Global Economic Outlook

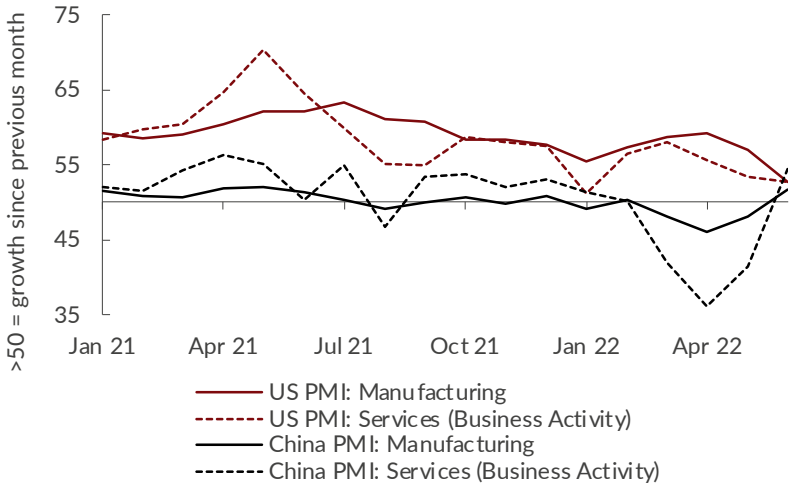
By Corrado Macchiarelli and Barry Naisbitt with Janine Boshoff, Ian Hurst, Iana Liadze, Xuxin Mao, and Patricia Sanchez Juanino[1]

Context

As the war in Ukraine drags on, the human cost of this tragedy gets ever higher. At the same time, increased commodity prices and the effects of sanctions are causing additional pain to the global economy.

The global composite PMI index continued its downward trend since early 2021 in May and, excluding China, edged down further in June. However, an increase in activity in China raised the overall index to a four-month high of 53.5 in June, signalling continued, but subdued, output growth, with optimism about the year-ahead outlook for growth dropping to a 21-month low. The PMI index indicated that, after two months of falling activity, global manufacturing industry returned to growth in June and service sector business activity was at a four-month high. In China, as the disruptions to economic life in several localities eased with lower numbers of Covid-19 cases and fewer lockdowns, the manufacturing PMI increased from 48.1 in May to 51.7 in June showing a rebound in activity. The services business activity index showed a more marked improvement, rising from a low of 41.4 in May to return to expansion at 54.5 in June. The revival of activity in China remains fragile and still reflect the continuing incidence of the pandemic with recent lockdowns having resulted in difficulties for shipping items due to the reduction in port traffic which has contributed to the continued supply difficulties and influenced the rise in inflation.

Figure 3 Recent trends in global PMIs (index)



Source: Refinitiv Datastream, J.P.Morgan, IHS Markit.

Economic activity in the US has weakened in recent months. In June the services PMI was 52.7, still signalling expansion but at a slower pace than in the previous three months and, faced with rising inflation and interest rates, business confidence was reported to have dropped to a 21-month low. While the manufacturing PMI showed industry still expanding in June (at 52.7), the index went sharply down in May (57.0) which is the lowest in two years (Figure 3). The signs of slowing US economic activity follow the unexpected fall in GDP in the first quarter of the year which was due to a negative net trade effect in the quarter rather than weakness in domestic demand.

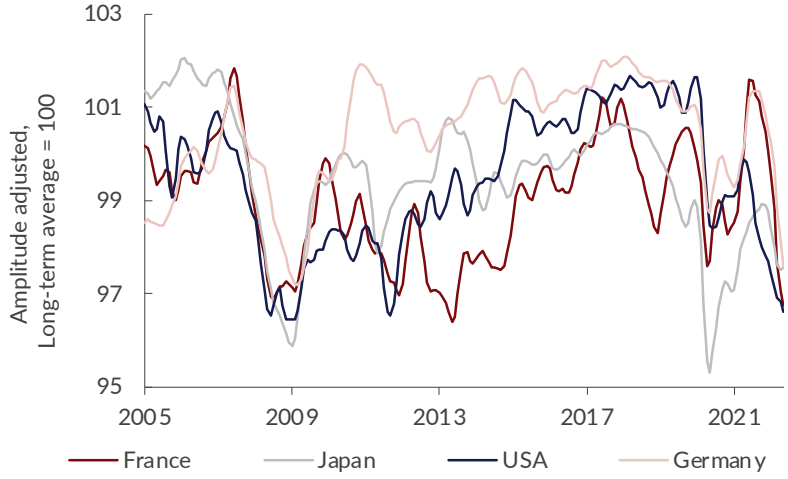
Economic activity in the Euro Area has slowed in recent months too. The composite PMI declined from 54.8 in May to 52.0 in June, the lowest reading since March 2021. While this reading indicates activity is still increasing, the

1 We would like to thank Jagjit Chadha and Stephen Millard for helpful comments and Joanna Nowinska for preparing the charts and the database underlying the forecast. The forecast was completed on 18 July 2022. Exchange rate, interest rate and equity price assumptions are based on information available to 8 July 2022. Unless otherwise specified, the source of all data reported in tables and figures is the NiGEM database and NIESR forecast baseline. All questions and comments related to the forecast and its underlying assumptions should be addressed to Iana Liadze (enquiries@niesr.ac.uk).

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pace of expansion has dropped sharply with the index at a 14-month low in France, a 6-month low in Germany and a 5-month low in Italy. In contrast with the US, policy interest rates had not yet risen in the Euro Area at the time of the survey, but the prospect of higher rates (as well as higher inflation) may be weighing on economic activity. With the manufacturing PMI already at a 22-month low in June (and that experience shared widely within the Euro Area) and the effects of higher energy prices and the embargo feeding through, business sentiment was reported by S&P Global to have fallen to its lowest since May 2020.

Figure 4 Consumer confidence (index, long-term average = 100)



Source: OECD.

Consumer confidence has fallen in the advanced economies since mid-2021. Despite overall economic recovery since the economic shock from Covid-19 and the associated lockdowns in 2020, the rise in inflation this year has shaken economic confidence further. Although labour markets remain in strong positions, with the US unemployment rate unchanged over three months at 3.6 per cent in June, and the unemployment rate falling to 6.6 per cent in the Euro Area in May, the rise in inflation is biting deeply into households' real incomes and, especially with rising interest rates, their confidence about their economic outlooks. The latest OECD consumer confidence indicators show that consumer confidence has fallen sharply throughout the OECD (Figure 4). In the US and the Euro Area, the May readings (of 96.6 and 96.1, respectively) are lower than during the Covid-19 crisis in 2020, and consumer confidence has fallen sharply since last October.

The speed of recovery in demand, boosted by the monetary and fiscal policy responses to the Covid-19 epidemic in advanced economies, has, at a time of disturbances to supply chains, also contributed to rising inflation. Inflation in most advanced economies has been much stronger than generally anticipated a year ago and the idea of the rise being only a transitory affair has disappeared. The effects of Russia's war on Ukraine, particularly on energy and food prices, have added to the inflationary surge. In the US and the Euro Area consumer price inflation has continued to increase ahead of forecasts this year, reaching multi-decade highs, with annual CPI inflation at 9 per cent in the US in June, and 8.6 per cent (HICP) in the Euro Area (Figure 5). The rapid increase in consumer prices, especially for energy and food, are squeezing consumers' spending power and contributing to the falls in consumer confidence, slower demand growth and challenges to economic policymakers.

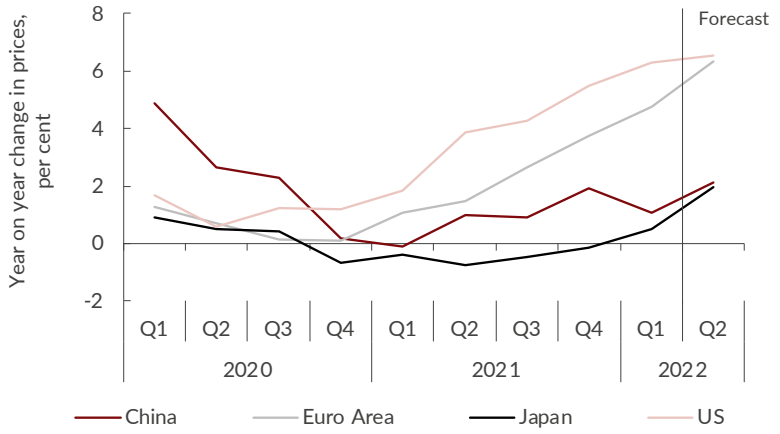
Prior to the war in Ukraine the general expectation in the major advanced economies was that the peak in annual inflation would be in the early part of this year. However, the sharp increases in oil, gas, wheat, and other commodity prices due to the war now threaten to keep inflation rising during the second half of this year, with a tighter real income squeeze on consumers in advanced economies. However, if the spikes in commodity prices stabilise and supply disruptions ease, annual inflation should ease in 2023. The extent to which inflation will come down will partly depend on the CPI basket composition, how much of the observed inflationary pressure will affect its 'stickier' components (Mortimer-Lee, 2022), and how far expectations of inflation will increase.

Higher than expected inflation has raised the risk of above target inflation becoming embedded. In response to this risk, many central banks have started to raise policy interest rates and reverse quantitative easing (i.e., quantitative tightening). As an example of how rapidly the policy outlook has changed, in September 2021 the median projection for policy rates by the US Federal Reserve (the Fed) in 2023 was 1.0 per cent. Following the June and July 2022 meetings, that projection had

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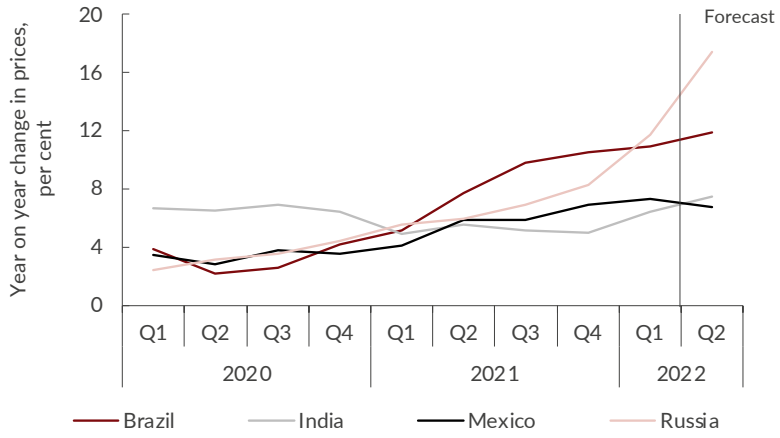
been raised to 3.8 per cent and was a full 1 percentage point higher than the projection made just three months earlier. The Fed raised policy rates for the second consecutive time in July by 0.75 percentage points in a bid to have "a period of growth below potential in order to create some slack".[2] The Bank of Canada has also raised policy rates, by 50 basis points in both April and June. The European Central Bank (ECB) increased its main policy rates by 50 basis points in mid-July.

Figure 5 Annual inflation since 2020Q1 – major economies (per cent)



Note: inflation for the US, Japan and Euro Area is based on consumer expenditure deflator.
Source: NiGEM database and NIESR forecast.

Figure 6 Annual inflation since 2020Q1 – major emerging market economies (per cent)



Source: NiGEM database and NIESR forecast.

Higher inflation and tighter monetary policy are not just advanced economy themes (Figure 6)**.** Central banks in Brazil, South Korea, Mexico and South Africa increased their policy interest rates before the tightening in advanced economies this year. The sharp increase in US policy and market interest rates so far this year has led to currencies depreciating against the US dollar, putting more upward pressure on inflation in emerging market economies. The increases in commodity prices that followed the start of the war in Ukraine are also likely to intensify pressures on economies that are most dependent on imported food and oil. However, oil and food exporters are likely to see benefits to their export positions.

High food and energy prices may have geo-political, as well as economic, effects (see Box B)**.** With household budgets stretched to breaking point, more voters across the globe are demanding that their governments cap the price of food and other essentials, and this has led to demonstrations in, e.g., the Netherlands, Belgium and Italy. Protests are spreading in many emerging economies where inflation has hit even harder. In Sri Lanka, increasing inflation has contributed to a deep political and economic crisis. Protests on inflation and living costs have also

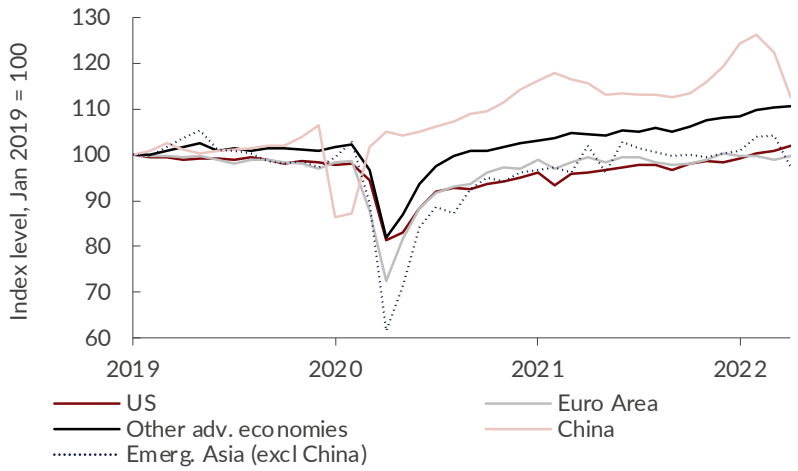
2 https://www.wsj.com/articles/transcript-fed-chief-powells-postmeeting-press-conference-11658955710

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occurred in Albania, Argentina, Panama, Kenya, and Ghana.

After initially recovering from the sharp Covid-related fall in 2020, world trade activity stalled in early-2021 as supply-chain disruptions hit. After growing again as 2021 passed, the reappearance of Covid-related disruptions, especially in China, has led to a dip in trade activity again early this year, with the volume of world trade in the three months to April estimated to be slightly lower than in the previous three months (Figure 7). This slowing in the expansion of trade is widespread, although the growth in trade by Latin American countries remains strong. The gradual removal of restrictions on international travel and the reduced severity of recent Covid-19 variants has contributed to increased tourism but trade patterns generally remain at risk to a revival in severe Covid-19 cases and actions to stop the spread of the virus leading to supply chain dislocations and restrictions in shipping activity.

Figure 7 Recent trends in world goods trade (index, January 2019 = 100)



Source: Netherlands Bureau for Economic Policy Analysis (CPB), World Trade Monitor.

Benchmark forecast and risks

Assumptions

The war in Ukraine will continue to affect global economic activity via commodity price volatility at least into early 2023. There has been no sign of a resolution to the war, and there are prospects of further disruptions of oil and gas supply from Russia, particularly towards the second half of the year, which will feed into more global economic uncertainty. With their high reliance on Russian gas and oil, European countries are facing mounting tasks in maintaining growth and controlling inflation.

While we retain the assumption made in the Spring Outlook that Covid-19 is largely under control, there have been renewed Covid-19 lockdowns in China which have exacerbated global supply-chain disruptions and slowed global economic growth, while Covid-19 infection numbers globally continue to increase. China has maintained its Zero-Covid-19 policy and locked down various big cities aiming to track down every single infection in the community. With the more infectious strains of Covid-19's Omicron variant, there are worries of renewed lockdowns across many parts of that country. We have revised down our 2022 forecast for Chinese GDP growth from 4.9 per cent to 3.9 per cent with the assumption that there is no significant change of course in China in terms of its tight Covid-19 control policy. This change alone accounts for around 0.2 percentage points off our projection for global economic growth in 2022.

On monetary policy, while we still expect higher interest rates in advanced economies over the next two years to tackle surging inflation, there is a disparity in market implied expectations of interest rates in the United States and the Euro Area. Inflation is likely to stay higher for longer than markets expected back in April and possibly take longer to react to rate rises. With the increasing risk of a recession this year, the Fed has signaled at some point they might slow down the pace of increase to assess the impact of recent hikes. Meanwhile, the ECB has now raised interest rates for the first time in more than a decade (see Box A).

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On fiscal policy, where we assume that governments stick to current published fiscal plans, we expect continued fiscal restraint in many developed countries. The Brookings Institute's Hutchins Center Fiscal Impact Measure (FIM) projects waning effects on US GDP of the previous Covid-related stimulus until the first quarter of 2024. In order not to neutralize any ECB efforts to tame inflationary pressures in the Euro Area, there has been a growing consensus across Europe on neutral or even slightly contractionary fiscal policy in the short term.

On exchange rates, we assume that the US dollar appreciates against most other major currencies with more volatility to reflect the risks and uncertainties in the world economy. Amid the continuing war in Ukraine and increasing interest rates in the US, the Euro is depreciating and is now at parity with the US dollar. In the medium term, we assume that exchange rates move in line with the uncovered interest parity condition based on interest rate differentials. Corporate bond spreads are also expected to converge gradually towards their long-term averages.

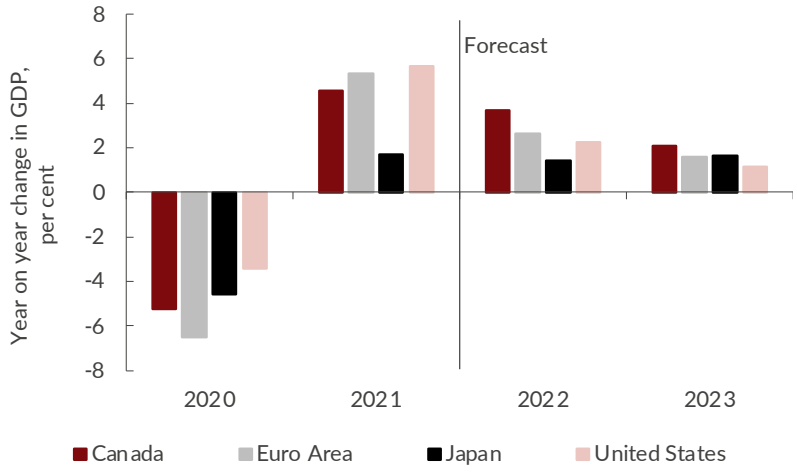
Oil prices are expected to remain high this year and increased volatility appears likely. The price of Brent crude remained above $102 per barrel (pb) in the first two quarters of 2022. In line with the US Energy Information Administration (EIA) assumptions, we assume that the global oil price will remain high this year and only fall gradually in 2023 to $97 pb, which is 11 per cent higher than our Spring forecast assumption. We assume higher commodity prices in general in this forecast than in April. Full details of these assumptions are in Appendix A.

Economic activity

Our forecast projects a further economic slowdown in developed economies and we have revised down our 2022 and 2023 GDP growth forecasts (Figure 8)**.** The United States is now projected to grow by 2.3 per cent in 2022, down from 3.5 per cent in our Spring forecast and 1.2 per cent in 2023. The United States' sluggish economic performance is going to severely affect other world economies.

We expect the adverse effects of the war in Ukraine to be more significant in the Euro Area than elsewhere and have revised down our forecast for growth in 2022 accordingly. In 2022 the Euro Area is now projected to grow by 2.6 per cent, 0.4 per cent lower than we expected three months ago. As there is no quick way out of the Euro Area's dependence on Russian oil and gas, we expect growth to slow down in the second half of the year, as Winter will drive up the European demand for energy. In Germany, the largest European economy, the annual inflation rate reached 7.9 per cent in May, the highest it has been since reunification in 1990. With the growth rate in 2023 revised down by 0.7 percentage points, to 1.6 per cent, more active policies are needed if the Euro Area is to avoid stagflation. If Germany and Italy take stronger steps in the short-term to cut gas imports from Russia, the result would likely be even slower growth (see Risk Scenario).

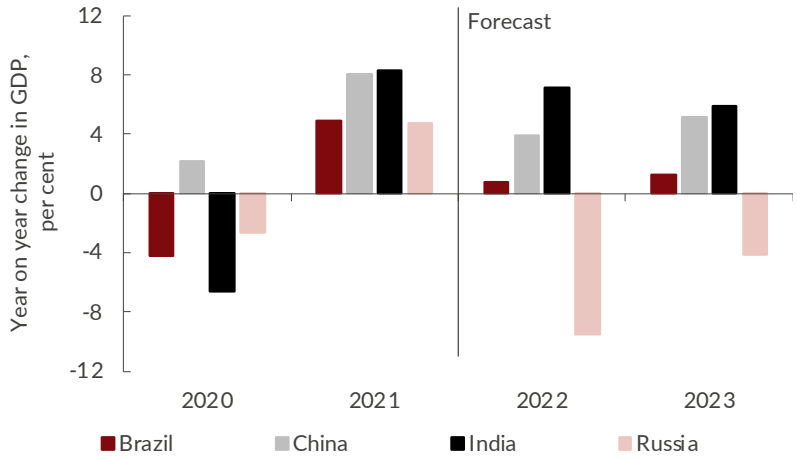
Figure 8 GDP growth in advanced economies (annual, per cent)



Source: NiGEM database and NIESR forecast.

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Figure 9 GDP growth in emerging economies (annual, per cent)



Source: NiGEM database and NIESR forecast.

Amid the global economic slowdown, we revised down our projection for GDP growth in Japan in 2022, from 2.4 percent three months ago, to 1.4 per cent. While Japan's inflation is not as high as its G7 counterparts, we have revised up the projection for its annual rate in 2022 to 1.6 per cent.

Emerging market economies have also been affected by higher inflation and slower growth. The GDP growth rate in the BRIC+ economies in 2022 is projected to be 3.1 per cent, marginally faster than the global average of 2.8 per cent. Major emerging economies still show significantly different growth rates among themselves in 2022 (Figure 9), with India and China growing at fast paces relative to other economies and output in the Russian economy being severely affected by the war and the embargoes.

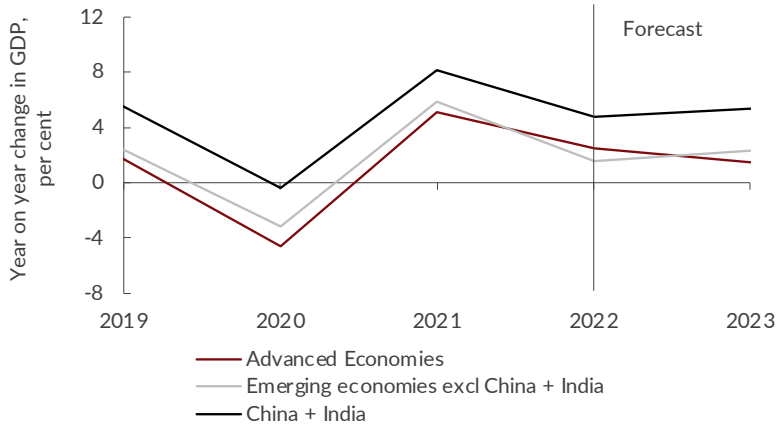
China's economy has been slowing down; we now expect growth of 3.9 per cent in 2022, compared with 4.9 per cent in Spring. China's economic performance has been affected by Covid-related strict lockdowns in Shanghai and many other cities, sluggish performance in housing markets, and uncertainty related to the 20th Party Congress which will determine the country's trajectory for years to come. Meanwhile, there are some signs that Chinese growth may have bottomed out. China's Manufacturing Purchasing Managers' Index was back above 50 in June. The Chinese government has launched more fiscal stimulus and will cut bank's reserve requirements further to spur the economy. There are also indications that the government might decide in favour of loosening the Zero-Covid policy to stimulate production and consumption.

India is still expected to have strong growth at 7.2 per cent in 2022. India stands out with its high consumer spending on both discretionary and essential items, while its 7 per cent annual inflation rate in June is still above the RBI's target range of 2 to 6 per cent. Looking ahead, capital investment will be a key component to sustain the economic recovery as will continued macroeconomic stimulus through both monetary policy and fiscal policy.

Among other BRICS+ countries, double digit inflation has haunted Brazil's economy for nearly a year, mainly due to fuel and food price increases, and we expect GDP growth to fall from 4.9 per cent last year to 0.7 this year following fiscal tightening. In Russia, the negative effects of the war are reflected in more than 16.5 per cent inflation and a projected decline in GDP of more than 9 per cent in 2022 (see also Liadze et al., 2022). Inflation in South Africa also rose in May (to 6.5 per cent) with higher fuel and food prices. Full details of the forecast are shown in table 2 and Appendix B.

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Figure 10 GDP growth in emerging and advanced economies (annual, per cent)



Source: NiGEM database and NIESR forecast.

Slower world trade growth is contributing towards slower global economic growth. We have revised down our forecast for world trade growth in 2022 from 3.7 per cent to 1.9 per cent, and for 2023 from 3.6 per cent to 2.9 per cent. High inflation and the war in Ukraine continue to be the main driving factors behind the sluggish recovery of global trade, together with ongoing Covid-related restrictions in China disrupting global supply chains.

In the medium term, we expect that the world economy will gradually recover. After downbeat increases of 2.8 per cent and 2.9 per cent in world GDP and trade respectively in 2023, between 2024 and 2028, we expect the world economy to see average annual increases of 3.0 per cent in GDP and 4.2 per cent in world trade. These remain, however, slower than in the five years prior to the pandemic.

Table 2 Forecast Summary — percentage change

	Real GDP[a]												World Trade[b]
	World	OECD	China	India	BRICS+	Euro Area	USA	Japan	Germany	France	Italy	UK	
2020	-3.1	-4.6	2.2	-6.6	-1.3	-6.5	-3.4	-4.6	-4.9	-7.9	-9.1	-9.3	-8.1
2021	6.1	5.5	8.1	8.3	7.3	5.3	5.7	1.7	2.9	6.8	6.6	7.4	10.0
2022	*2.8*	*2.6*	*3.9*	*7.2*	*3.1*	*2.6*	*2.3*	*1.4*	*1.8*	*2.2*	*2.4*	*3.5*	*1.9*
2023	*2.8*	*1.5*	*5.2*	*5.9*	*4.0*	*1.6*	*1.2*	*1.6*	*1.5*	*1.5*	*1.3*	*0.5*	*2.9*
2024-2028	*3.0*	*1.7*	*4.8*	*5.6*	*4.4*	*1.6*	*1.6*	*0.9*	*1.5*	*1.7*	*1.2*	*1.6*	*4.2*

	Private consumption deflator									Interest rates[c]			Oil ($per barrel)[d]
	OECD	Euro Area	USA	Japan	Germany	France	Italy	UK	India	USA	Japan	Euro Area	
2020	1.7	0.6	1.2	0.3	0.7	0.9	-0.2	1.1	6.6	0.5	-0.1	0.0	43.0
2021	3.8	2.2	3.9	-0.4	3.0	1.6	1.6	2.4	5.1	0.3	-0.1	0.0	69.9
2022	*9.6*	*5.7*	*5.6*	*1.6*	*5.5*	*3.6*	*5.0*	*9.1*	*7.3*	*1.8*	*-0.1*	*0.3*	*103.6*
2023	*6.2*	*3.1*	*3.0*	*1.1*	*3.1*	*2.8*	*3.1*	*6.5*	*5.2*	*3.6*	*-0.1*	*1.3*	*96.1*
2024-2028	*2.9*	*2.1*	*2.2*	*0.9*	*2.1*	*2.1*	*2.2*	*2.3*	*4.3*	*3.4*	*0.3*	*1.7*	*95.9*

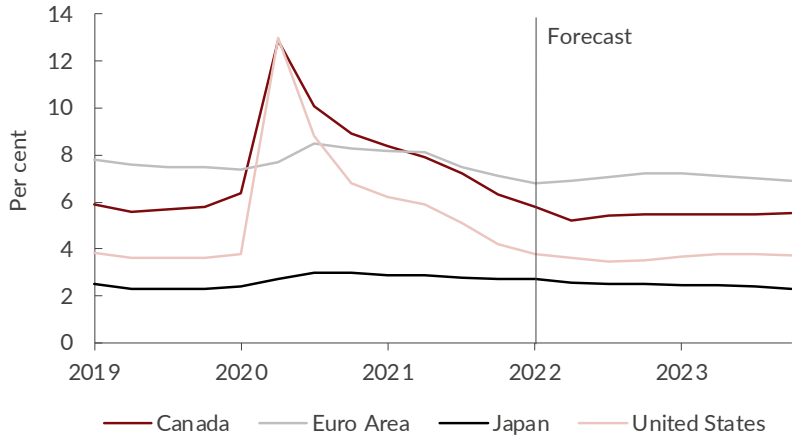
Notes: BRICS+ includes Brazil, China, Russia, India, Indonesia, Mexico, South Africa, Turkey. [a] GDP growth at market prices. Regional aggregates are based on PPP shares. 2017 reference year. [b] Trade in goods and services. [c] Central bank intervention rate, period average per cent. [d] Average of Dubai and Brent spot prices.
Source: NiGEM database and NIESR forecast.

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Unemployment

Unemployment in many advanced economies fell during 2021 when the world economy started to recover from the Covid-19 pandemic. In the United States, the unemployment rate in both May and June stood at 3.6 per cent, with the number of unemployed people falling by 38 thousand, to 5.912 million. Labour markets in the Euro Area have been in much better shape than in 2021 and unemployment reached a record low of 6.5 per cent in May (Figure 11).

Figure 11 Unemployment rates (per cent)



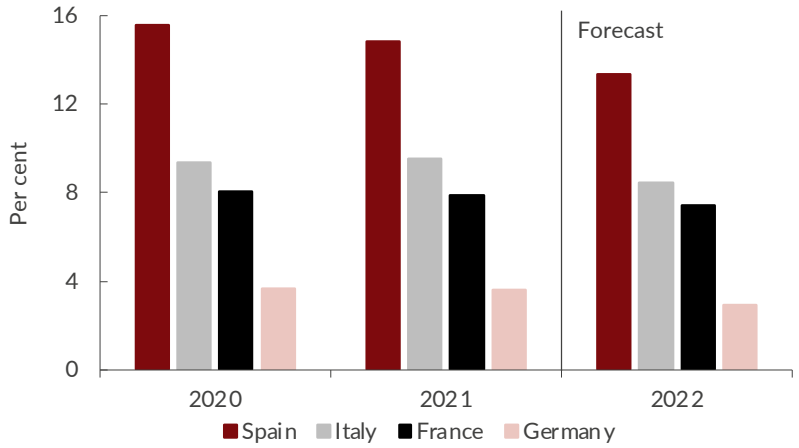
Source: NiGEM database and NIESR forecast.

However, there are still worrying signs in labour markets amid the global slowdown. Even though unemployment has been declining since the beginning of 2021 in most advanced economies, as the result of the recovery from the pandemic, we expect increasing inflation and interest rates to lead unemployment rates in advanced countries to stop falling. While the unemployment rate remains comparatively low in the United States, the labour force participation rate has been edging down, reaching 62 per cent in June. In Japan, the unemployment rate increased in May by 0.1 percentage points, to 2.6 per cent, with further increases expected in the coming months. In the Euro Area, there is still a huge disparity across economies. While we expect the Netherlands to maintain an unemployment rate at around 4 per cent in both 2022 and 2023, Italy and Spain are projected to see high unemployment rates (above 8 per cent and 13 per cent, respectively) during the same period (Figure 12).

With more severe impacts felt by low-income countries, we expect unemployment in these countries to rise. As the war in Ukraine continues to disrupt activity and global trade and drive up food price inflation, and fiscal and monetary policy easing is withdrawn in many advanced economies, low-income countries will struggle with increasing capital misallocation and inequality.

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Figure 12 Unemployment rates in the Euro Area (annual average, per cent)

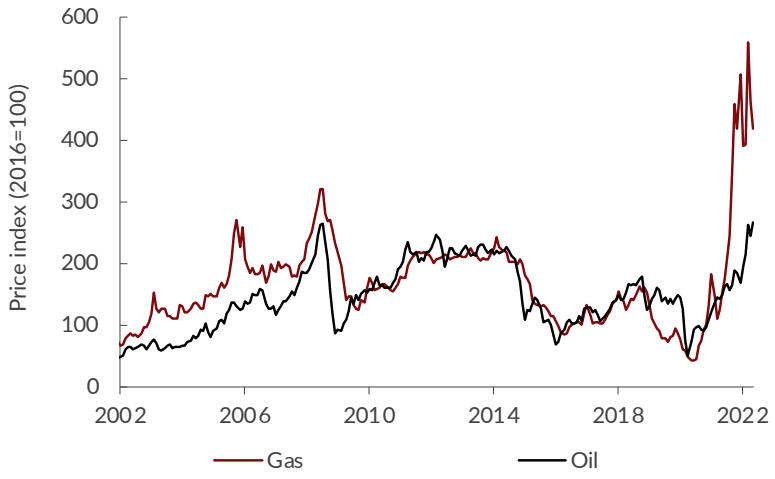


Source: NiGEM database and NIESR forecast.

Inflation

Annual OECD inflation more than doubled between 2020 and 2021, from 1.7 per cent to 3.8 per cent, and is currently forecast to reach 9.6 per cent. Before the war in Ukraine started, we had expected the rate of inflation to increase further, to 5.3 per cent this year. But the additional pressures from rising energy, food and commodity prices (Figure 13), together with renewed disruption to supply chains from the Covid-19 outbreaks in China this year, have led us to increase that forecast to 9.6 per cent.

Figure 13 Commodity prices (index, 2016 = 100)



Source: IMF Commodity price database.

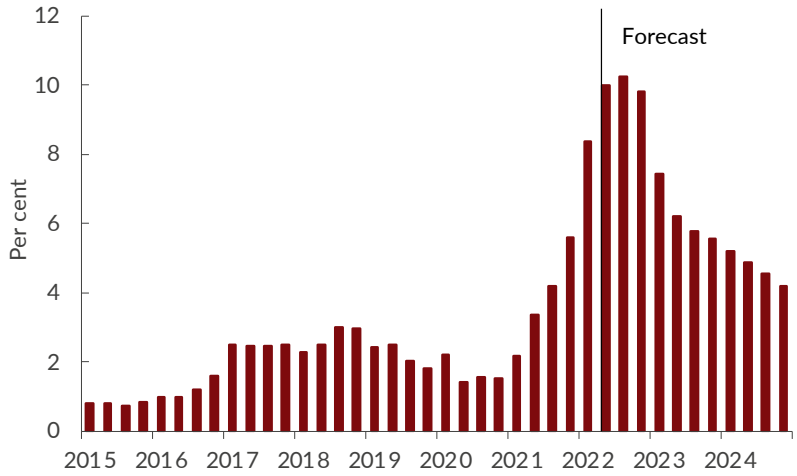
We continue to forecast that OECD inflation will be lower in 2023 than in 2022 but have increased our forecast for next year from 4.4 per cent to 6.2 per cent as the momentum from the sharp increase in 2022 feeds through. While we expect inflation to drop further in 2024, to 4.7 per cent, as a combination of the slowdown in growth, monetary policy tightening, and the peaks in oil and gas prices receding, the period of above target inflation will be longer than expected a year ago. It remains possible that an early end to the war could lead to commodity prices falling back more quickly than anticipated but, even in that case the period of high inflation will be prolonged.

The increase in inflation has spread more widely this year although the headlines are driven by the high inflation readings in the G7 economies. The average OECD annual inflation rate is shown in Figure 14, with the combination

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of aggressive fiscal and monetary loosening in response to the challenges posed by the Covid-19 pandemic and the speed of the underlying recovery contributing to a rapid rebound in demand last year and early this year at a time when supply chain disruptions caused by Covid-19 restrictions limited the supply response, reinforcing the increase in inflation from energy and commodity prices.

Figure 14 Average annual OECD inflation (per cent)



Source: NiGEM database and NIESR forecast.

Monetary authorities, in advanced economies especially, initially tried to 'look through' what was seen as a temporary increase in inflation. It was expected that, as the recovery proceeded and supply-chain problems were resolved, inflation would slow. However, the increase in inflation has been stronger and more prolonged than anticipated a year ago as new shocks have hit. Higher energy prices caused by the war and the embargoes in response to Russia's aggression have squeezed households' real incomes and added to the urgency to tackle inflation. Our central view remains that the pace of inflation will ease next year but prices will continue rising at a rate above inflation targets through 2023 and into 2024. Tighter monetary policy will assist in this process, with most major central banks having already increased policy interest rates and halted (if not reversed) asset purchase programmes. In the US, markets and the Fed are converging on the view that inflation might possibly settle at around 3 per cent starting from next year.

While we have assumed that in the medium-term commodity prices follow market expectations, developments in labour markets will be very important for the longevity of high inflation. Labour markets have tightened over the past year in advanced economies as economic activity has expanded. However, employment is still widely below pre-pandemic levels and, with vacancies high, some sectors and occupations are reporting labour shortages which, in part, reflects reduced labour supply. If participation does not increase, this could point to upside risks to inflation, especially if international restrictions on labour mobility develop further. Such effects could be particularly acute for agriculture and those service sectors that rely on seasonal and cross-border employees. The combination of tight labour markets and high inflation could lead to higher wage increases and higher prices if companies pass on labour cost increases to consumers to avoid an erosion of profit margins. The expected slowing in economic growth is likely to play a role in moderating wage inflation, especially if labour markets slacken and medium-term inflation expectations do not rise substantially.

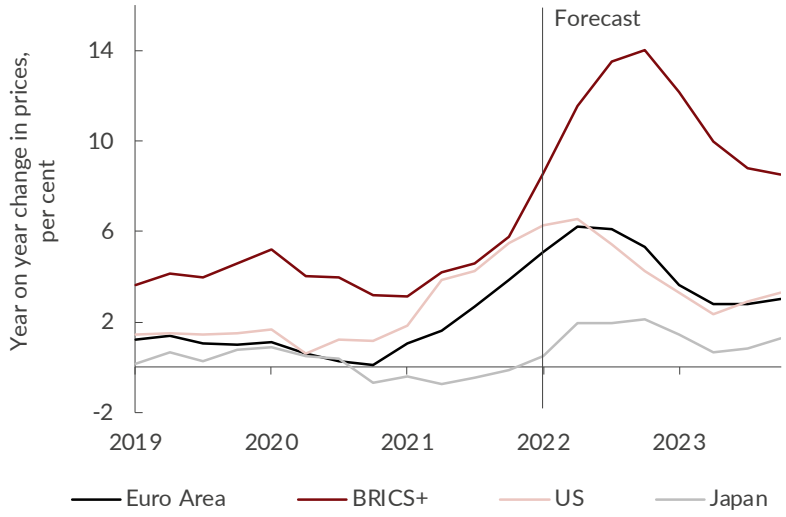
The rise in inflation has been especially sharp in the major advanced economies. In May, the US annual Personal Consumption Expenditures (PCE) inflation rate held steady at 6.3 per cent, slightly down on April's 6.6 per cent. Underlying inflation (PCE inflation excluding energy and food) fell to 4.7 per cent in May, the lowest since November. But the annual inflation rate of energy prices increased further to 35.8 per cent and food prices were up 11 per cent. While these inflationary pressures will persist, slower growth and higher policy rates are expected to contribute to lower inflation in 2023. We forecast PCE inflation to average 5.6 per cent this year and 3.0 per cent in 2023 (Figure 15). Although short-term inflation expectations have risen, medium-term expectations have not risen as steeply and certainly not to the extent that actual inflation has (Figure 16). The Fed will be watching the data for any signs of medium-term inflation expectations moving significantly away from the inflation target.

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In the Euro Area, annual HICP inflation was 8.1 per cent in May, up from 1.9 per cent a year earlier, and it rose further in June, to 8.6 per cent, another record rate. Excluding energy and food annual inflation is running at 4.6 per cent, up from just 0.9 per cent a year ago. The Euro Area is clearly exposed to higher oil and gas prices from Russia and if supply is reduced further price increases could follow (see Box B and Risk Scenario). We forecast that HICP inflation in the Euro Area will average 7.8 per cent this year but fall back to 3.3 per cent next year as the rapid rise in commodity prices abates and the pace of economic activity slows sharply.

While all the G7 economies have seen inflation increase, the rise in Japan has been more subdued. The core consumer price index annual inflation rate (which excludes volatile fresh food prices) was above the 2 per cent target (at 2.1 per cent) in April and May. However, the annual rate of energy price inflation fell to 17.1 per cent in May from 19.1 per cent in April, which may be an indication that the worst of the energy price effect may be past. In overall terms, the central bank has indicated that it will retain loose monetary policy unless the key drivers of inflation become domestic demand and strong wage growth.

Figure 15 Inflation in advanced and emerging economies (annual, per cent)



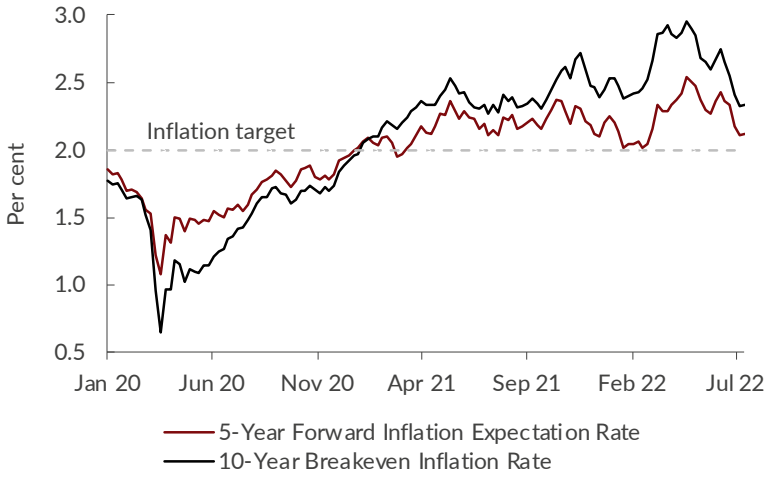
Source: NiGEM database and NIESR forecast.

The inflation picture is more complex in emerging market economies. As Figure 15 shows, for the BRICs+ as a group inflation has risen but this reflects the experience of Russia, where inflation is projected at 16.8 per cent this year, and Brazil with 10.6 per cent inflation. Against these, China is forecast to have inflation of 1.9 per cent this year and India 7.3 per cent. For each of these economies with high inflation we forecast lower inflation in 2023 than in 2022. Other emerging economies, such as South Africa and Indonesia, are seeing more moderate increases in inflation. The widespread depreciations of currencies of emerging market economies against the US dollar are adding to inflationary pressures and complicating monetary policy choices where domestic economies are not strong.

Our expectation remains that the higher rates of inflation are most likely to prove to be temporary rather than permanent, although the more inflation rises in the near-term the greater the risk that higher inflation rates start to raise medium-term inflation expectations. We project that the current increase in inflation will subside in the medium term as supply chain issues from the pandemic gradually clear, the short-term spikes in commodity prices ease, the effects of fiscal policy boosts wane and the higher policy interest rates from central banks bite on economic activity. Average annual inflation in the OECD is forecast to return to around 3 per cent in the medium term once the current inflation burst subsides. There are risks on both sides of this view. Higher inflation may become ingrained in the system as in the 1970s and be a more prolonged phenomenon. On the other side, it is possible that energy prices could fall back more sharply than assumed and so lead to more rapid reductions in the rate of headline inflation.

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Figure 16 US inflation expectations (annual, per cent)



Source: FRED, St. Louis Federal Reserve.

Economic policy

The rise in inflation in advanced economies, which has been higher than expected and threatens to be more persistent, has led to monetary policy tightening. Of the major economies experiencing high inflation the Euro Area has lagged in tightening. In contrast, the US Fed has halted asset purchases and already raised policy interest rates by 2.25 percentage points since the start of the year in what is currently expected (by the Fed and financial markets) to be the start of a series of policy interest rate increases that will take short-term rates to over 3.5 per cent by the end of this year.

Table 3 Recent directions in monetary policy interest rates (per cent)[a,b]

	Januany 2020	December 2021	June 2022	Change since December 2021	*2022 (end-of-year)*	*Change since Spring Outlook*	*2023 (end-of-year)*	*Change since Spring Outlook*
USA	1.75	0.25	1.75	↑	***3.4***	↑	***3.8***	↑
Euro Area	-0.50	-0.50	-0.50	-	***0.9***	↑	***1.5***	↑
Japan	-0.10	-0.10	-0.10	-	***-0.1***	-	***0.0***	↑
Canada	1.75	0.25	1.50	↑	***3.0***	↑	***3.5***	↑
UK	0.75	0.25	1.25	↑	***2.4***	↑	***3.1***	↑
China	4.15	3.85	3.70	↓	***3.7***	↓	***3.8***	↓
India	5.15	4.00	4.90	↑	***4.9***	↑	***4.8***	↑
Brazil	4.50	9.25	13.25	↑	***13.3***	↑	***12.1***	↑
Russia	6.25	8.50	9.50	↑	***9.3***	↓	***8.5***	↓
Australia	0.75	0.10	0.85	↑	***1.5***	↑	***2.4***	↑
Turkey	11.25	14.00	14.00	-	***14.0***	↑	***12.2***	↑

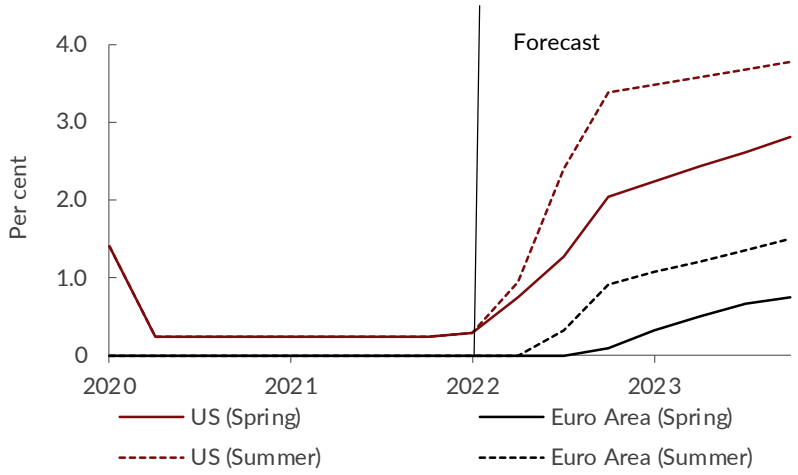
Note: (a) Monthly average rates are shown. Forecast values refer to end of year rates. (b) Canada and Russia data corresponds to April.
Source: Central banks, DataStream and NIGEM, NIESR.

Our short-term forecast for policy interest rates, which is based on policy statements and implied market expectations, now shows a higher level of interest rates than in our Spring Outlook. The increases reflect both higher than expected and more persistent inflation as well as the statements of central banks that imply that further monetary tightening will be required. Given our projection of inflation dropping next year and in 2024, policy rates are expected to peak at rates well below those that prevailed before the global financial crisis of 2008-9.

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We anticipate that higher rates will, together with external forces, lead to slower economic activity and return the rate of inflation in the United States gradually to target. But there is a risk that inflation may endure longer than we expect (see Sanchez-Juanino et al., 2021). The risk that the Fed faces is that while its more aggressive policy stance could bring inflation down more quickly, this might only be achieved at the cost of provoking a recession and possibly increased volatility in asset markets such as those as seen at the time of the 'taper tantrum' in 2013 (see also NiGEM Topical Feature).

Figure 17 Policy interest rates (per cent)



Source: NiGEM database and NIESR forecast.

Table 4 Recent directions in 10 year government bond yields (per cent)[a]

	January 2020	December 2021	*June 2022*	*Change since December 2021*	*2022 forecast (end-of-year)*	*2023 forecast (end-of-year)*
USA	1.76	1.45	*3.15*	↑	*3.0*	*3.0*
Euro Area	0.16	0.11	*2.19*	↑	*1.9*	*2.0*
Japan	-0.02	0.05	*0.24*	↑	*0.3*	*0.5*
Canada	1.50	1.46	*3.32*	↑	*3.2*	*3.2*
UK	0.67	0.83	*2.35*	↑	*2.2*	*2.6*
China	3.05	2.78	*2.82*	↑	*3.0*	*3.4*
India	6.58	6.41	*7.49*	↑	*7.1*	*6.2*
Brazil	6.77	10.68	*12.92*	↑	*17.6*	*15.6*
Russia	6.22	8.48	*8.95*	↑	*8.9*	*7.9*
Australia	1.18	1.64	*3.78*	↑	*3.4*	*3.0*
Turkey	10.93	21.61	*20.18*	↓	*17.6*	*15.1*

Note: (a) Monthly average rates are shown. Forecast values refer to end of year rates.
Source: Central banks, DataStream and NiGEM, NIESR.

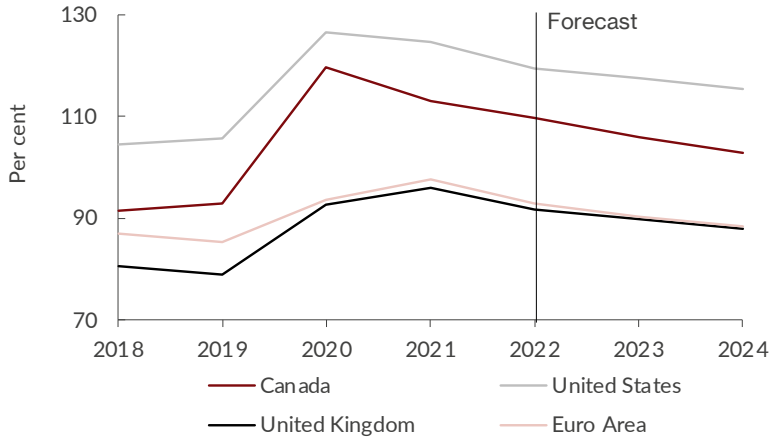
The policy rate rises, and the expectation of further increases have resulted in higher long-term market interest rates. The higher level of market rates also has effects on economic activity, especially in the United States where the increase in market rates has raised mortgage rates, leading to a slowdown in housing market activity, and affected the borrowing costs for companies and countries. As Table 4 shows, the rises in US market rates have been transmitted internationally and this has resulted in higher government borrowing costs. This effect has been exacerbated by concerns about inflation, slowing economic growth and high government debt levels such that the risk premia for many countries have risen, adding to the burden of borrowing costs.

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With the reduced severity of infections from the most recent Covid-19 variant, governments have withdrawn the special fiscal policy support that helped households and companies in the initial severe phases of the virus. The legacy of that support is elevated public debt to GDP ratios as shown in Figure 18. With market interest rates having increased, governments now face higher debt interest costs at a time when GDP growth is slowing, with fears of unemployment rising and tax receipts falling. The pressures that governments will face will be around providing enough spending to support economies but also to ensure that debt to GDP ratios stabilise, most likely with proposals to reduce them in the medium-term.

We forecast that government debt to GDP ratios in the G7 economies will decline gradually but remain at elevated levels in the near-term (Figure 18). Even with gradual adjustment, the combination of rising policy interest rates, higher longer-term market interest rates (see table 4) and increased geo-political uncertainty and scaled back central bank buying of bonds represent challenges to the management of government finances in the medium term.

Figure 18 Public sector debt / GDP ratios (per cent)



Source: NiGEM database and NIESR forecast.

Rising inflation in several major emerging market economies (e.g., Turkey, Russia, Ukraine, Brazil, Mexico) has resulted in their central banks tightening monetary policy, although some of the early increases in policy rates in Russia have been reversed (see table 3). Some emerging market economies have also faced capital outflows and currency depreciations against a stronger US dollar, which have also been factors behind monetary policy tightening. With spillovers on their financial markets from Fed tightening, many will face a delicate balancing act between domestic demand weakness and near-term inflationary pressures (see NiGEM Topical Feature, as well as Danninger et al., 2022; Liadze and Naisbitt, 2018).

Emerging market economies with high external debt and expected low growth will remain exposed to financial market stress, particularly if investor risk sentiment deteriorates, or worse reverses, because of increased inflation. High debt levels expose financial systems to a sharp rise in longer-term interest rates and country risk premia, which might be triggered by increased risk aversion, higher-than-expected inflation, and monetary tightening (Holland, Kü□ük, and Macchiarelli, 2021). They also face considerable challenges from central bank interest rate tightening and from a retreat from exceptionally large asset purchases in the major advanced economies. Many emerging market governments will need to keep a close watch on medium-term debt sustainability. The heavy reliance of many emerging economies on foreign capital makes their public finances more vulnerable to rising foreign interest rates and exchange rate depreciation. At the same time, weaker exchange rates *vis-à-vis* the US dollar may help support export activity and higher commodity prices will boost commodity exporters, but risk creating financial vulnerabilities if commodity prices were to fall back unexpectedly.

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Risk overview

This section briefly discusses some major risks around the central economic projections (as shown in Figure 1 and 2).

One important risk to the economic outlook remains from the continued spread of Covid-19 and lower-than-expected vaccine efficacy, which have led to localised containment measures in countries such as China, with an effect on global economic activity. Globally, the unevenness of vaccine distribution and the possibility of further virus flare ups continue to cloud the horizon, particularly for low and lower middle-income countries.

Short-term, the main potential downside risk to global economic prospects remains the war in Ukraine. Food and oil prices have risen dramatically as the result of the war, putting a strain on public finances in a number of emerging economies. Additional risks could materialise for emerging economies particularly as the result of the monetary spillovers from the US following an aggressive tightening in response to the oil price shock. These spillover effects are explored in our NiGEM Topical Feature.

With labour and supply-chain constraints already fuelling inflation before the war, recession risks have increased, particularly in China, the Euro Area, and the US, due to the persistence of high inflation and a worsening global growth outlook. In the US, inflation has hit 40-year highs, prompting the Fed to aggressively tighten interest rates. At the same time, with real income being squeezed and consumer confidence dipping again, any downside shock that leads to higher unemployment may reveal further economic vulnerability, with central banks already walking a delicate line between fighting inflation and avoiding a recession.

The build-up of debt – in both public and private sectors – against the backdrop of rising interest rates represents another important risk. As discussed in the previous sections, this could create a potential vulnerability and, after such a long period of ultra-low interest rates, borrowers and lenders may have grown so accustomed to low debt service costs such that even gradual and limited increases in interest rates could have more substantial negative effects on confidence and spending than usually anticipated.

There remain long-term and structural issues as well, including China's slowdown and the need for Europe's transition away from dependence on Russian energy supply.

Our fan chart in Figure 1 also shows that it is possible that GDP growth could be stronger than forecast. If the pace of vaccinations speeds up and there is a resolution of the war in Ukraine before winter, confidence could be higher than expected and GDP growth in the fourth quarter of the year and into 2023-24 could be stronger than forecast.

Risk scenario

We use stochastic simulation of NiGEM to examine the effect of putting extra weight on the risks of higher European energy prices and a total embargo on Russian gas.

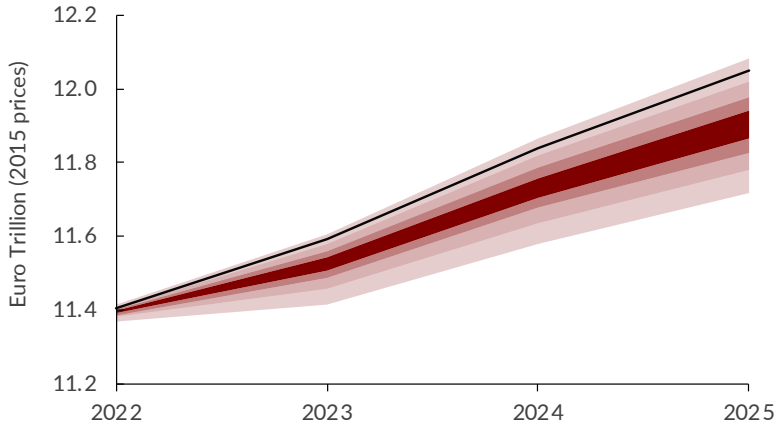
The partial shutdown of gas deliveries is already having an impact on European economic activity, but a full shutdown could be far worse. The slowdown of world and Euro Area GDP growth in light of the Russia-Ukraine conflict raises the risk that we may see a much more protracted weakening of global activity, particularly as some Euro Area economies such as Germany and Italy remain heavily exposed to Russian energy exports and may decide to embargo Russian exports.

Our view, underpinning the central forecast, is that the Russia-Ukraine conflict will represent a drag on growth at least until 2023. A further escalation of international tensions, and the possibility that the effect of higher fuel and food price rises as the result of a full European embargo, might mean that the conflict has a larger impact on Europe's GDP and global inflation. Alongside the official measures showing slower activity growth, some measures of business sentiment have severely dipped in June (including the US ISM Manufacturing index), possibly reflecting an increased likelihood of some of these tail risks materialising. While it is impossible to attach individual probabilities to these events, Figures 19 and 20 show the effects of increasing their probability relative to similar shocks in the past on the confidence bands around our main case scenario for the Euro Area's GDP growth and inflation. In both cases, the fan chart is intended to represent the uncertainty around the central forecast shown by the central line, with the possibilities of oil prices increasing and increased European trade-restrictions on Russian exports being the main source of this uncertainty.

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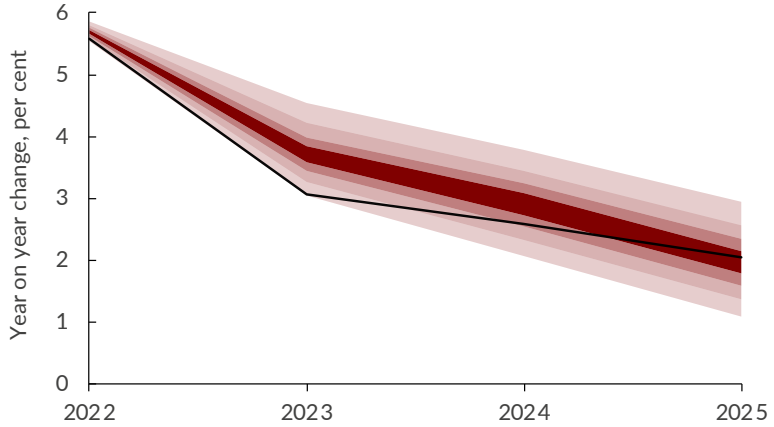
In the Euro Area, recent survey data for Germany such as the German IFO business confidence index confirm a sharp worsening in expected business conditions. While part of this is likely to be related to specific materials shortages created by the ongoing effect of the war in Ukraine, it possibly also represents businesses' views of the possibility of an embargo on Russian energy and the effects that such an embargo would have on economic activity in the Euro Area's largest economy. This is a major downside risk to our central forecasts.

Figure 19 Euro Area GDP (forecast)



Note: The shades within the fan chart represent a 10 per cent chance that GDP will lie within the boundary of that shade. There is a 20 per cent chance that GDP will lie outside the shaded area of the fan.
Source: NiGEM database, NIESR forecast and NiGEM stochastic simulations.

Figure 20 Euro Area Inflation (forecast)



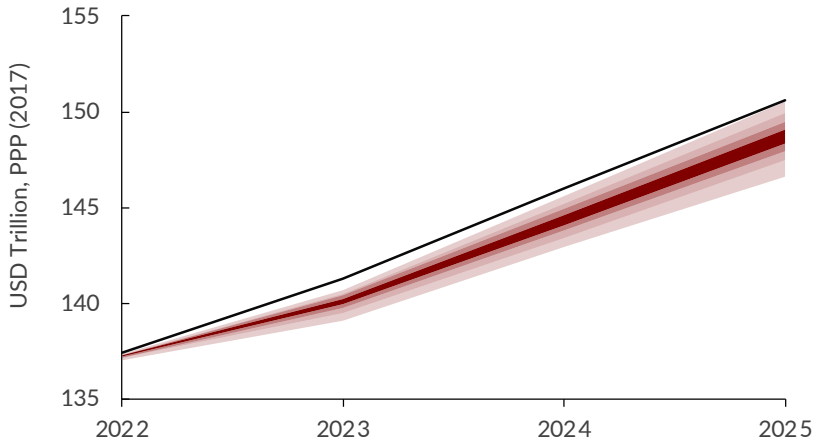
Note: Private consumption deflator. The shades within the fan chart represent a 10 per cent chance that inflation will lie within the boundary of that shade. There is a 20 per cent chance that inflation will lie outside the shaded area of the fan.
Source: NiGEM database, NIESR forecast and NiGEM stochastic simulations.

The possibility of a full embargo provides a potential downside risk to our projection for short-term economic activity, while increasing the likelihood of even higher inflation at the same time. Figure 21 illustrates our fan chart risk scenario for global GDP. The stochastic simulation reflects the balance of risks that we perceive from oil prices increasing further in the third quarter of this year, compared to a general upside risk of stronger growth.

When we consider a full Russian gas shutoff from the third quarter of 2022, we focus on the impact relative to our main forecast baseline. The shape of the fan chart reflects our assumption that the balance of risks remains to the downside, reflecting our view of a greater risk of higher European energy prices and further trade restrictions on Russia in the case of a full embargo. The fan chart reflects increased inflationary pressure in Europe for energy and a global downside risk to demand.

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Figure 21 World GDP (forecast)



Note: The shades within the fan chart represent a 10 per cent chance that GDP will lie within the boundary of that shade. There is a 20 per cent chance that GDP will lie outside the shaded area of the fan.
Source: NiGEM database, NIESR forecast and NiGEM stochastic simulations.

Our results are consistent with previous research by Bachmann et al. (2022), the Bundesbank (2022) and the IMF (Lan, Sher and Zhou, 2022) all pointing to the contractionary effects on the German economy in case of a complete shutoff of the remaining Russian natural gas supplies to Europe, that is, the total curtailment of flows through Nord Stream 1 rather than the partial one that is currently taking place. This effect is estimated between 3 per cent and 5 per cent of German GDP cumulatively until 2023 (see also Liadze, Macchiarelli and Sanchez-Juanino, 2022). The associated increase in wholesale gas prices could raise inflation by about 2 percentage points on average in 2022 and 2023.

However, some of these effects could be mitigated by securing alternative supplies and energy sources, easing infrastructure bottlenecks, encouraging energy savings while protecting vulnerable households, and expanding solidarity agreements to share gas across borders (Lan, Sher and Zhou, 2022). There remains the obvious coordination problem among EU member states and the picture gets more complicated when one considers the complexities of various EU economies, as well as the technical and geopolitical questions surrounding the issue of replacing Russian energy exports (see Box B). These mitigating factors are not part of our Risk Scenario.

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Box A: The Euro Area's monetary-fiscal policy interactions after 2020: A new normal?[1]

By Anthony Bartzokas,[2] Renato Giacon,[3] and Corrado Macchiarelli

- Since the Covid-19 shock, there has been an increasing recognition among EU policy makers of the need for European wide economic recovery with a constructive consensus on the mitigation of the risk of moral hazard on public debt issuance.
- At the peak of the pandemic, EU leaders agreed to the EU Recovery and Resilience Facility (EU-RRF) with the goal of achieving longer term growth and economic convergence. For the first time, this opened up the idea of joint EU debt issuance at large scale to finance new (mainly green and digital) investments, side-lining the thorny issue of legacy debt. Yet, the EU-RRF remains far from a cyclical stabilization tool.
- As the ECB enters a tightening cycle, markets are signalling the EU-RRF is not enough to guarantee debt sustainability in the currency union. In response, the ECB came up with a new anti-fragmentation tool, the so-called Transmission Protection Instrument (TPI).
- In this box, we review the interactions and the potential complementarities between the new TPI and the ongoing implementation of the EU-RRF and discuss long-term implications for the Euro Area.

The role of the ECB after 2020

Since the global pandemic in 2020, in the wake of deteriorating capital market trends, rising energy and food prices and the war in Ukraine, policy makers in the Euro Area have faced an important trade-off of having to regain monetary and fiscal space without stifling a fragile economic recovery.

For fiscal policy, in particular, there is a growing consensus that policy should remain overall neutral or even slightly contractionary in the short term in order not to neutralize any ECB efforts to tame the Covid-19 pandemic and Ukraine war's inflationary pressures, while at the same time remain focused on targeted and temporary support to households most affected by the squeeze in real incomes (Thygesen et al., 2022).

The ECB has recently entered a tightening cycle following - with some delay - other major central banks (including the Bank of England and the US Federal Reserve) all pivoting toward more aggressive rate hikes in anticipation of higher inflation. In line with the ECB commitment to its price stability mandate, on 21 July the Governing Council decided to raise the three key ECB interest rates by 50 basis points. On the same day, the ECB adopted the new Transmission Protection Instrument (TPI) which, as the ECB Governing Council continues normalising monetary policy, aims to ensure that the monetary policy stance is transmitted smoothly across all Euro Area countries.

The implementation of this new tool is confronted with two challenges. First, monetary policy is not designed to deal with regional differences; rather it should aim to meet a target for inflation over the Euro Area economy. It then follows that – if we are prepared to accept that the Euro Area is an 'optimal currency area' in the first place – ECB policy should not be redefined to meet intra Euro area regional macroeconomic differences. Second, providing even more uncapped fiscal insurance via the Central Bank would likely lead to even more moral hazard for individual governments. At the core of these issues is the question of what role fiscal and monetary policy coordination should have in the Euro Area?

At the peak of the Euro Area sovereign debt crisis in 2012, the ECB unveiled the Open Market Transactions (OMTs) tool, where the ECB agreed to buy a country's sovereign debt, as long as that country's government agreed to strict conditionality. However, the conditionality attached to the programme, i.e., the need to negotiate a programme of reforms with the European Stability Mechanism (ESM), proved sufficiently onerous and politically difficult to prevent any Member State from requesting it. Time and again, Euro Area leaders

1 The note represents the view of the authors and not those of the European Bank for Reconstruction and Development (EBRD). The authors would like to thank, Jagjit Chadha, Stephen Millard, Mateusz Szczurek and Peter Sanfey for comments on the draft.
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have shown a willingness to redistribute liquidity and risk via the ECB's balance sheet, while any steps towards stabilisation via fiscal redistribution remain taboo (see Bartzokas et al., 2022).

As the ECB has adopted its new TPI, it has decided not to limit the amount of the debt purchases' envelope ex-ante – in contrast to the ECB Pandemic Emergency Purchase Programme (PEPP) whose initial 750 billion EUR envelope had to be increased twice in later stages - to avoid exposing itself to speculative challenges with markets testing the new instrument's upper limit. The ECB Governing Council has considered a cumulative list of eligibility criteria to assess whether the jurisdictions, in which the Eurosystem can conduct purchases under the TPI, pursue sound and sustainable fiscal and macroeconomic policies. In particular, the criteria include: (1) compliance with the EU fiscal framework, i.e. not being subject to an excessive deficit procedure (EDP); (2) absence of severe macroeconomic imbalances, i.e. not being subject to an excessive imbalance procedure (EIP); (3) fiscal sustainability; as well as (4) compliance with the milestones submitted in the Recovery and Resilience Plans for the Recovery and Resilience Facility and with the European Commission's country-specific recommendations in the fiscal sphere under the European Semester.

The EU-RRF is not a cyclical fiscal stabilization tool

On the fiscal side, the policy novelty since 2020 is the above-mentioned Next Generation EU (NGEU) programme and its centrepiece, the Recovery and Resilience Facility (RRF). These instruments are set up so that the deployment of the EU funds is conditional upon the fulfilment of milestones and targets underpinning the reforms and investments in the respective national recovery and resilience plans (NRRPs). Furthermore, the NRRPs are embedded in the European Semester, the EU's framework for economic policy coordination, with the additional need to achieve ambitious green and digital targets. The mechanism represents external market discipline both in the funding and the investment framework, which finds a precedent only in the experience of some EU countries such as Greece under the Enhanced Surveillance Framework post-2010.

Recent calls for an ex-ante conditionality mechanism based on the RRF milestones to be used in coordination with the new anti-fragmentation TPI (Greene, 2022; Bartzokas et al., 2022) have clearly guided the ECB's latest announcements and this could represent an important development in the evolution of monetary-fiscal policy coordination in the EU.

Here we go further and advocate that the RRF loan component could be used as leverage for activating the ECB TPI, given that loan demand is largely coming from the EU southern (Greece, Portugal, Italy, Cyprus) and eastern (Romania, Poland, and Slovenia) periphery who typically face "tougher budget constraints" (De Grauwe, 2011).

RRF conditionality circumvents the usual moral hazard criticism by moving the goalpost from mutualizing legacy debt to financing longer-term new (mainly capital expenditure related) investment opportunities. While reviews of RRF milestones are political processes that take time and tend to happen at most twice a year – thus, representing an institutional process which might move too slow for markets – the process is not procedurally lengthier than a potential ESM programme (such as Greece's Third Adjustment Programme), had the OMTs been used.

More specifically, EU RRF funds are being paid for by the European Commission by issuing new EU debt as NGEU bonds, establishing for the first time a large-scale joint funding model, and then transferred as grants and concessional loans to finance ministries at national government level. According to early ECB estimates (see Giovannini et al., 2020), NGEU issuances will raise EU common debt by a factor of roughly 15, making it the largest ever experience of supranational Euro-denominated debt sharing.

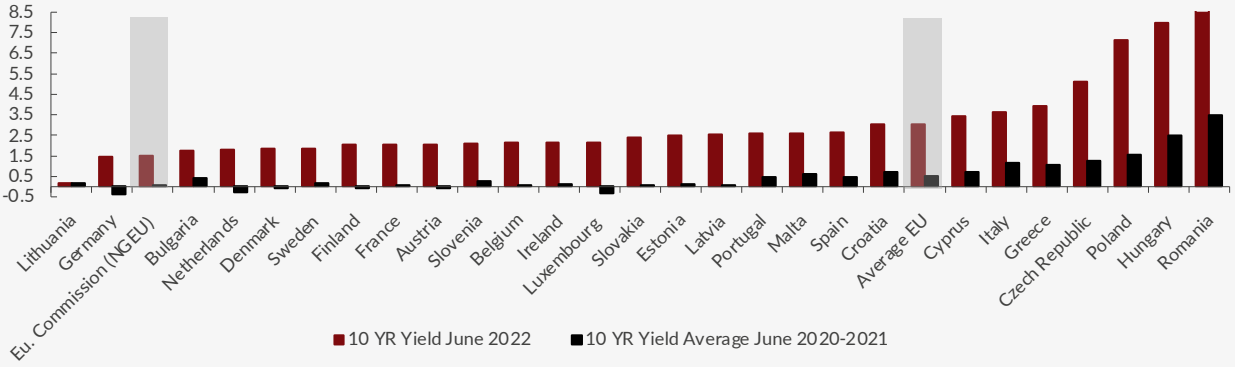
However, from the point of view of market participants, NGEU and the EU-RRF do not represent a shock absorbing device (Bartzokas et al., 2022). In fact, looking at the link between GDP growth and the RRF funds, the correlation between these appears to be small, if not negative in some cases (Darvas et al., 2022). In short, the EU still lacks a joint cyclical fiscal stabilization tool. This could be achieved through a permanent EU-RRF which would have the potential to provide a financing buffer through concessional loans in case market funding becomes scarcer as the result of steeper borrowing costs.

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Long-term implications to short-term challenges

Despite the limited interest to date in the loan component, the NGEU and EU-RRF instrument have been estimated by the European Commission, the ECB and the IMF to have led to an increase in GDP of up to 1.5 per cent, relative to the baseline scenario for 2022. An early study by Liadze and Macchiarelli (2021) estimated that the NGEU and the RRF would imply a debt-based fiscal expansion of 0.65 per cent of GDP on average over the five years between 2021 and 2026, with countries that are among the scheme's major beneficiaries, such as Italy and Greece, benefiting from an extra 3 per cent and 2 per cent of GDP, respectively, at the peak, relative to countries which have decided not to apply for loans. Currently, only 7 EU Member States (Greece, Italy, Portugal, Poland, Romania, Cyprus and Slovenia) have requested loans, amounting to a total of EUR 166 billion out of the EUR 385.8 billion available.

Figure A1 Market yields of government bonds with maturities of 10 years, and European Commission's first and latest issuance under the Next Generation EU, June 2022 (per cent)



Source: Authors' elaborations based on data from the ECB (https://www.ecb.europa.eu/stats/financial_markets_and_interest_rates/long_term_interest_rates/html/index.en.html) and European Commission (https://ec.europa.eu/info/strategy/eu-budget/eu-borrower-investor-relations/nextgenerationeu/transactions-data_en). Data for the NGEU bond refers to the weighted average yield at the corresponding 10-year maturity.

Politically, Northern European countries that have been grouped as the 'frugal' states (i.e., Netherlands, Austria, Finland, Sweden) have always made clear that they would prefer to opt out of the EU loans for now. More generally, from a financial point of view, other EU countries with an AAA rating, including Germany, may find it unappealing to borrow from the EC, even if at concessional rates, as their national interest rates are still below, on par or just slightly above with the NGEU Bonds (Figure A1).[4]

However, EU Member States can still request loan support until 31 August 2023. As capital market conditions have deteriorated over the past few months following Russia's invasion of Ukraine in February, and the ensuing protracted war, more EU member states will have incentives to request loans from their RRF allocation.

This is a scenario that the European Commission and Finance Ministers could even welcome in the short to medium term, as there is a scarcity of new financial resources to cushion the effect of the economic and financial ramifications of the war in Ukraine. With national fiscal resources already overstretched and countries having achieved the annual upper ceilings of the EU budget, the expectation in Brussels was that more EU countries would have requested RRF loans from the European Commission. However, even countries such as Spain, Croatia, Czech Republic and Hungary among others, which have substantial funding needs and would borrow at substantially higher interest rates on the markets than the EU NGEU bonds, have preferred to stay put and only request grants for the time being. Other countries such as Poland, Cyprus and Portugal requested only small amounts of their RRF loan allocation considering legacy issues of delayed implementation and monitoring requirements.

4 https://ec.europa.eu/info/sites/default/files/about_the_european_commission/eu_budget/policy_brief_web_13.07.pdf

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With interest rates currently rising and bond spreads widening once again within the Euro Area, it is likely more governments will avail themselves of RRF loans. Should an increasing number of EU Member States tap into the full amount of RRF loans to which they are entitled (i.e., equal to 6.8 per cent of their 2019 Gross National Income), the European Commission's borrowing on financial markets would need to be on a par or even larger than that of the largest Euro Area sovereign borrowers (Italy, France, Germany and Spain) over the next few years. Should countries which have the market incentives opt to request the entire loan allocation to which they were entitled, this could have important ramifications the EU funding strategy and could even break the upper threshold of the funding targets that the European Commission has set for itself in terms of bonds' issuance on the markets, the initial EUR 385.8 billion RRF loan component (at current prices), envisioned in the RRF Regulation (Bartzokas et al., 2022).

The current design of the TPI leaves the ECB a lot of discretion and facing a non-trivial fiscal dominance problem in light of these monetary-fiscal policy interactions. For instance, as the result of market speculation, the European Commission might decide not to trigger an Excessive Deficit Procedure (EDP), as that would make the country's debt ineligible for the ECB TPI. This could mean that the cost of using fiscal rules might become even higher in the EU, as Member States through a Reverse Majority Voting Quorum (RMVQ) would automatically sanction a country whose fiscal path is not sustainable, but – with that – they would also veto any chances of ECB interventions. This would make the corrective arm of EU fiscal rules even more pro-cyclical and difficult to use politically.

Our analysis has highlighted the complementarities of the ECB's TPI tool with the EU-RRF (Bartzokas et al., 2022). With bonds' purchases not limited in scale ex-ante, the main anchor of credibility for the ECB is its conditionality. While the TPI tool may reduce fiscal risks and support the creditworthiness of sovereigns at risk over the short term, progress over debt stabilization will remain key to the Eurozone's long-term sustainability. The link with the RRF Loan Facility could be a reasonable compromise step in the medium term to circumvent the fiscal dominance problem and any politics associated with linking monetary policy and EU fiscal rules.

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Box B: The geopolitical consequences of Russia's invasion of Ukraine

By Creon Butler[1]

Russia's invasion of Ukraine on 24 February was an unparalleled attack by a permanent member of the UN Security Council not only on an independent sovereign state, but on the entire post World War II system for international security and rules-based multilateral governance. The West responded in three main ways: by launching an unprecedented package of economic and financial sanctions targeting Russia's ability to sustain the war; by expanding and strengthening the NATO military alliance; and through the development of a very large-scale package of economic/humanitarian, military and political support for Ukraine.

Taken together, Russia's action and the response it triggered from the West are having wide ranging geopolitical consequences, which in turn are transforming the global economy. This box discusses the four main geopolitical impacts from the war to date.

A stronger Western alliance

Russia's action has, somewhat perversely, helped unify and strengthen the Western alliance which only a few months earlier had seemed to be in a serious trouble following the chaotic withdrawal from Afghanistan and the recriminations that followed.

US leadership underpinned the economic sanctions package, including unprecedented measures to cut Russia off from global financial markets by freezing assets of the Russian central bank, suspending Russian commercial banks from global payment systems and forcing the Russian government to default on its international debt. US leadership has also been critical in escalating the campaign to freeze the assets of Russian oligarchs who have provided support to President Putin, as well as measures to cut Russia off from access to western technology (including advanced equipment needed by the energy sector and civil aircraft) and markets for its hydrocarbon exports (through a G7 agreement to phase out imports of Russian oil and other measures to reduce radically over time EU reliance on Russian gas).

These steps have had an amplified effect as a result of voluntary actions by many hundreds of Western multinationals which have suspended operations or withdrawn completely from the Russian economy (sometimes at considerable financial cost). This reflects the desire to avoid legal risks, but also pressure from staff, customers and investors underpinned by the Environment Social and Governance (ESG) investor movement. The response of Ukraine's creditors to its request for a two-year payment freeze on its international bonds will be a further test of the international financial community's approach to the moral and humanitarian issues raised by Russia's invasion.

A strong US lead, backed by other prominent alliance members, ensured a positive and speedy response to the request by Sweden and Finland to join NATO - including the recent settlement of Turkish objections - and the deployment of new forces to NATO's border with Russia.

Meanwhile G7 budget support (provided and pledged) for Ukraine has so far amounted to $29.5bn in 2022, while humanitarian assistance stands at $2.8bn (although Ukraine is estimated to need $5bn a month to sustain its public finances).

Within this framework, and urged on by Poland and other member states bordering Russia, the EU has taken substantial action despite the disparate views and interests of its 27 members and the position of Hungary's Prime Minister, Viktor Orban, who has remained sympathetic to President Putin. It has largely resisted Russian efforts to divide EU members, backed the exceptional sanctions package against Russia, provided extensive economic, military and humanitarian support for Ukraine (including accepting at least 2.8 million refugees out of a total of more than 5 million recorded in Europe), and reached a consensus on very difficult issues such as offering Ukraine and Moldova EU candidate status and a plan to phase out certain hydrocarbon imports from Russia. Some individual member states have also taken tough decisions to increase defence spending, notwithstanding the profound budgetary implications. To some extent the EU's actions have built on its

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successes in response to the pandemic, such as the creation of a pan-EU funding mechanism to support the Next Generation EU package and the ultimately successful roll out of collective vaccine purchases.

Other members of the Western alliance have also provided critical support, with the UK taking early steps to provide military equipment and training to the Ukrainian armed forces. And some western-orientated countries with major financial centres, which might not in the past have been expected to join the Western action, have responded: Switzerland took the exceptional step of dropping its traditional neutrality and adopted sanctions aligned with the EU, while Singapore has also implemented some sanctions.

The eventual contribution of these actions to ending the war on terms which do not reward Russia's aggression remains to be seen. The IMF has forecast a 6 per cent decline in Russian GDP in 2022, but sharply higher prices mean Russia has been able to maintain or increase its revenues from hydrocarbon exports despite the drop in sales and the need to pay high discounts relative to the global price.

Overall, however, it is clear that the leverage of a united and determined West on the global economy is substantially higher than many had previously assumed. There are, for example, no alternatives to the West as a source of genuinely convertible currencies.

Global governance systems under enormous strain

While 141 out of 193 UN member states voted for a resolution on 2 March demanding that Russia "immediately, completely and unconditionally withdraw all of its military forces from the territory of Ukraine within its internationally recognized borders.",[2] and 93 member states voted on 7 April to suspend Russia from the UN Human Rights Council, the group of countries taking significant measures against Russia is largely confined to the Western alliance - led by the G7 and NATO.

On 4 February, shortly before Russia's invasion of Ukraine, Presidents Xi and Putin met and agreed that "Friendship between the two states has no limits, there are no 'forbidden' areas of cooperation…". In this context, and in contrast to the West, China has provided relatively strong political support to Russia and has taken advantage of Russia's need to find new markets for its hydrocarbons to become Russia's largest oil importer. But it is highly unlikely that the Chinese government was in favour of Russia's invasion of Ukraine - and Chinese-owned public and private companies have been cautious about taking other supportive steps that might trigger Western secondary sanctions or expose Chinese companies to legal action in US and EU courts.

Meanwhile, several other major emerging economies have tried to avoid explicitly taking sides and, in some cases (notably Turkey), have sought to maintain good relations with Russia while supporting Ukraine and the G7 on some issues.

Some low-income countries have condemned Russia's action, while others abstained in the UN General Assembly vote. But there is a widespread concern across the developing world at the rising costs of a continuing war (in high energy prices, supply chain disruption and food shortages) and a fear that the sheer scale of Western economic assistance to Ukraine, combined with the need to address the sharp pandemic-related rise in public debt, will lead to a de-prioritisation of their needs. The UK government's recent decision to block "non-essential" new aid payments for the rest of the summer illustrates this concern.

While the UN Secretary General condemned Russia's attack on Ukraine, the UN's ability to compel Russia to comply with the UN charter is effectively paralysed by the Russian Security Council veto and Chinese political support. The G20 has fared no better, with the Russian foreign minister recently walking out of the G20 Foreign Minister's meeting following intense criticism by Western participants.

On the economic side, the Indonesian G20 Presidency has persevered in trying to progress its agenda on global challenges ahead of the Leaders' summit in November. But in circumstances where some major emerging economies are resisting Western calls for Russia to be suspended from the body, and where there were already substantial tensions between China, India and the West which frustrated progress on, for example, global health at a recent G20 leaders' summit, it is hard to see how substantive progress will be achieved.

2 Only five member states voted against the resolution, while 35 abstained.

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The resulting deficit in leadership and coordination left by a weakened G20 can partly be addressed by other groups, such as the G7 working with like-minded partners. But there is a limit to the G7's legitimacy and the willingness of its members to carry the financial burden of addressing massive global challenges without more support from major emerging economies.

There is also scope for international economic organisations, such as the IMF, World Bank and WTO, to act within their existing mandates to address the economic and humanitarian consequences of the war, while avoiding the question of responsibility for its origins. Other international economic organisations whose governance and direction is even more heavily weighted towards the West - such as the IEA, EBRD and OECD - may be able to go further.

But the overall weakening in global governance is an enormous concern, particularly as the need for global coordination and political leadership on such issues as climate change, food shortages, cyber-security, preventing future pandemics and tackling the escalating sovereign debt crisis is growing by the day.

Less support for globalisation

The invasion has further undermined belief in, and support for, the model of unbridled globalisation under which trade, investment, information and ideas move unrestricted across international borders. In recent years Western countries (particularly the US, UK and EU) have tightened restrictions on the use of Chinese technology and limited Chinese investment in sectors where it is judged to create national security risks. This has been re-enforced by concerns over unfair trading practices and strategic competition from Chinese firms and by an increased focus on maintaining resilience in the context of the pandemic and the rising frequency of climate change linked extreme weather events. Both the Ukrainian and Russian economies are relatively small in global terms, but the war has given this trend a further substantial impetus. The belief of many European politicians that it would never be in Russia's interest to restrict the supply of gas to EU markets has been shattered. Sharp food price rises linked to disruption in Ukrainian and Russian wheat exports have heightened global concerns over food security. And the West's financial sanctions have no doubt heightened concern among non-democratic governments with large hard currency reserves, such as China ($3.2tn) and Saudi Arabia ($0.5tn), as to whether they can really be relied on as a buffer against political as well as economic shocks.

However, despite these cumulating pressures, it is far from inevitable that world markets will become substantially more fragmented over the long-term. China and the West are already closely integrated in economic terms and the economic costs of de-linking, except where national security concerns make it essential, are high. In addition, a global market with multiple suppliers can typically add to, rather than detract from, resilience. The agency of private companies and the choices they make within the constraints set by national governments, will also be critical. While there is some empirical evidence that the pace of globalisation has slowed in the last decade, it is too soon to say whether the Ukraine war will accelerate this.

Possible impetus to climate action

Many governments have responded to the sharp increase in oil and gas prices by cutting taxes on hydrocarbon energy products and/or increasing subsidies linked to their use, arguing that this is a social and political necessity. And there have also been short-term moves to expand the use of coal as an alternative to Russian gas exports. This has led to the fear that supposedly temporary emergency measures damaging for the climate will one way or another become "locked in". On the other hand, it is also widely recognised by political and business leaders - at least in Europe - that these measures can only be a very short-term response. And, against the backdrop of extreme weather events linked to climate change, there is a reasonably good prospect that attention will switch fundamentally to accelerating implementation of renewable energy/ energy efficiency policies which can simultaneously address both the climate emergency and the national security threat from Russia.

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Conclusions

One of the most important determinants of the eventual outcome from these four geopolitical forces will be how long the war continues, and what the eventual settlement looks like. The strength and determination of Ukrainian resistance has if anything deepened as the war has continued. Moreover, the Western consensus on providing strong support for Ukraine has so far held up well despite a barrage of economic and implicit nuclear threats by Russia. But many commentators have questioned whether it will be sustained through winter 2022-23 (when EU countries will be even more vulnerable to eduction or suspension of gas exports from Russia), or after 2024 (if President Donald Trump, or a Republican politician with a similar outlook, is elected president). The initial resistance from some member states to the European Commission's proposal that all member states cut gas use by 15 per cent between August 2022 and March 2023 against an average of the previous five years illustrates the fragility of the consensus. Nonetheless, the most probable scenario is that the Western commitment will be very largely sustained, essentially because of the enormous national security issues at stake. In these circumstances, the war could go on for months and possibly even years.

Perhaps the most likely scenario is that the two sides will at some point agree on "freezing" the conflict. If this leaves Russia occupying large parts of Ukraine's territory (currently some 20 per cent), it seems very unlikely that there will be any substantive easing in Western sanctions. At the same time, provided the drain from any continuing low level military conflict with Russia, is not too great, there is at least one scenario in which the un-occupied parts of Ukraine will thrive economically and socially, as it moves towards EU membership, undertakes reconstruction and its armed forces are increasingly "NATO-ised". Thus, Ukraine could in some respects parallel the performance of South Korea after the Korean war. Ukraine has enormous natural resources and human capabilities, combined with a strong civil society, free media and pluralistic government. The period from 2014 to 2022 has demonstrated its ability to reform and progress economically and militarily despite weak political leadership. There are, of course, other much less positive scenarios, particularly if Ukraine finds it hard to maintain the unity and sense of purpose it has achieved in response to Russia's attack in the face of continuing Russian disinformation campaigns and/or a revival in the influence of oligarchs.

But the more successful Ukraine is over the long-term, even if it fails in the short-term to recover all the territory occupied by Russia, the more the West's actions will be perceived as a success, and the more likely it will be that the underlying principles of the post World War II rules-based multilateral system will be preserved.

Another key aspect of how these geopolitical forces will play out is what lessons China and the US take from Russia's invasion of Ukraine for their handling of the dispute over Taiwan and whether it proves possible for the West and China to establish a working relationship which enables them to tackle global challenges where they have a strong common interest in cooperation.

Some foreign policy experts have advocated a system of "managed strategic competition"[3] which would enable cooperation between the West and China on areas of vital common interest while managing competition and conflicts in other areas. Achieving this will be difficult, but the alternatives are very unpalatable. It is also possible that rapid deterioration on one of the current global policy challenges, such as the emergence of a full-scale sovereign debt crisis in the developing world, could unlock the necessary working relationship. If an understanding between the West and China is achieved, other key elements for global cooperation are much more likely to fall into place.

Overall, however, the geopolitical forces unleashed by Russia's invasion of Ukraine are still evolving, and additional ones to the four discussed here may yet appear. The full implications may not be clear for some time to come.

3 See "The Avoidable War" by Kevin Rudd

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