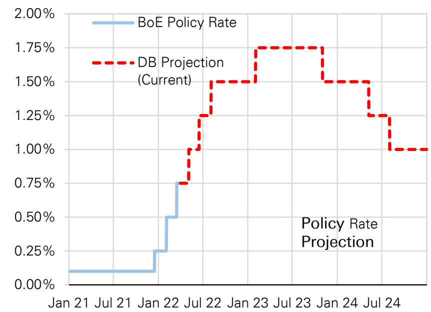
Big picture, we expect UK GDP growth to remain very bumpy beyond Q1-2022. Overall, we see GDP growth slowing from 7.5% in 2021 to 3.8% in 2022, with quarterly growth averaging near stagnation levels (~0.1% q-o-q). Moreover, beyond 2022, we expect UK GDP growth to push down even further to 0.7% in 2023, reflecting weaker base effects and lower supply growth post-pandemic/Brexit, before picking up modestly in 2024 (1.3%), as policy tightening eases, inflation falls back, and sentiment generally improves.

On the policy outlook, the picture is more mixed. Fiscal policy is tightening by less than previously expected, with the Chancellor announcing around 1% of GDP in support measures for households and businesses to cope with the unfolding cost of living crisis. We think some more easing is likely this year, but we do not expect any large blanket relief measures. Overall, we see the Chancellor's deficit settling at 4% of GDP in 2022/23 before falling to around 1% by the middle of the decade.

On monetary policy, we expect the combination of rising inflationary pressures, surging inflation expectations, and a very tight labour market (with unemployment settling below NAIRU) will leave the MPC in tightening mode. Indeed, after three back-to-back hikes, we think the MPC pushes through three more consecutive hikes, including commencing active QT from late summer, before slowing down (we pencil in one more hike next year in Q1-23). This would take our projection of the terminal Bank Rate to 1.75%. Risks are tilted to fewer hikes, however. Growth prospects are looking weaker and the Bank has made clear that they remain sensitive to growth developments, including and more importantly, risks to medium-term inflation. That's one reason why we see the MPC easing from late 2023, should inflation and inflation expectations move broadly in line with our forecasts, bringing the Bank Rate down to a more accommodative level (~1%) by end of 2024.

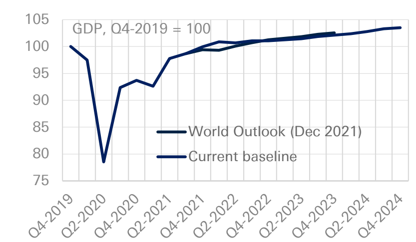
Sanjay Raja

Figure 64: We see the Bank Rate reaching 1.75% in Q1-23, before easing from late next year (Q4-23)



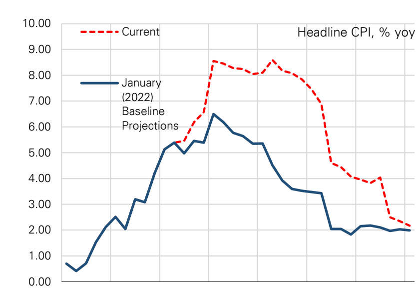
Source : Deutsche Bank, Macrobond

Figure 65: UK GDP expected to broadly track our previous projection profile



Source : Deutsche Bank, Macrobond

Figure 66: Our CPI projections have shot up – mostly on the back of core goods, food, and energy inflation



Source : Deutsche Bank, Haver Analytics LP

E. Japan

Lowering growth forecast, raising inflation forecast

We have revised downward our growth forecast for Japan from our previous World Outlook report in December while raising our outlook for inflation. Our action was spurred by three factors: the renewed uptick in domestic Covid-19 cases and the government's response; the slowdown in overseas economies; and the rise in energy prices. We examine these three factors in greater detail below.

Pandemic's continued downside risk to growth

Covid-19 cases have grown considerably since the start of the year, soaring to levels well beyond the previous peak of last August-September. This prompted the government to introduce **semi-emergency measures in the major cities**. While the restrictions were lighter than under a full-scale state of emergency, they proved sufficient to influence the public's behavior. As a result, **we now anticipate negative growth in 1Q 2022**.

We believe the pandemic will remain a significant downside risk to the Japanese economy. The government's approach, though not to the crushing level of a Zero Covid-19 policy, has tended to be stricter than other developed nations, and the economy has thus been highly vulnerable whenever cases turn upward. We suspect that we will have to revise our forecast downward again in the future whenever new variants emerge. We believe that the volatility in economic fluctuations from this repeated tightening and easing of regulations will hamper the recovery in capex demand, thereby holding back a genuine comeback in growth.

Implications of overseas economic slowdown for Japan

The biggest near-term risk to overseas economies is the Ukraine crisis. The direct impact on Japan should be modest given the country's limited economic and financial ties with Russia[11], the object of economic sanctions. However, the **indirect impact could be substantial via the adverse effect of the war on economies elsewhere. Europe**, where the sanctions placed on Russia could have an appreciable reverse impact, will likely experience lower growth. **We have lowered our 2022 forecast by around 1 percentage point (ppt) from our December outlook**.

We see the largest risk in 2023 as the negative burden from Fed monetary tightening. Our US economic research team assumes that the Fed will lift rates to 3.6% by mid-2023. This aggressive rate hike pace along with the projected balance sheet runoff of around USD1.9trn is now expected to push the US into recession by late 2023.

This retreat in US and European growth will likely have a sizeable impact on Japan. Our VAR model indicates that a 1% drop in overseas real GDP (trade-weighted) would spark a 0.71% falloff in Japan's real GDP (see *Japan Economic Perspectives*, 10 March). In particular, the US accounts for fully 18% of Japan's export values, so we view a downturn in US growth as the biggest single risk for the Japanese economy in 2022-24.

11 Russia accounted for only 0.9% of Japan's export values and 1.7% of its import values in 2021. Even in the energy sector, the biggest concern for imports, Russia supplies a mere 3.6% of Japan's crude oil and 8.8% of its LNG in volume terms. Russia represents less than 0.5% of Japan's direct foreign investment and foreign portfolio investment, and external claims on Russia at Japan-based banks (consolidated basis) are just 0.19% of Japan's total foreign claims.

Japanese inflation picks up notably

Japanese inflation has been intensifying steadily as elsewhere due to the upswing in energy prices. Headline inflation has been listless due to the large cutbacks in mobile phone charges, which has alone dragged the YoY CPI inflation down by 1.5ppt. **Excluding phone charges, inflation is already over 2%**. In addition, imputed rents for owner-occupied homes, the item with the largest weighting (15.8%) in Japan's CPI, remain stagnant at present, which has also weighed down inflation. If the cost of owner-occupied housing in the CPI were to be calculated by the acquisition approach rather than rental equivalence, we estimate that inflation would currently be 3.0-3.5%.

Meanwhile, **wages have failed to keep pace with inflation**. Wage hikes won in the annual shunto spring labor negotiations this year were around 2% YoY, which comes to some 0.5% in terms of base salary growth. This is a relatively swift pace compared with the past two pandemic-hit years, but we believe a rise of that level amounts to negative growth in real wages. That is also a negative factor for the Japanese economy. This tepid wage growth suggests that the rise in Japanese inflation is unlikely to prove sustainable. We believe that headline inflation will reach 2% in April, when the impact of mobile phone fee reductions will largely disappear on YoY basis but expect the figure to remain at that level only through 2Q 2022 and recede thereafter.

Government price curbs vs. BoJ's ongoing accommodative stance

The Japanese government has begun to take measures to address the uptrend in domestic inflation driven by mounting energy prices. This is expected to include subsidies to oil distributors in an attempt to hold down gasoline prices as well as support for low-income households. It plans to finance this by drawing on ¥5trn in reserve funds in the FY2022 budget. Therefore, **a supplementary budget would appear unlikely before the Upper House election scheduled in July**. However, we feel that what is necessary right now is not such short-term measures but a full reconsideration of the nation's energy mix. One particularly important point of discussion should be a restart of Japan's nuclear power plants, which have largely remained offline since the devastating Tohoku earthquake of 2011. We estimate that Japan's electricity charges could be reduced by around 30% if the nation returns to the energy mix prevailing prior to the disaster.

Regarding monetary policy, **our main scenario calls for a continuation of the BoJ's present easing stance in light of the low possibility of inflation reaching the 2% target as defined by the bank**, i.e., price growth accompanied by wage growth. Still, we do see a 40-50% probability that the bank will shorten the target maturity under its yield curve control (YCC) policy sometime between April and July. Rising inflation, weakening yen, and the shift by US and European central banks toward a normalization of monetary policy have undermined the sustainability of YCC, and the BoJ will need increasingly to coordinate with the government in the latter's attempt to curb price growth. Another key point will be the choice of a successor to BoJ Governor Haruhiko Kuroda, whose term ends in April 2023. If the post is given to someone who prioritizes the growing side effects of present policy, the bank might undertake a full-scale monetary policy normalization, including an abandonment of the negative interest rate policy. Conversely, the choice of someone who views continued monetary easing as essential would increase the likelihood of a shift to an FTPL-type equilibrium, i.e., an aggressive fiscal policy and yield peg policy, raising the danger of a move toward an undesirable balance in the form of fiscal dominance.

Kentaro Koyama

F. China

China's growth outlook has deteriorated since our last World Outlook. The Omicron variant has spread much faster than previous virus strains, triggering lockdown in a few major cities and disrupting mobility and supply chains in some regions. Meanwhile, the US and EU's more aggressive rate hikes and growth slowdown could lead to capital outflows in the near term and dampen China's exports growth in the medium term. We revise down our China growth forecast to 4.4% in 2022 and 4.7% in 2023, based on current policies. Achieving the government's 5.5% growth target will require prompt containment of current outbreaks, additional policy easing, and a fast turnaround in the property market.

Covid-19 hits China again

Covid-19 outbreaks have again become the biggest challenge to China's growth outlook. The omicron variant has been spreading much faster than previous virus strains. The number of new Covid-19 cases in China, including those tested positive but without symptoms, surged to ~8,000 per day by end-March from only ~100 a month ago. Although Shanghai and Jilin Province accounted for >90% of all new cases, 23 other provinces have nonetheless reported new cases in the past 14 days. Fortunately, cases outside Shanghai and Jilin have come down lately (Figure 54).

It seems large-scale lockdown and testing is the only way to contain Omicron outbreaks, judging from what happened in Shenzhen and Shanghai. Both cities detected Omicron community spread in early March. After a few days, Shenzhen decided to impose a city-wide lockdown for the first time in 2 years. It suspended public transportation and nonessential businesses, asked people to largely stay at home, and tested its whole city population daily for a week. These measures helped contain the outbreak; the city reopened after a week. In contrast, Shanghai initially continued its "targeted" approach of testing and contact tracing without imposing large-scale lockdowns, but it was not sufficient. Shanghai later switched to large-scale lockdowns as daily new cases reached thousands and continued to rise. Clearly, other cities will be more likely to follow Shenzhen's approach rather than Shanghai's. Going forward, more cities may decide to announce lockdowns early when only limited number of new cases were reported.

Economic disruptions can be expected in the near term... Activity has already slowed; March manufacturing and services PMIs have both fallen below 50 to 49.5 and 46.7, respectively. Shanghai and a few other big cities remain in lockdown, and there are signs that broader travel and mobility have been negatively affected. Disruptions to production and supply chains were also observed in Jilin and more recently in Shanghai: suspension of operation in some factories, reduction of trucks, and congestion at ports. Most notably, the property market took a considerable hit nationwide: housing units sold in the top 30 cities dropped 48% YoY in March compared with a 30% YoY drop in Jan-Feb.

...and outlook beyond that remains uncertain. It will likely take at least a few more weeks to fully contain the ongoing outbreak in Shanghai and Jilin. But even after that, no one can be sure that outbreaks won't happen again. If anything, local outbreaks have become much more frequent in China since the Delta variant became dominant in mid-2021. It is difficult to foresee how frequent future outbreaks will be, but chances are that China will continue to be hit by frequent outbreaks in different cities.

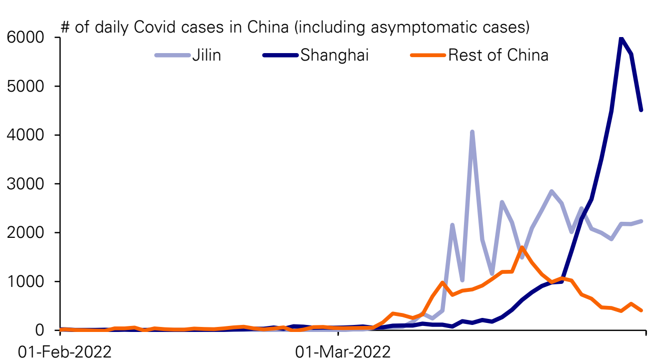
When will China switch to "living with Covid"? Although China has been preparing for dealing with wider spread, neither the government nor the population seems ready to switch to a different, "living with covid" strategy. The government has been rolling out booster shots since November and has recently approved the use of self-testing kits and antiviral pills. Nevertheless, 20% of China's age 60+ group are still unvaccinated, and only 50% of the population has received a booster shot. Prematurely easing Covid-19 controls would risk a run on health care resources and a sharp rise in deaths. Today's supply of antiviral pills and testing kits is likely vastly insufficient to meet the surging needs resulting from opening up. The population is not ready either: only 1 out of 10,000 Chinese citizens has ever contracted Covid-19. Most countries switched to "living with Covid" only at a time when their total confirmed cases were much higher, and when their population were familiar with how to cope with Covid-19 infections.

Liftoff risks

The US and EU's more aggressive rate hikes and growth slowdown could dampen China's growth in the medium term. China's exports grew 28% in 2021 and contributed as much as 1.7 ppt to the annual GDP growth. With a sharp slowdown in US and EU's growth expected in 2023 and 2024, China's exports growth will likely slow sharply to lower single digits.

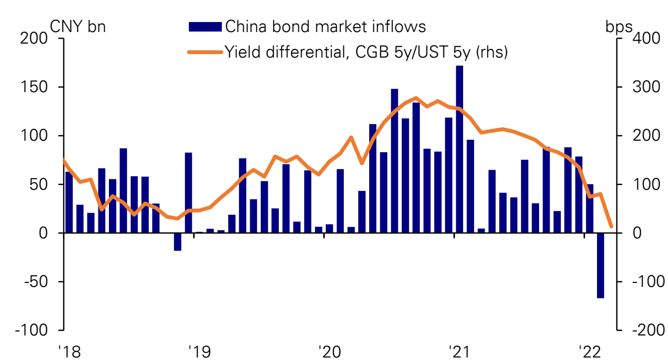
A more immediate concern is capital outflows. The Fed's is expected to tighten aggressively, bringing the Fed funds rate to 2.625% by year-end. The PBOC will not be in a position to follow the Fed, rather it will more likely cut its policy rate in the coming months. This means China's short-term policy rate---the 7-day repo rate which is currently 2.1%---will soon be lower than the Fed funds rate for the first time since 2008. In fact, market interest rate differentials are already closing rapidly. CGB yields were 120-180bps higher than US treasury yields across the yield curve as of end-2021, but have narrowed to just 10-50bps as of end-March. Given our expectation of a Fed terminal rate at 3.625% by mid-2023, USD interest rates could go higher than CNY interest rates and stay higher for a few quarters in 2022-23. This will likely reduce the attractiveness of CNY fixed income assets, and could interrupt foreign inflows into China's bond market. Already CNY 67bn of bond market outflows was observed in February (Figure 54).

Figure 67: China was hit by a new round of Covid-19 outbreaks, primarily in Shanghai and Jilin



Source : Deutsche Bank Research, NHC, WIND

Figure 68: Narrowing CNY/USD yield differential raises capital outflow concerns



Source : Deutsche Bank Research, WIND

Disruptions from the Russia/Ukraine conflict

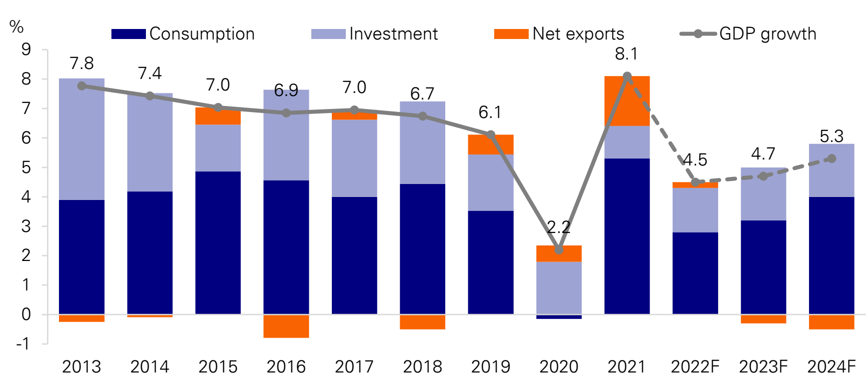
The direct impact from Russian/Ukraine war on China's economy has so far been limited. Russia and Ukraine account for only 2.6% of China's international trade. The surge in crude oil prices has driven up China's retail gasoline prices by about 15% since February, but other prices are largely stable. China's CPI inflation is expected to rise only modestly to 1.3% in March from 0.9% in February.

However, China will need to carefully manage the risk of secondary sanctions. Chinese banks and companies have been careful not to violate sanctions on Russia imposed by the US and other countries. These sanctions, especially on Russian banks, have already caused disruptions to China-Russia trade. Over time, though, it is likely that Chines and Russian companies will find ways to restore trade without violating sanctions, e.g., by settling payments in local currencies through Russian banks not being sanctioned. Moreover, many US and European companies have voluntarily reduced or halted their businesses with Russia, while Chinese companies have fewer incentives to do the same. Hence, it is likely that China's share in Russia's international trade will increase going forward. These developments could be perceived as China strengthening its economic ties with Russia and will likely be unpopular among western countries even though China would not be violating any official sanctions.

Revising down 2022 and 2023 growth, expect weaker Renminbi

We revise down our China real GDP growth forecast to 4.4% in 2022 and 4.7% 2023 from 5.1% and 5.5%, respectively. Our key assumptions are: (1) consumption growth will remain subdued owing to more restrictive Covid-19 containment measures. Consumption recovery is expected only in late-2023 and 2024; (2) investment will strengthen thanks to government policy support; and (3) net exports' contribution to growth will reduce sharply in 2022 and turn negative in 2023-24.

Figure 69: China real GDP growth forecast



Source : Deutsche Bank Research

Covid-19 remains the biggest downside risk to our near-term growth outlook. Given how infectious new Covid-19 variants have become, there's a non-negligible risk that current or future variants could break China's Covid-19 defence line, resulting in wider lockdowns and possibly stress in the health care system. The growth shock will be large initially, but will likely be short-lived for no more than a few months.

On the upside, the government may implement additional policy easing to aim for its 5.5% annual growth target. Our forecasts are based on current policy and have not built in any additional easing measures, aside from another 20bps of policy rate cuts by the PBOC in Q2. The government remains committed to a 5.5% growth target. Achieving that target will require: (1) rapid containment of current outbreaks and avoid major disruptions for the rest of the year, (2) additional fiscal and credit easing to support consumption and investment, and (3) a quick turnaround in the property market and rapid recovery in property investment. While we think it is prudent not to assume these in our baseline, we'll closely monitor developments and adjust our forecasts accordingly.

The Chinese yuan will likely face depreciation pressures in the next few quarters. The exceptional strength of the CNY in 2020-21 was underpinned by both: (1) a current account surplus, and (2) sustained capital inflows into China's financial markets. While the former still holds---we think China will maintain a current account surplus at around 1.5% of GDP in the next two years--- the latter can no longer be ascertained given the expected aggressive Fed tightening cycle. We therefore expect the CNY will depreciate to around 6.6/USD by end-2022, and stay at around that level in 2023. The CNY can be expected to strengthen again in late 2023 and 2024 when the Fed eases.

Yi Xiong

G. India

The global economic outlook for the next 6-12 months is shrouded in unprecedented uncertainty. There are various moving parts that will determine the global macro trajectory going forward, of which four factors are most obviously critical: i) the outcome of the Russia-Ukraine conflict; ii) the new normal for global crude oil and gas prices once the near-term volatility recedes; iii) the fallout of Fed's rate hike cycle and QT agenda; and iv) China's economic response to a resurgence of Covid-19 cases. Indeed, policymakers will have a challenging task to navigate through the various uncertainties over the next several months.

India's trade linkages with Russia are significantly smaller compared with the US or China, which implies that **the potential direct adverse impact of geopolitical tensions surrounding Russia and Ukraine through the trade channel is likely to be limited.** Indeed, India's share of exports to Russia as proportion of its total exports is just 0.8% vs. 18% for the US, 6.5% for the UAE and 5.6% for China. Meanwhile, India's imports from Russia account for only 1.5% of its total imports vs. 15.5% for China and about 7.0% for the UAE and USA. The top item of India's imports from Russia is crude oil, followed by coal and petroleum products. But **India's imports of crude oil (including petroleum products) from Russia is just 2.5% of its total crude oil imports,** with India importing crude oil mostly from other countries. Given this dynamic, India buying oil from Russia at a steeply discounted price is unlikely to make a major difference. The key countries that India depends on for its crude oil and petroleum products imports include Iraq (19.1% of total), Saudi Arabia (15.9%), UAE (13.0%), the US (8.6%), Nigeria (6.4%) and Kuwait (6.2%).

Figure 70: Oil imports by India from key countries (USD bn and % share) - Apr-Dec'21

Top 10	Oil imports by country (Apr-Dec'21)	Crude oil imports (1)		Petroleum products (2)		Total oil imports (1+2)	
		USD bn	% share	USD bn	% share	USD bn	% share
	Total Oil Imports	85.5		28.0		113.6	
1	Iraq	20.8	24.4	0.8	3.0	21.7	19.1
2	Saudi Arabia	14.7	17.2	3.3	11.7	18.0	15.9
3	UAE	9.0	10.5	5.8	20.6	14.7	13.0
4	USA	7.6	8.9	2.2	8.0	9.8	8.6
5	Nigeria	6.5	7.6	0.8	2.8	7.3	6.4
6	Kuwait	5.7	6.7	1.3	4.7	7.0	6.2
7	Mexico	2.7	3.1	0.0	0.0	2.7	2.4
8	Oman	2.4	2.8	0.8	3.0	3.2	2.8
9	Russia	1.9	2.3	0.9	3.1	2.8	2.5
10	Brazil	1.8	2.1	0.0	0.1	1.8	1.6

Source : Ministry of Commerce and Industry and Deutsche Bank

However, the main risk for India is from the indirect channel of persistently higher global oil and gas prices.

*** Growth:** As far as growth is concerned, the Russia-Ukraine conflict will likely prevent India from growing over 8%yoy in FY23, as higher oil prices will have a negative impact on private consumption to a certain extent. US interest rate hikes and heightened geopolitical tensions are also likely to result in a slowdown in the US as well as the global economy (not to forget China slowdown risks due to Covid-19), which could in turn slow down India's exports momentum in 2022 and beyond. From a slightly positive perspective, India remains relatively less vulnerable to global external shocks compared with the other open market EM economies, which should help cushion downside growth risks. Fortunately, the impact of the third Covid-19 wave has also proven to be limited, with mobility improving back to pre-pandemic levels swiftly. We would have revised India's growth forecast higher by about 50bps to 8.0%, given the significant improvement in the Covid-19 trajectory since Jan'22, but owing to the ongoing conflict, **we have decided to maintain our FY23 real GDP growth forecast at 7.5%** (as a 100bps downgrade to the baseline G-2 growth trajectory can potentially lower India's real GDP growth by 40bps), which is in line with consensus estimates.

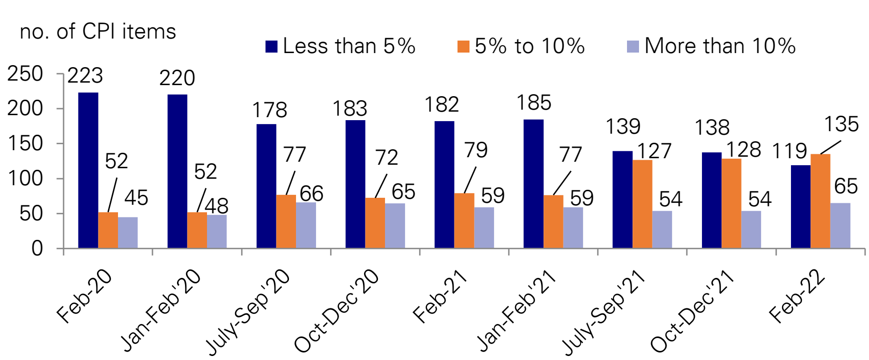
Figure 71: India: Real GDP growth and CPI inflation forecast: DB vs. RBI

	Apr-Jun'21		Jul-Sep'21		Oct-Dec'21		Jan-Mar'22		FY22		Apr-Jun'22		Jul-Sep'22		Oct-Dec'22		Jan-Mar'23		FY23	
	RBI	DB	RBI	DB	RBI	DB	RBI	DB	RBI	DB	RBI	DB	RBI	DB	RBI	DB	RBI	DB	RBI	DB
Real GDP growth	20.3	20.3	8.5	8.5	5.4	5.4	6.0	3.3	9.2	8.5	17.2	14.0	7.0	6.0	4.3	5.5	4.5	5.5	7.8	7.5
CPI inflation	5.6	5.6	5.1	5.1	5.0	5.0	5.7	6.2	5.3	5.5	4.9	5.7	5.0	5.8	4.0	5.4	4.2	5.1	4.5	5.5
Core CPI*	-	5.9	-	5.9	-	6.2	-	6.3	-	6.1	-	6.2	-	5.9	-	5.9	-	5.7	-	5.9
Core core CPI**	-	4.7	-	5.0	-	5.3	-	5.9	-	5.2	-	5.8	-	5.7	-	5.7	-	5.4	-	5.6

*Source : RBI and Deutsche Bank. Note 1: Real GDP growth and CPI inflation for April-Dec'21 are actual outturn. Note 2: *Core CPI refers to CPI ex food, fuel and tobacco (RBI definition), ** Core core CPI refers to CPI ex food, fuel, tobacco & transport.*

*** Inflation:** Elevated oil prices are expected to result in higher food prices with a lag, on account of rising transportation costs as well as due to a likely greater increase in minimum support prices (MSPs) for summer crops to cover the rising input costs (particularly fertilisers) of farmers. **While we are forecasting CPI inflation to average 5.5% in FY23, there are non-negligible risks of the average rising closer to 6.0%** if further unanticipated shocks (for example, an erratic monsoon in 2022 could be a trigger) were to manifest. Inflation is showing signs of persistence and price pressures are also becoming generalised across different categories, including core prices (ex fuel). Further, demand side inflationary pressure is expected to gain traction over the coming months, adding to the already entrenched supply-side and cost-push pressures. Inflation, in our view, may turn out to be a bigger risk for India than growth over the coming quarters, if not dealt with at this stage (at least the second order impact on core prices and management of expectations).

Figure 72: CPI inflation - no. of items in different inflation brackets



Source : CEIC and Deutsche Bank

*** Monetary policy:** We still expect 50bps of repo rate hikes in 2022, with **two 25bps hikes penciled in for 3Q'22 and 4Q'22, respectively.** In 2023, we expect an additional 75bps of repo rate hikes, followed by one last 25bps hike in 2024. Even if the repo rate rises to 4.50% by end-Dec'22, real interest rates should still stay negative to the tune of 130bps, as we expect CPI inflation to average 5.8% in 2022. The RBI is unlikely to respond with larger and faster rate hikes in 2022, just because of an aggressive Fed rate hike cycle. Based on the growth and inflation projections for FY23 and beyond, a simple Taylor Rule formula indicates a terminal repo rate of 6.00% or higher, but given RBI's dovish disposition, **we think the terminal repo rate will increase at most to 5.50% in this cycle.** As output gap closes in FY23, and CPI inflation averages 5.5% over the next 12-24 months, the repo rate should rise to at least 5.50%, to have non-negative real interest rates.

Figure 73: Range of outcome for terminal repo rate

Economic Variables	DB baseline est. for FY23 CPI and real GDP	Consensus est. for FY23 CPI and real GDP	RBI projections for FY23 CPI and real GDP
1. Real interest rate	0.00	0.00	0.00
2. CPI forecast (FY23 avg.)	5.50	5.50	4.50
3. CPI target	4.00	4.00	4.00
4. Inflation drift (2 -3)	1.20	1.00	0.50
5. GDP forecast (FY23)	7.50	7.60	7.80
6. Potential growth rate	6.0 to 6.5	6.0 to 6.5	6.0 to 6.5
7. Output gap	0.00	0.00	0.00
Implied repo rate	6.10	6.00	4.75

Source : RBI and Deutsche Bank

*** Fiscal:** If the central government is eventually compelled to cut excise duty similar to the Nov'21 quantum, it will potentially reduce excise tax collection by INR1trn in FY23 or about 0.4% of GDP. Even if Brent prices remain at USD90-100/bbl, fertiliser subsidies could be easily higher by INR350-500bn in FY23, relative to the budget estimate. Elevated Brent prices are going to put pressure on both the revenue and the expenditure side of the fiscal, even with the central government prudently estimating a conservative fiscal deficit estimate of 6.4% of GDP to start with. **Ultimately, the trade-off of not allowing the fiscal deficit to rise further than the budget estimate would have to be dealt with expenditure compression.** With little scope to cut revenue expenditure further, capital expenditure (INR7.5trn allocation) would probably need to be reduced in FY23 eventually to mitigate the potential impact of revenue shortfall and increase in fertiliser subsidies on account of higher Brent prices, in our view.

*** CAD, BOP and rupee:** India's FY23 current account deficit (CAD) is estimated to rise to **2.7% of GDP, or closer to USD100bn** in absolute terms. This will likely push the **overall BOP into a deficit,** even after assuming a relatively strong capital account surplus. The worsening of the BOP dynamic has already put pressure on rupee, and the situation could worsen further, if a high current account deficit coincides with sustained weak capital inflows or outflows due to Fed tightening cycle. Our base-case scenario is that RBI will likely defend rupee from hitting new lows (beyond 77) by selling USD, mainly to reduce incremental inflationary pass-through risks from FX depreciation. RBI's calculations indicate that a 5% depreciation of INR from baseline estimate (RBI had assumed USD/INR at 74.3 in Oct'21 for 2HFY22) can potentially push up CPI inflation by an additional 20bps.

Kaushik Das

H. Russia

- The unprecedented Western sanctions represent a severe systemic shock to the Russian economy. Russian authorities have managed to limit the initial fallout via prudent crisis policies and strict capital controls. Their ability to manage the crisis may continue if energy exports are not significantly affected, but the economic damage will deepen. In our baseline scenario, we expect a 2022 GDP decline of c.8%, with inflation peaking at c.25%. The peak-to-trough decline in activity would be moderately worse than the c.10% falls in 1998 and 2008-09. More crucially, the recovery will be much weaker than following these crises (DB 2023e: -2.5%; 2024e: +2%). More severe outcomes directly comparable with the early 1990s would emerge in our downside scenario.

Unprecedented sanctions put Russian economy under severe stress The speed, breadth and intensity of sanctions by the West has been unprecedented for an economy of Russia's size (see table and chart). This included an initial stronger-than-expected response to Russia's recognition of the breakaway Donbass republics, and was expanded sharply following Russia's invasion on 24 February, most notably to include the freezing of Russia's central bank reserves. This has been accompanied by broad sanctions against commercial banks (including SWIFT shutoff of many large Russian banks). Western sanctions have also targeted the Russian aviation sector, exports of various equipment and technology goods and restrictions on investment into Russia. The US moved to announce an embargo on imports of fossil fuels from Russia. The EU, which is much more heavily reliant on Russian energy (40% of EU gas imports and 25% of EU oil imports pre-war), has avoided formal energy trade sanctions, although there has been a significant reduction due to self-sanctioning and operational factors. The EU has announced plans to "phase out its dependency on Russian gas, oil and coal imports as soon as possible". As we discuss in A. Geopolitics section, as our baseline we expect some further intensification of sanctions, but for a full European energy embargo to be avoided.

Crisis policy response has partially mitigated the initial shock... The first two weeks after Russia's invasion saw dramatic financial stress, with the ruble nearly halving in value. However, after initial deposit flight, the domestic banking system's liquidity has recovered following the combination of the emergency rate hike (from 9.5% to 20%) and a variety of capital and regulatory easing measures. Strong capital controls have been introduced, including prohibitions on foreign investors selling Russian assets, a decree for exporters to repatriate 80% of revenue, as well as strict restrictions on residents' ability to buy FX or make overseas payments. Coupled with the ongoing external surplus (Russia's current surplus totaled USD 20bn in February; while exports have been disrupted since, high energy prices and falling imports will have maintained a high surplus) capital controls have helped drive a rally in the official RUB exchange rate, but at the cost of effectively ending RUB convertibility.

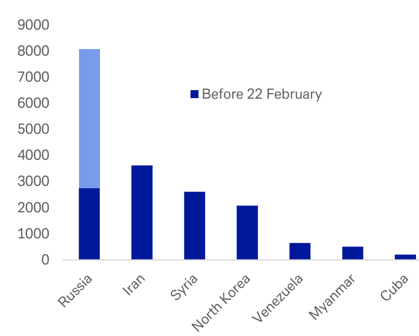
...but the economic crisis will deepen. The above factors have helped prevent a full-blown EM financial crisis from emerging, but the economic shock will likely deepen in the coming months. First, the real income shock will worsen. The spike in the weekly inflation data has been around 2.5x stronger than during the 2014-15 crisis. This run rate is slowing, with moderation in selected categories that saw very sharp initial spikes (holidays, electronics, cars, etc.), but price pressures are broadening and we expect inflation to peak at around 25% in the coming months. Second, the resilience in high-frequency domestic activity indicators during March,

Figure 74: US sanctions introduced against Russia

Date	Sanctions
February 24th	Restrictions on issuance of new debt and equity Restrictions on transactions in dollars, full blocking of several banks Russia-wide ban on exports of critical technologies, especially defence
February 26th	Asset freeze for Russian central bank announced
March 2nd	Russian defence firms are added to SDN Export restrictions on oil refining Russian carriers are banned from US airspace SWIFT ban - Sberbank and Gazprombank excluded
March 3rd	Media bans, the list of sanctioned individuals expanded
March 8th	Ban on imports of Russian commodities, including crude oil and products, LNG, coal and products New investment and its financing in Russian energy sector is prohibited
March 11th	Import ban on Russian seafood, alcohol and non-industrial diamonds Export ban on luxury goods New investment in any sector of the Russian economy is restricted Supply of dollar banknotes to Russia is prohibited
March 17th	The House supported revoking Russia's most-favoured-nation status
March 24th	Sanctions extended to more companies and individuals

Source : This table lists key sanctions introduced or supported by the US since late February. Most of these have been matched by the EU, although the US has gone further in several areas, notably including commercial bank sanctions and embargo of fossil fuel imports.

Figure 75: A sharp broadening of sanctions against Russia



Source : Castellum.AI, Deutsche Bank, Data as of 31 March 2022 in part, reflects a crisis front-loading of demand. Third, the impact of trade disruptions – for instance, import shortages weighing on production – will broaden over time. Fourth, the ensuing credit crunch will deepen.

Economic authorities will have to make difficult policy choices. While capital controls have helped to stabilise the currency, over time these will further damage the investment climate and lead to negative side effects on the financial system (including via growth of a black market for FX). The CBR will have to strike a delicate balancing act between ensuring financial stability and easing capital controls (in our baseline scenario, we expect very gradual easing of capital controls and of the policy rate to begin in H2 2022). The CBR will also have a difficult job balancing between the depth of the credit crunch and the ability to bring down the spike in inflation and inflation expectations. Meanwhile, measures such as bankruptcy moratoria may limit the initial financial contagion but would also bring negative financial and growth side effects if persistent. Even in the best-case scenario, it will take years for the monetary and fiscal authorities to regain the strong macroeconomic policy credibility that had emerged since 2015.

We expect an initial decline in activity that is moderately worse than 1998 and 2008-09… We expect annual GDP to decline by c.8% in 2022. The extent of the 2022 average decline will be limited by the positive carryover from the 2021 recovery and the early 2022 performance. On a peak-to-trough basis, we expect the contraction to be slightly larger than the c.10% declines seen during the 1998 and 2008-09. More importantly, the prospects for a future recovery will be much weaker than in these previous crises, with a further GDP decline in 2023 (DBe -2.5%).

… and with a much weaker recovery potential. The big difference compared with the 1998 and 2008-09 crises is that while these were primarily cyclical recessions, the current crisis represents major and persistent supply-side destruction. This will take place via a number of channels. First, trade ties have been severely damaged. "Unfriendly" countries account for over 50% of Russia's trade, while China accounts for 15% of exports and 25% of imports, respectively. The ability of Russia's economy to reorient externally will be limited. Second, even insofar as Russia is able to reorient its trade towards other regions, it will lose access to key Western technologies. Russia has been able to achieve import substitution successes in low-tech sectors (e.g., agriculture) but it has struggled to do so in technologically advanced sectors (e.g., aircraft).

Third, the withdrawal of Western companies from Russia will result in an even more state-centric economy, weighing further on productivity growth. The increasing need for natural resource revenues to support incomes of workers in unproductive state-controlled segments of the economy will also increase the fiscal burden over time. As a result, Russia will be left even more reliant on commodity revenues and exposed in the event of a future downward correction in commodity prices. Lastly, a brain drain will weigh on the long-term potential of the economy (which already faces a strong drag from ageing). Early evidence points to emigration out of Russia well into the hundreds of thousands since the invasion of Ukraine. This trend is likely to continue. While the magnitude of the exodus may be small relative to the overall size of the labour force (75 million), those leaving will generally have higher human capital (younger and more educated workers). Together with decoupling from the West, this will damage high-growth service sectors of the economy (such as IT).

Two-sided risks but tilted to the downside. The depth and duration of the economic crisis remains highly uncertain and will depend on the outcome of the war and the direction of sanctions. On the upside, a stable peace settlement could limit the depth of the 2022 decline. Damage to the economy's potential will still be severe, but may allow for a more gradual adjustment as the withdrawal of Western companies and the decline in energy exports to Europe are less sudden. In a downside scenario – with a broad European energy embargo, stringent use of secondary sanctions and near absolute withdrawal of Western companies – materially more extreme economic outcomes would come into view. The crisis would become more directly comparable with the early 1990s, with a decline of activity by a quarter, or even more, over the next few years. Inflation would rise into mid-to-high double digits as authorities struggle to meet fiscal needs without resorting to monetary means.

Risks to political stability limited but rising in the long-run. Limited opinion polling suggests that the Kremlin has largely managed to keep control of the domestic narrative around the "*special military operation*" and the ensuing economic crisis. The near-term risks from popular discontent or elite insurrection to regime stability are likely very limited. However, much of the domestic support for the Kremlin's stance may be perfunctory and it would be wrong to draw strong conclusions over long-term stability. Popular discontent may rise as the economic costs become deeper. Russia has moved from facing few economic stability risks on a 5- to 10-year horizon to having to navigate a severe structural economic crisis. This will inevitably raise the risks to domestic political stability in the coming years. A geopolitical implication to consider is that the long-term economic deterioration will weaken the capacity of the Russian state to project its power on the global stage.

Peter Sidorov

IV. Outlooks for financial markets

A. Equities

There were 3 drivers of the Q1 correction in equities. The first phase of the pullback was driven by mega cap growth (MCG) & Tech stocks on earnings concerns given high valuations since the pandemic. The second phase was driven by geopolitical escalation, starting on Feb 11 with President Biden's speech on the imminent invasion by Russia of Ukraine. Over 17 trading days, the market fell 7.4% and then recovered its prior level very quickly in 6 trading days. This pattern conforms with the typical trajectory of the S&P 500 around geopolitical events and risks historically, which saw sharp short-lived selloffs for 3 weeks of 6-8%, then recovering prior levels in 3 weeks. After which, the economic context dominated, with the market typically going back to the prior prevailing trajectory. The third driver has been concerns about the Fed's hiking cycle, whose impacts look to have been more episodic than persistent. These concerns stem from observations that 8 of the 11 Fed hiking cycles (73%) ended in recession, the 2s10s curve viewed as a leading indicator of recessions is near inverting, and higher rates seen as compressing multiples.

What do the drivers imply going forward? The first driver of the pullback, the excessive valuation premium in MCG & Tech, has been an ongoing concern for 20 months. The group has gone sideways vs the S&P 500 since July 2020 and the valuation premium has fallen, but in our reading remains somewhat above what we see as fair value (40%). But a correction in the premium does not require a market correction as relative valuations can correct through faster earnings growth, which for the group is the fastest in the market. The second driver, geopolitical risk, looks to have already played out in line with the historical playbook in terms of its market price impact. On the Fed's hiking cycle, the focal point of current market concerns, we note that while almost three-quarters of them ended in recession, on average this took 2 years, which would put the recession in the spring of 2024. Equities tended to peak 3-6 months before the recession began, which would put the peak in late 2023. We note that equity price returns were robustly positive in the first year of Fed hiking cycles, with 10/11 cycles seeing positive returns that averaged 7% one year in, again suggesting it should not impact equity returns this year. What about the yield curve inversion? In our reading, at a behavioral level what an inverted 2s10s curve is saying is that the market is pricing rate cuts possibly associated with a recession sometime between 2 and 10 years, but this is already evident from the average timing of recession following the initiation of a hiking cycle.

We maintain our forecasts for the S&P 500 (5250) and the Stoxx 600 (550) for year-end 2022; with a typical recession correction of 20% in late 2023. Our projections for equity demand-supply this year suggest equities should be well supported by strong inflows, a recovery in positioning to at least somewhat above neutral and buybacks, but this support should start to slow with growth in the second half of next year. We see some but limited impacts on European earnings from the Russia-Ukraine war and multiples recovering. In 2023, we expect equity markets to hold up well through the summer before the US falls into recession and for equities to correct by a typical 20% as it begins, before bottoming half-way through and recovering prior levels.

Binky Chadha and Parag Thatte

B. Rates: Repricing the terminal rate and the term premium

We update our yields forecasts to reflect the impact of the Ukraine war and the latest Fed and ECB call by our economists. We now expect yields to achieve a cycle peak by Q1-23 with 10Y Treasury reaching 3.3% and 10Y Bund reaching 1.75%. Yields are then expected to rally back as the Fed eases policy to support growth.

In our 2022 outlook published a few months before the Ukraine war, we expected a sharp sell-off in Q1-22 as the market repriced the Fed. But we also capped the sell-off in H2-22 as we assumed that the market would price the risk of a significant fiscal tightening in the US after the midterm elections, which would only partially be compensated by upside risks to fiscal policy in the Eurozone.

After the Ukraine war, developed economies will have to pay the price for peace, having reaped the peace dividends for three decades. In particular, fiscal policy is likely to be structurally easier in the years ahead in Europe. In the short term, fiscal policy is absorbing a significant amount of the adverse energy shock on the economy. In the medium term, significant additional fiscal spending is likely to be necessary for defence, energy independence and energy transition. Importantly, the risks to US fiscal policy are now also more balanced given the likely partisan consensus on additional defence spending.

Moreover, the latest geopolitical developments could lead to a preemptive reassessment of supply chains and global trade. Over time, this could result in higher inflation and lower growth (higher production costs) and reduced global excess savings (less FX reserve).

Lastly, we argued a year ago that the policy response to Covid-19 together with the climate transition would generate a regime shift higher in inflation. The Ukraine war is an additional negative supply shock that adds further upside pressures to inflation. As inflation expectations are adaptive, this should further consolidate the regime shift up in inflation and the perception of inflation risks. The negative supply shock will also add downside pressures on growth, especially for commodity importers.

Thus, the Ukraine war has four high-level macro implications: (1) additional upside shock to inflation, (2) downside shock to growth, (3) a structural shift higher in fiscal policy, especially in Europe, and (4) increased risks of deglobalisation. The net impact should be an increase in the terminal rate to a 3.25-4.25% range for the Fed and a 1.75-2.75% range for the ECB. Moreover, central banks are likely to start unwinding their balance sheet (QT in the US, end of QE and TLTRO repayments in Europe). The combination of higher inflation, higher inflation risks and reduced supply/demand imbalances in bond market should also support a higher risk premium in bond markets. Lastly, as the Fed tightens policy above neutral, recession risks will increase and the market will start to anticipate rate cuts.

Adding it all up, this results in UST10y at 3.3% by the turn of the year and 10Y Bund at 1.75 by Q1-23. We then expect US10y to rally back just below 3% as the market prices the Fed easing expected by our economists.

There are three main downside risks to our view. First, at the macro level, a significant fiscal tightening after the US midterm elections would create downside risks to our forecasts. Second, domestic political risk in Europe could prevent the ECB from deploying its backstop facilities against market fragmentation, thereby constraining monetary policy. Third, from a flow perspective, more persistent ALM demand may keep the bond risk premium lower than we expect.

Francis Yared

C. Credit

Coming into the year, we viewed Credit as mid-to-late cycle, and with the expectation that the low volatility environment of 2021 would breakdown and give way to a H1 selloff as markets repriced the front-end of the rates curve due to the Fed being considerably behind the curve. We then thought the still high growth outlook would win out and spreads would grind back down to end the year a bit wider than where they started. So a big round trip.

In now updating our view, we keep our 2022 spread forecasts broadly similar, which means from this starting point IG outperforms HY on a ratio basis. HY has held in exceptionally well this year, especially in the US, and now looks very expensive on a relative basis.

We've long felt that we would get a US recession by H1 2024 as our expectation was that the 2s10s curve would invert at some point later this year. We feel this is the best lead indicator of the US cycle there is. That it's inverted already is impressive and brings forward our US recession risks into late 2023 given the average 18-month lag between the two. What worries us even more though is that the shortest cycles between first Fed hike and a recession have all occurred when the Fed is still hiking when the curve inverts. This cycle is at the extreme end of this as the gap between the first hike and the first 2s10s inversion is the shortest on record (only a couple of weeks). So we think the risks to credit spreads in 2023 are all on the downside. As such, our first look at YE 23 spread levels are all at recession levels and much wider than current. The risk might be that we're being a bit too optimistic for the rest of 2022. However, we still think growth will be ok this year and that the recent backup in spreads will tempt investors in at higher all-in yields while the cycle is still ongoing.

The risks that Europe leads the cycle centres around energy. If Gas and Oil prices go sharply higher again due to the war in Ukraine, then our 2022 forecasts are too sanguine.

Jim Reid & Karthik Nagalingam

D. FX

We see developments in the energy market as the most important upfront negative for EUR/USD - elevated prices are not going away any time soon. On the flipside, further Fed repricing is becoming incrementally less beneficial to the dollar, the ECB has exceeded our (hawkish) expectations and Europe's fiscal response to offset the near-term growth impact looks sizeable. All up, we have recently downgraded our EUR/USD forecast, implying a neutral view but with a bias to buy EUR/USD around 1.10 over Q2 and a stronger bullish view thereafter (1.17 year-end).

The impact of the energy crisis. Energy remains the key transmission channel of the Ukraine war on the exchange rate. At current prices, we estimate a 150 – 200bn decline in the Euro-area energy balance over the course of the year, a little more than 1% of GDP. This is nearly a third of the impact compared with a few weeks ago, but still sufficient to take Europe's current account surplus down closer to zero.

Fiscal policy and growth. The euro has historically always behaved as a pro-cyclical currency, strengthening at times of upgraded growth expectations and vice versa. It will take some time for the market to rebuild confidence in the European growth story, but we ultimately believe this will happen. Beyond the near term, the medium-term increase in defence spending and the energy transition point to an even more supportive fiscal stance next year. In sum, while the near-term growth headwinds are a negative for the euro, these should dissipate fairly quickly in the coming months, provided the war in Ukraine does not escalate into more extreme scenarios.

Monetary policy. The ECB shift towards an exit from accommodation this year - despite the war - is the single most important reason why we are not making larger adjustments lower in the euro. We continue to emphasize two things: first, the shift of the European rate structure back to positive is likely to have significant non-linear positive effects on capital inflows. Indeed, the shift to negative rates in 2014 led to a multi-year 800bn euro swing in Euro-area portfolio flows. Second, the medium-term fiscal outlook, among others, is more conducive to a sustained repricing in European rates higher compared with the "boom bust" dynamics in the US. Indeed, while front-end rate differentials has moved in favour of the USD in recent weeks, neutral rate pricing (proxied via 4y1y) has moved in favour of Europe.

Putting it all together the outcome of the Ukraine war remains the most important driver of EUR/USD. A sharp deterioration prompting a large energy price spike, a delayed ECB lift-off versus an ever-accelerating Fed and further downgrades to growth is the clearest downside risk to our forecasts. Continued positive progress on negotiations - as has taken place in recent days - followed by eventual removal of the energy risk premium would be an important positive development.

What about the broad USD? With Fed pricing already moving above neutral, every additional rate hike priced into the Fed should have a smaller incremental positive dollar impact driven by two factors. First, even as the market prices more hikes it will likely price more easing at the same time constraining the move in long-end yields. Second, as the market downgrades US growth this will reduce funding support for an already wide US current account deficit. Indeed, our favored metric of the US basic balance has deteriorated significantly in recent months. Beyond EUR/USD, our forecasts therefore also look for a broad peak in the dollar over Q2 followed by the beginning of a broader downtrend.

George Saravelos

E. Emerging Markets

Emerging market assets – across local markets, hard currency bonds and equities – are coming out of their worst first quarter of the year since GFC, except for in 2020 when Covid-19 was first breaking out. There remain plenty of headwinds for EM, including: a) the large tail/jump risks from the Ukraine war (though arguably off their wides, and less skewed than when the war first broke out); b) the prospect of persistently tight energy and food markets keeping key input prices elevated for longer; c) the likelihood that DM central banks will be forced to tighten more (and quicker) than market pricing to correct the demand function; and d) the downside to China's growth outlook from its pandemic containment efforts. **As the stagflationary impact of the war gets more acutely reflected in data on economic activity in the coming months, it is likely to further complicate policy decision making across EM, and force increasing differentiation in a tightening cycle which is already a year old (and leading the DM cycle).**

There remain, though, two relatively encouraging factors. One, the EM 'risk smile' has proven increasing crooked, with relatively greater resilience to tightening in real rates in DM, and a relatively higher beta to any relief rally from prospects of de-escalation in the Ukraine conflict. Two, both valuations and positioning in EM assets have become decidedly more attractive versus the addition to global liquidity following the pandemic, and against relative tightening in (parts of) EM vs DM. If, and when, the Ukraine war shifts to becoming more localized; and if the Fed repricing proves incrementally less supportive for the dollar; then EM's increasingly differentiated cycle – with terminal rates coming into sight in a few places - should support the case for better returns and selective allocations**. We maintain our defensive view on EM fixed income, but increasingly focused on relative value intra-EM expressions of policy and commodity cycles, and on opportunities for spread compression versus core rates.**

LatAm stands out most in EM on both valuations and in terms of room for rates to compress versus the US across most of the region. We find the local curves pricing in magnitude and duration of monetary cycle that is increasingly at contrast with observed persistence in underlying inflation, and weakness in demand. Fiscal policies have also largely reversed; and while we still need to contend with political risks, the uncertainty there too is gradually easing. We find the monetary policy premium too high in the likes of Mexico, Colombia and Chile even as inflation-growth trade-offs for the central banks get more balanced; and the term premia in curves very low. Inflation break evens are attractive in Brazil, and the currency there has more still to catch up to the improvement in fiscal and terms of trade.

The CEEMEA geography is more differentiated. CE3 policy has actively kept pace on real rates; FX there have cheapened into the risk premium built since the Ukraine war began; and the prospect of EU help to deal with the refugee crisis could help with containing fiscal costs. PLN looks relatively the most attractive on valuations and positioning; while Hungary is a good example of where rates have overshot fundamentals. Inflation pressures remain relatively better contained in South Africa, and its terms of trade partly helped by higher commodity prices. We think SARB will tighten only gradually. Turkish assets we think will remain subject to a high level of policy unpredictability and realized vol, with both inflation and the current account gap likely to remain extremely elevated through the year.

Asia's challenges are compounded by both its relatively high terms of trade exposure to commodities, and given China's struggles to convince markets about its willingness and ability to arrest downside in its economy. The policy cycle in the region has lagged most of other EM given a deeper impact from the pandemic on output gaps (in part because of harsher containment measures), and more subdued inflation pressures. With activity bouncing back as the region (ex-China) reopens, and given the supply shock from the Ukraine conflict; the reaction functions are likely to get more differentiated. We think the bias of risk on RMB has turned more negative. India and the Philippines still look most under-priced to the level of real rates and the impact of commodity price shock on external balances. Korea is the only market in the region that has likely overpriced tightening. We remain relatively constructive on Indonesia vs other high yielding EM.

Sameer Goel

Appendix 1

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