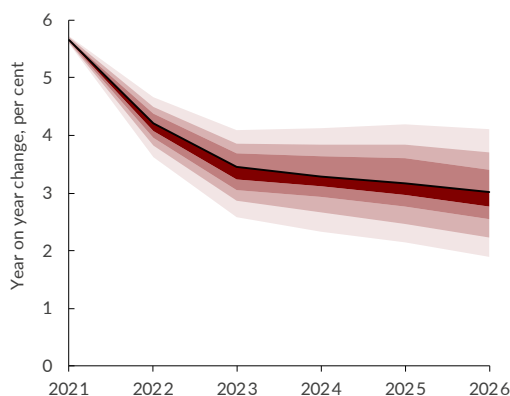


Global Economic Outlook

Inflation prompts policy normalisation

By Corrado Macchiarelli and Barry Naisbitt with Janine Boshoff, Ian Hurst, Iana Liadze, Xuxin Mao, Patricia Sanchez Juanino and Craig Thamotheram¹

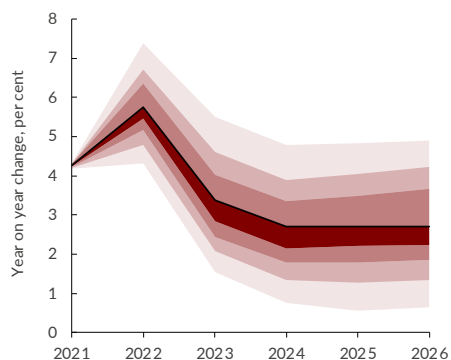
Figure 1 Global GDP growth (forecast)



Notes: The shades within the chart represent a 10 per cent chance that the series will lie within the boundary of that shades in the long run. There is a 20 per cent chance that the series will lie outside the shaded area of the fan chart.

Sources: NiGEM database, NIESR forecast and NiGEM stochastic

Figure 2 Global inflation (forecast)



Notes: OECD countries, private consumption deflator. The shades within the chart represent a 10 per cent chance that the series will lie within the boundary of that shades in the long run. There is a 20 per cent chance that the series will lie outside the shaded area of the fan chart.

Sources: NiGEM database, NIESR forecast and NiGEM stochastic

Overview

Despite forecasting GDP growth in 2021 and 2022 a bit weaker than we previously thought, our forecast for the world economy is still for an expansion of 5.7 per cent in 2021 and 4.2 in 2022 (Figure 1), marginally lower than our Autumn Outlook.

Growth of the world economy is set to slow down further, to 3.5 per cent in 2023, with risks skewed to the downside due to the virus and supply chain disruptions. We estimate that the pandemic will result in the level of global GDP being about 3 per cent of GDP lower in 2025 than our pre-pandemic expectation, with the cumulative loss up to 2025 amounting to around \$28 trillion.

Comparing our current forecast for 2023 with our pre-pandemic projections, the UK is still expected to suffer the worst total hit from Covid-19 among the G7 (about 3 per cent), followed by France (2 per cent) and Italy (less than 1 per cent). These reductions are due to the direct effects of Covid-19, as well as changes in individual behaviour and lockdowns implemented to prevent further virus' flare-ups.

In December, monthly economic activity indicators for the manufacturing and service sectors both continued to expand, albeit services business activity slowed to a three-month low (Figure 3). The increase in Covid-19 cases, fuelled by the Omicron variant, has particularly affected face-to-face service sectors.

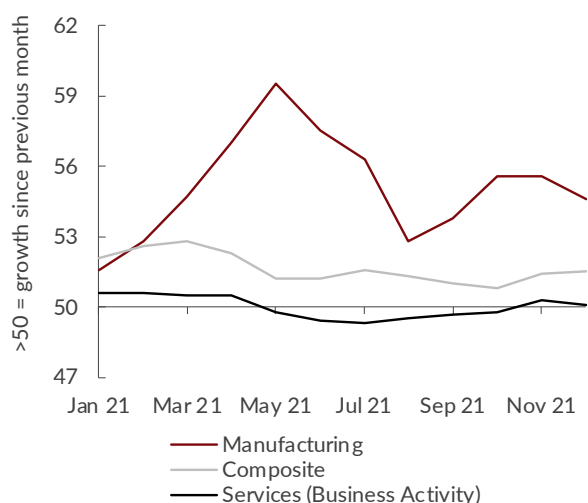
Meanwhile, manufacturers stated that output constraints have lessened. However, supply chain issues remained a substantial drag on worldwide production until the end of last year, according to IHS Markit PMI readings.

For instance, the US PMI Index fell to 58.7 in December of 2021 from 61.1 in November. The reading indicated the slowest expansion in manufacturing activity since January, owing to a drop in new orders (60.4 vs 61.5), while employment increased to its highest level since April (54.2 vs 53.3). The manufacturing sector in the United States remains demand-driven and supply-chain limited, with little signs of supplier delivery times improvement. Similarly, the manufacturing PMI index for the Euro Area was confirmed at 58 in December 2021, its lowest level

¹ We would like to thank Jagjit Chadha and Paul Mortimer-Lee for helpful comments and Amber Rivett and Patricia Sanchez Juanino for preparing the charts and the database underlying the forecast. The forecast was completed on 24 January 2022. Exchange rate, interest rate and equity price assumptions are based on information available to 13 January 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).

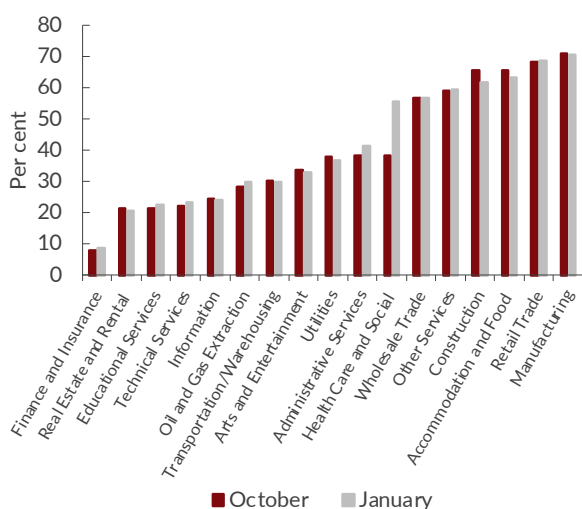
since February.

Figure 3 Recent trends in Global PMI (Index)



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

Figure 4 Supply-chain disruptions by sector in the US ('In the last week, did this business have domestic supplier delays?' (per cent of Yes))



Source: US Census Bureau updated 27 Jan 2022

In the US, while parts of the face-to-face service sector were adversely affected by Omicron, the business climate has improved recently, particularly in hospitality and tourism. In contrast, expectations in logistics have remained low in parallel with manufacturing (Figure 4).

The US non-manufacturing PMI dipped to 62 in December from a record high of 69.1 in November, considerably below market expectations of 66.9, but still indicating the sector's

nineteenth month of expansion. The demand for services is still high, but businesses are also dealing with inflation, supply chain disruptions, capacity restrictions, logistical issues, and labour and intermediate goods' shortages.

Similarly, in December 2021, the IHS Markit Eurozone Services PMI was 53.1 after a previous estimate of 53.3, and down from November's 55.9. The most recent data indicated the worst rate of increase in the service sector since April, as new order growth slowed to an eight-month low due to a drop in new international orders.

US consumer confidence fell sharply as inflation rose and recent survey readings are diverging, with consumer confidence up in November and December, according to the Conference Board, but still falling on the Michigan survey, suggesting uncertainty about the pace of the continued expansion.²

There is still considerable heterogeneity in, growth experience across countries, particularly across advanced and emerging economies (Figures 5 and 6).

Many EU countries, such as the Netherlands, Italy and France, have ended the year with stronger GDP figures than previously thought, due to upward revisions in the last quarter of 2021. Recent evidence from the European Commission's Business and Consumer Surveys shows that shortage-related output losses in the Euro Area have been concentrated in Germany (around half of the impact) and a in few sectors, with the EU-wide motor vehicle and machinery and equipment sectors being the most affected (Axioglou and Wozniak, 2022). There has been positive news from Germany, where recent figures indicate that the car sector is reviving, and growth has been strong in many EU countries, supporting the view that the bloc could return to its pre-pandemic GDP level by the end of the year in quarterly terms.

China's economy expanded at its weakest rate in more than a year and a half in the fourth quarter of 2021 (3 per cent, quarter-on-quarter, down from 3.9 per cent), driven down by weakening demand, debt controls, and tough Covid-19 restrictions, putting pressure on officials to provide additional economic stimulus.

India remains on track to achieve the world's fastest growth this year as well, thanks to a stronger-than-expected manufacturing and service performance (Figure 6).

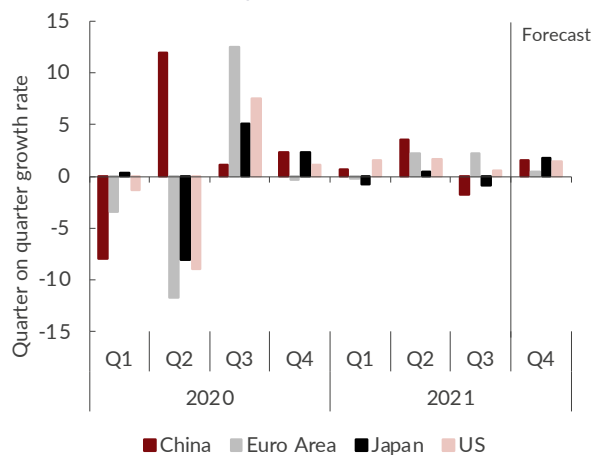
Despite its sixth interest rate rise (interest rates are presently at 6.75 per cent), Russia's economy is expected to continue to recover, boosted by higher oil prices and the government's intentions to raise expenditure.

Growing signs of Brazilian economic weakness are set to carry over into 2022 from 2021, with a slight economic downturn in the second and third quarters continuing in the final quarter of last year.

2 See the Conference Board Consumer Confidence <https://www.conference-board.org/data/consumerconfidence.cfm>.

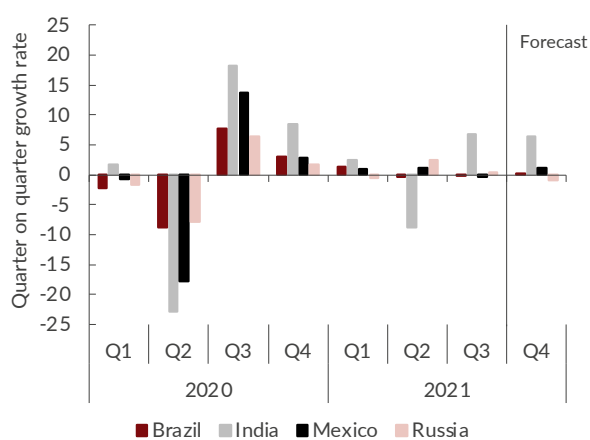
As the result of supply-side disruptions, we have revised down our forecast for world trade growth for 2021 from 8.3 per cent in November to 7.8 per cent in 2021 and to 6.2 in 2022 (from 7.6 in the Autumn).

Figure 5 Quarterly changes in GDP since 2019Q4 – major economies (per cent)



Source: NiGEM database and NIESR forecast.

Figure 6 Quarterly changes in GDP since 2019Q4 – emerging market economies (per cent)



Source: NiGEM database and NIESR forecast.

As Figure 7 shows, China and Emerging Asian economies – which saw the most marked and sustained increases in trade activity since the second half of 2020 – have also been affected by international supply chain disruptions. Continued restrictions on international travel and faltering vaccination rates in some countries also explain why services trade has not recovered completely yet.

We expect the peak in the current inflation upsurge to be in the first half of 2022 in most countries, as last year's

strong month-on-month rises in prices drop out of the twelve-month comparison, and that inflation will ease back into 2023 (figure 2). The extent to which CPI inflation will come down will depend on the CPI basket composition and how much of the observed inflationary pressures will affect its 'stickier' components such as housing. Because of decreasing base effects, headline inflation may decline slightly in 2022, and this is expected to continue throughout 2023. Despite this, inflation is expected to remain elevated in advanced economies (the US and the Euro Area in particular) during the first half of 2022 as price pressures have broadened beyond volatile items such as energy and food. This is especially true for global energy costs, which increased by 82 per cent in 2021, the largest annual increase since the 1973-1980 oil price crisis.

The overall monetary stance in advanced countries is still extremely accommodative with substantially negative real interest rates and swollen central bank balance sheets. Central banks around the world are shifting towards less stimulative monetary policies to counteract inflation (see 'Assumptions'). For example, the US Federal Reserve is signalling three rate hikes in 2022, though we expect four, and has accelerated the tapering of its emergency assets purchasing program, which will imply a gradual runoff of its sizable balance sheet.

Main-case short-term forecast

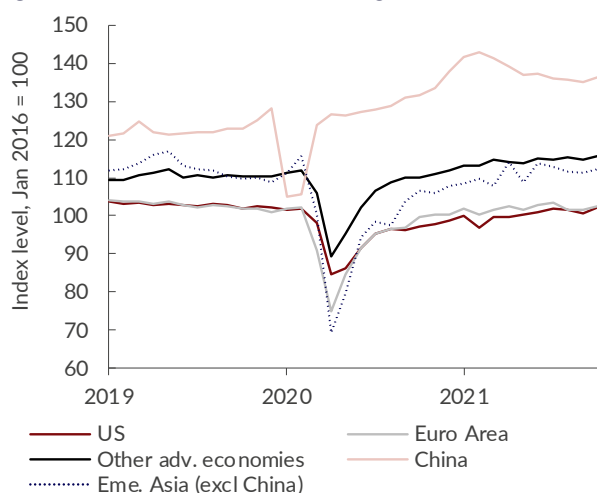
Assumptions

The progress of the pandemic remains a crucial issue for the global economic outlook. Our central assumption is that Covid-19 comes under control very gradually. More than 9.75 billion doses of the vaccine have been administered across 184 countries, according to data collected by Bloomberg. The latest rate was roughly 36.7 million doses a day.³

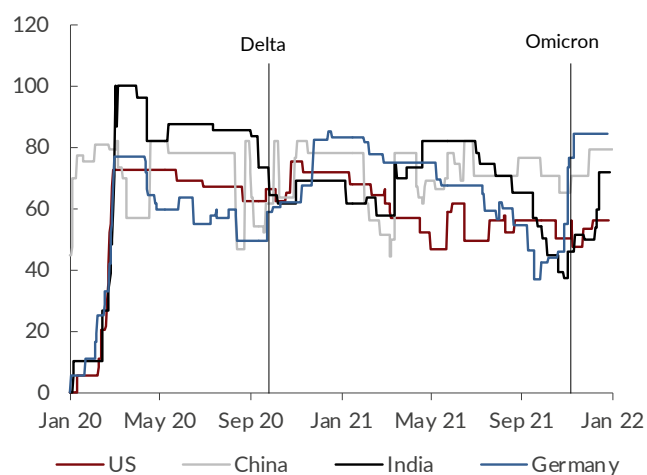
The new Omicron variant has resulted in a major spike in infections in Europe and North America. Even though most governments have not imposed many new restrictions on activity and travel (Figure 8), there are grounds to believe that Omicron will have a negative economic impact, particularly through lower labour market participation.

In recent months, the number of people who are not reporting to work has risen dramatically, particularly in essential areas like healthcare and transportation. If this pattern persists, it may stifle economic growth and continue to disrupt critical supply chains.

3 See Bloomberg vaccine tracker www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/ accessed 18 Jan 2022.

Figure 7 Recent trends in world goods trade (index)

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

Figure 8 Oxford stringency Index for selected countries

Source: Oxford Covid-19 Government Response Tracker.

While the Omicron variant has not yet had a big impact on economic activity in some important parts of the world, such as in Germany and Japan, it represents a significant economic and public health risk globally. Cases are increasing in the four BRIC countries (Brazil, Russia, India, China).⁴

One of the main global issues thus remains the distribution of the vaccine doses, as the rate of increase in developed countries' vaccination rates is 10 times faster than those in emerging economies. As developed nations' demand for booster jabs is further slowing down procurements in less developed countries, the uneven nature of the vaccine roll-out across countries remains the number one policy issue globally.

Our monetary policy assumptions, largely based on market-implied interest rates, show an increase in policy rates in the course of 2022 for the US. The recent increase in price inflation in major advanced economies has resulted in financial markets anticipating earlier increases in policy interest rates in major advanced economies. However, the scale of anticipated increases is limited, with financial markets still viewing the increase in inflation as largely temporary.

On fiscal policy, our forecast assumption is the retention of current published fiscal plans. The ongoing discussions in the US regarding President Biden's social spending bill (Build Back Better) are therefore not included in additional fiscal measures. The European Union's Next Generation EU programme is not included in the baseline scenario, given that many countries have not yet received or spent the pre-financing amounts in the form of grants received over the summer (Liadze and Macchiarelli, 2021).

We assume that exchange rates versus the US dollar will follow the uncovered-interest parity condition, based on interest rate differentials, over the medium term. We also assume that corporate bond spreads will gradually converge towards their long-term averages.

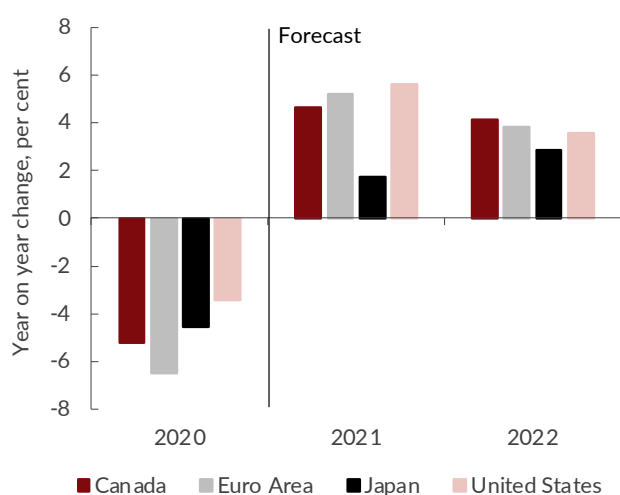
The recent increase in oil prices (to above \$76pb in early 2022) has led to a higher assumed medium-term price level. We follow the US Energy Information Administration (EIA) assumptions, which imply that the pressure coming from oil prices will fade and prices are projected to be around \$69pb in the medium term, around 1 per cent lower than in our Autumn forecast. Full details of the assumptions are in Appendix A.

4 In China, the zero-tolerance policy has led the government to take steps meant to stifle transmission that could have negative economic consequences, leading to lockdowns in some large cities such as Beijing, Tianjin and Xian. See also NIESR's COVID-19 TRACKER: INDIA <https://www.niesr.ac.uk/india-covid-19-tracker>

Economic activity

Globally, in the fourth quarter of 2021, consumers' ability to continue spending supported demand for goods and services despite higher prices. We expect continued growth in consumers' demand despite the impact of the virus' variants and inflation fears.

Figure 9 GDP growth in advanced economies (per cent)



Source: NiGEM database and NIESR forecast.

Since the summer, supply chain delays have been far more severe than we assumed earlier. Growth has been slower, and inflation has been higher than expected. Higher container, shipping, transportation, and storage costs have resulted in shortages and higher consumer prices.

For the time being, the Fed is counting on the bottlenecks being transitory and expects prices to level off once supply chain bottlenecks resolve. If the disruptions worsen or last longer than expected, monetary policy authorities might decide to raise interest rates earlier or more strongly than we predict (see 'Assumptions').

Recent developments suggest that supply-side hindrances might fade only gradually, remaining a drag to economic growth at least into the second first half of 2022. These affect the price of merchandise coming from China and other emerging economies to the US and the Euro Area. Additional delays in the supply of critical inputs could cause curtailments in production which would feed into lower real GDP figures at least in the first half of this year.

There are significant differences in GDP growth projections across countries with India, Indonesia, China notably strong and Argentina, Brazil and South Africa particularly weak in 2022, for example. Full details of the forecast are shown at the end of this section, in Table 2.

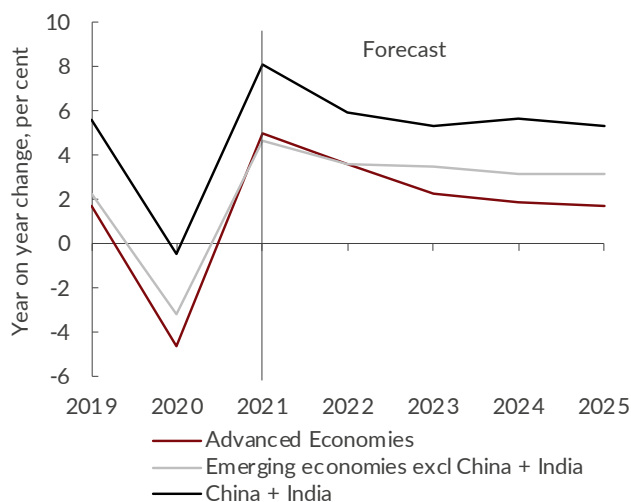
We have continued to revise down our 2021 and 2022 growth forecasts for most developed economies, with the US now projected to grow at 5.6 per cent in 2021, down from 5.8 per cent in our Autumn Outlook, 3.6 in 2022 and 2.3 in 2023 (Figure 9). Since the pandemic, the United States has nevertheless continued to have the strongest overall GDP performance among the G7 countries.

GDP in the Euro Area is forecast to grow by 5.2 per cent in 2021, 3.8 per cent in 2022 and 2.5 in 2023. Across the Euro Area, we expect 2022 GDP growth to range from less than 3.5 per cent in Germany to just above 5 per cent in Spain. We forecast that Euro Area economies will return to pre-pandemic GDP levels by mid-2022.

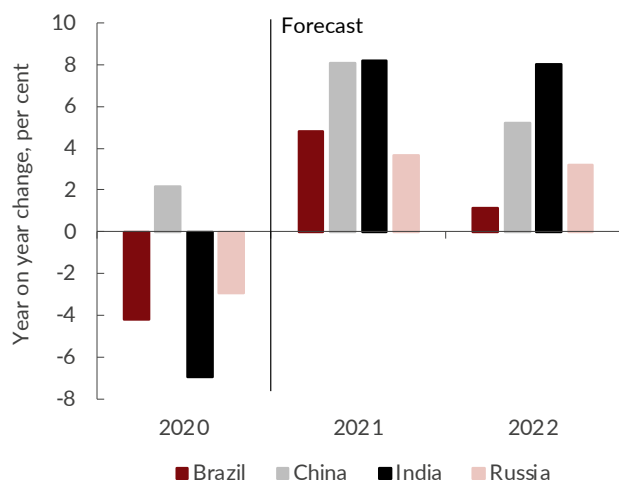
Many EU countries have extended macroeconomic policy support in recent months. One of the most notable developments came from the Next Generation EU (NGEU) programme, the main expenditure component of the EU Recovery and Resilience Facility (RRF), the European Commission's EUR 750 billion fiscal boost. National plans for the NGEU have been firmed up in 20 countries (see also Giacon and Macchiarelli, 2021; Liadze and Macchiarelli, 2021). The European Recovery and Resilience Facility envisages a total stimulus of about 5 per cent of GDP over the period 2021-2026, using both the grant and the loan components of the fund. Spending the bulk of the EU's fiscal package will start in the next few months.

We forecast slower than previously expected US GDP growth this year and an increase in consumer's expenditure deflator inflation to average 3.9 per cent in 2021, 4.6 this year, and 2.5 per cent in 2023. The Fed is showing increased nervousness about its view that the increase in inflation is transitory. While we expect inflation to increase further in the next six months and moderate thereafter, as core goods price pressures ease (see our Box A), we forecast that underlying CPI inflation will stay above 3 per cent until at least the end of 2022 and the first quarter of 2023, and slowly moderate thereafter to around 2 per cent by end-2024.

The forecast for GDP growth in Japan for 2021 has been reduced to 1.7 per cent, compared to 2.5 in our Autumn Outlook, but increased to 2.8 per cent in 2022. Japan's GDP has continued to expand, as shown in Figure 9. High input costs, shortages of raw materials, and shipping delays have restrained goods production. For now, the recovery is supported by monetary policy aid, a substantial vaccination campaign, and an expected large-scale fiscal spending package of up to ¥33 trillion (equivalent to \$290 billion, about 5 per cent of GDP).

Figure 10 GDP growth in emerging and advanced economies

Source: NiGEM database and NIESR forecast.

Figure 11 GDP growth in emerging economies (per cent)

Source: NiGEM database and NIESR forecast.

We expect to see a continuation of the split in economic growth performance, as seen over the past two decades, between China and India and the other emerging economies (Figure 10). For instance, over the medium to longer term (2024-28), we forecast Chinese GDP to grow at a 4.8 per cent annual average, compared with 5.4 per cent for India and 2.9 per cent for other emerging markets (see 'Medium term assumptions').

Emerging market economies have resumed growth, owing particularly to stronger manufacturing trade, and increasing commodity demand. Emerging market economies are generally not likely to reach pre-pandemic GDP levels until late 2022. However, the two largest economies, China and India, have already regained their pre-pandemic GDP levels.

GDP growth in 2021 in China, at 8.1 per cent, was below our previous forecast and we predict the slowdown to continue well into this year, predicting 5.2 per cent growth in 2022 and 5.1 in 2023. Despite stronger-than-expected performance in exports sustaining the recovery, Chinese economic growth continues to be restrained by persistent production and consumption disruptions caused by Covid-19 outbreaks, as well as the emerging property market downcycle (Figure 11). Consistent with slowing growth, monetary policy is easing and fiscal spending on social security and infrastructure development is poised to expand strongly in 2022.

India is still on track to achieve the world's fastest growth in 2022 (8 per cent), thanks to a still strong manufacturing and service performance, although at a slightly slower pace than previously expected as the country went through a devastating surge in infections in the year that just ended. The economy has lately been recovering but there are fears of another surge, especially given the large number of mass gatherings related to upcoming elections. We project growth of 8 per cent in 2022 following a likely forecast outcome of 8.2 per cent in 2021, 0.8 percentage points lower than our Autumn Outlook, and 5.7 per cent in 2023 (Figure 11).

Slower world trade growth than previously forecast in the Autumn mirrors the weakening in global economic activity. We expect world trade to have expanded by 7.8 per cent in 2021, about 0.5 percentage points lower than previously forecast, and to grow by 6.2 per cent in 2022, 1.4 percentage points than the Autumn forecast. Behind this revision are the current supply chain disruptions, inflationary pressures, and the uncertainty related to new variants of the virus.

Despite many face-to-face services activities having resumed, international travel restrictions will continue to affect service sector activity (Naisbitt and Whyte, 2020; 2021; Macchiarelli, 2021), particularly as a considerable part of the world remains unvaccinated. Continued measures to preserve public health and the continuation of the vaccination campaign are likely to support confidence and GDP growth, though further restrictions to mobility (both voluntary and involuntary) are possible.

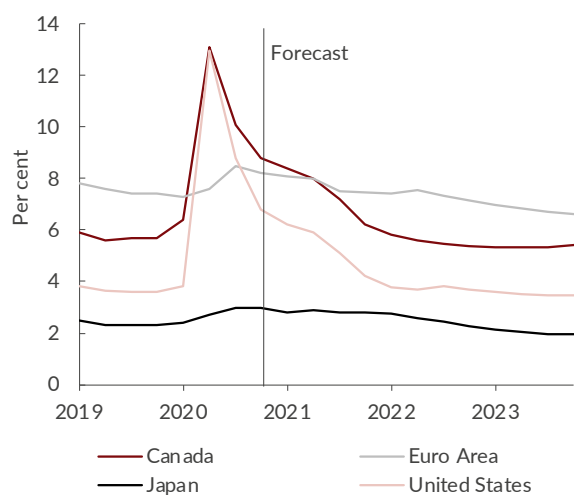
Table 2 Forecast Summary percentage change

	Real GDP ^a													World Trade ^b
	World	OECD	China	India	BRICS+	Euro Area	USA	Japan	Germany	France	Italy	UK		
2020	-3.1	-4.7	2.2	-7.0	-1.4	-6.5	-3.4	-4.5	-4.9	-8.0	-9.0	-9.4	-8.4	
2021	5.7	5.3	8.1	8.2	7.1	5.2	5.6	1.7	3.0	6.6	6.3	7.3	7.8	
2022	4.2	3.6	5.2	8.0	5.1	3.8	3.6	2.8	3.4	4.1	4.2	4.8	6.2	
2023	3.5	2.4	5.1	5.7	4.7	2.5	2.3	1.4	2.4	2.3	2.1	1.3	6.0	
2024-2028	3.0	1.7	4.8	5.4	4.4	1.4	1.6	0.9	1.2	1.5	1.4	1.1	4.8	

	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	0.5	1.2	0.3	0.7	0.6	-0.3	1.2	6.6	0.5	-0.1	0.0	43.0
2021	3.6	2.2	3.9	-0.4	3.0	1.7	1.4	2.3	5.1	0.3	-0.1	0.0	69.9
2022	5.2	3.1	4.6	0.3	3.6	2.3	2.5	5.3	4.0	0.7	-0.1	0.0	76.2
2023	2.9	1.3	2.5	0.3	1.4	1.1	1.1	2.7	4.0	1.7	-0.1	0.1	69.5
2024-2028	2.3	1.8	2.2	0.9	1.6	1.8	1.6	2.1	4.0	2.3	0.3	0.7	69.2

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.

Figure 12 Unemployment rates (per cent)

Source: NiGEM database and NIESR forecast.

Unemployment

Labour markets remain distorted by the pandemic, with lower participation rates and shifts in demand between sectors leading to extensive labour shortages and upward pressure on wages.

In the United States, the net 6.4 million jobs generated in 2021 was the largest annual amount ever recorded. Despite this, the number of existing employees was still

3.7 million lower in December than it was in February 2020, before the pandemic struck.

The 3.9 per cent US unemployment rate in December 2021 is only marginally above the 2019 average of 3.7 per cent (Figure 12). We forecast that it will fall further in the coming months despite more people returning to the workforce. Data from the US Current Population Survey shows a drop in labour force participation (Figure 13), particularly women with dependencies. This likely reflects pandemic-related job losses, the shift of many schools to distance learning (BLS, 2021), as well as sick absences in the wake of the more contagious Omicron variant. While young workers have suffered the most since the first phase of the pandemic, their labour market participation has recovered to levels higher than before the pandemic.

Based on the latest available data from Eurostat in December 2021, there is still considerable heterogeneity in the Euro Area labour markets: Spain (13 per cent), Italy (9 per cent), and France (7.4 per cent) had the highest unemployment rates among the largest Euro Area economies, while Germany (3.2 per cent) recorded the lowest levels.

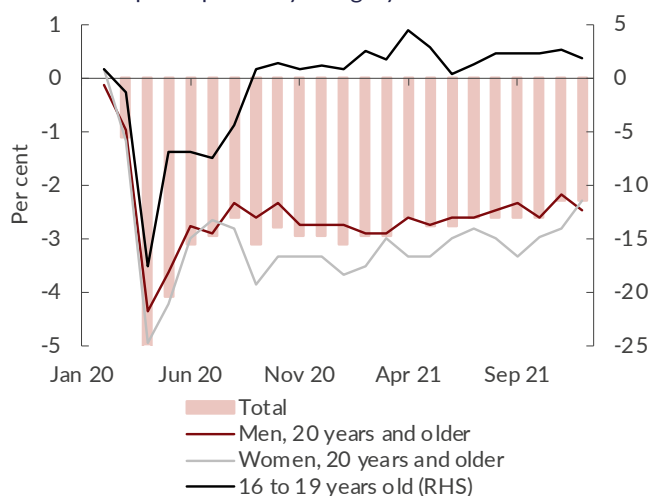
As cyclical support measures are phased out, the European labour market may remain subdued in comparison to pre-pandemic levels until beyond 2022, because of the large use of short-term working schemes, and especially as the impact on employment of programmes like the Next Generation EU would be seen more over the medium term.

Table 3 Recent directions in monetary policy interest rates (per cent)^a

	January 2020	September 2021	December 2021	Change since September 2021	2022 forecast (end-of-year)	2023 forecast (end-of-year)
USA	1.75	0.25	0.25	-	1.1	2.1
Euro Area	-0.50	-0.50	-0.50	-	0.0	0.2
Japan	-0.10	-0.10	-0.10	-	-0.1	-0.1
Canada	1.75	0.25	0.25	-	1.1	2.1
UK	0.75	0.10	0.25	↑	1.2	1.5
China	4.15	3.85	3.85	-	3.8	3.8
India	5.15	4.00	4.00	-	4.0	4.0
Brazil	4.50	6.25	9.25	↑	11.0	9.8
Russia	6.25	6.75	8.50	↑	8.6	7.8
Australia	0.75	0.10	0.10	-	0.3	0.4
Turkey	11.25	18.00	14.00	↓	12.8	10.4

Note: (a) Monthly average rates are shown. Forecast values refer to end of year rates.

Source: Central banks, DataStream and NiGEM, NIESR.

Figure 13 Cumulative growth of US labour force participation by category

Source: Bureau of Labour Statistics.

Based on previous downturns and recoveries, there is a risk of scarring after the pandemic as some of those who lost their jobs could lose attachment to the labour force and see their human capital depreciate faster than if they were employed. This concern applies most to those sectors, such as in-person services, where labour shortages due to enhanced unemployment benefits, concerns about contracting Covid-19 and finding childcare might further delay the labour market adjustment. Demand for less-skilled employees has resumed lately, but the pandemic's restructuring, sectoral shifts, and rapid automation, particularly in advanced economies, could stymie the recovery of low-skilled employment,

with adverse implications for labour participation and the wage distribution (see also 'Inflation' section).

Economic policy

In advanced economies, with rising inflation rates the focus now is on monetary policy tightening. Despite sluggish employment growth in December, the Federal Reserve (Fed) is expected to halt asset purchases and begin interest rate normalisation in March 2022. While the Fed would like to see labour participation rise, high rates of inflation that risk second-round effects are forcing its hand with regard to monetary policy, necessitating a bringing forward of the end of monetary ease. The Fed is focussing on the low and still falling unemployment rate, record vacancies, and soaring quit rates, all of which signal a red-hot labour market that risks seeing higher wages feeding into higher service sector inflation.

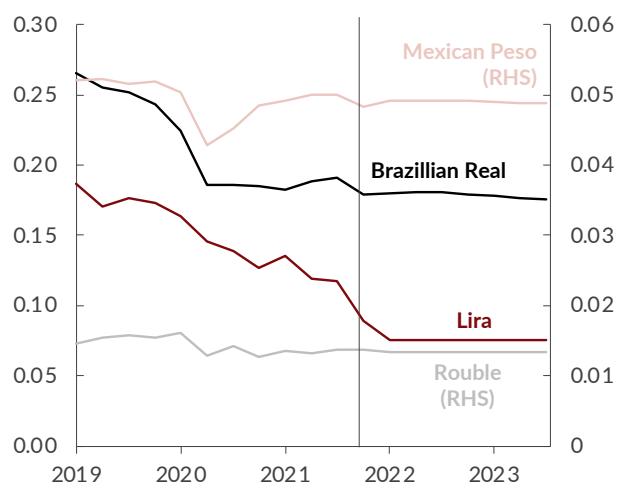
The jump in the US benchmark 10-year bond rate at the beginning of January (currently trading above 1.7 per cent) indicates that investors have increasingly come to believe that the Fed will not only raise rates in 2022 but will taper rapidly and may even begin selling bonds, as flagged in the minutes of the Fed's December meeting. Fed officials' median interest rate projections released in December showed that the central bank could raise the federal funds three times in 2022 from its current record-low level of near zero. We forecast four rates hike this year, starting in March (Table 3).

Table 4 Recent directions in 10-year government bond yields (per cent)^a

	January 2020	September 2021	December 2021	Change since September 2021	2022 forecast (end-of-year)	2023 forecast (end-of-year)
USA	1.76	1.37	1.45	↑	2.0	2.2
Euro Area	0.16	0.04	0.11	↑	0.8	1.0
Japan	-0.02	0.04	0.05	↑	0.3	0.5
Canada	1.50	1.27	1.46	↑	1.9	2.2
UK	0.67	0.81	0.83	↑	1.4	1.6
China	3.05	2.87	2.78	↓	3.0	3.3
India	6.58	6.18	6.41	↑	5.8	5.1
Brazil	6.77	10.98	10.68	↓	15.4	13.7
Russia	6.22	7.12	8.48	↑	7.8	7.0
Australia	1.18	1.27	1.64	↑	1.4	1.3
Turkey	10.93	16.84	21.61	↑	20.4	17.3

Note: (a) Monthly average rates are shown. Forecast values also refer to end of year rates.

Source: Central banks, DataStream and NIGEM, NIESR.

Figure 14 Exchange rate for selected emerging economies against USD

Source: NiGEM database and NIESR forecast.

Together with the Bank of England and the Bank of Norway, we expect several other central banks in advanced economies to tighten soon, such as the Bank of Canada and the Bank of New Zealand. The ECB remains for now the major outlier. The rate and extent of such monetary tightening are unclear because of the risks around Covid-19 and the growth forecasts, ambiguity about the transitory nature, or otherwise, of inflation after a decade of very low inflation, and doubts about the effects of monetary policy actions against the background of increased central bank balance sheets.

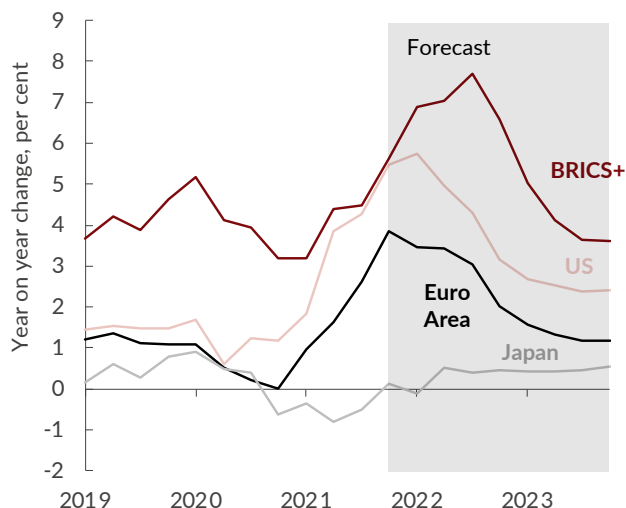
The rate of inflation in the US is expected to return to central bank target only slowly, remaining at 2.5 per cent on average in 2023. While we are more pessimistic about inflation remaining high than the consensus, inflation may endure longer than we expect (see Sanchez-Juanino et al., 2021). A more aggressive stance by the Federal reserve than we envisage could bring inflation down more quickly but only at the risk of provoking possibly discontinuous asset price revaluation (“tantrums”).

Euro Area inflation exceeded the European Central Bank’s 2 per cent inflation target in 2021, and is expected to continue to overshoot until 2022Q2 when it will moderate as some of the cost-push factors from the current energy shortage are expected to fade. While the interest rate environment and the pace of the central bank purchases remain accommodative, the main challenge for the ECB will be to avoid tightening prematurely, i.e., overreacting to short-term supply shocks that have no lasting long-term bearing on inflation.

Several major Emerging Market Economies (Turkey, Russia, Ukraine, Brazil, Mexico), have taken substantial steps to suppress inflation, avert capital outflows and stabilise their currencies. While some emerging economies, including Brazil, Russia, and South Africa, have started to increase monetary policy interest rates, we continue to believe that central banks in those countries will have to balance carefully continuing domestic demand weakness against near-term inflation pressures carefully (see also Danninger et al., 2022). Additional inflation pressure in emerging market economies may risk de-anchoring inflation expectations and prompt monetary tightening amid modest recoveries, which might also result in financial stress. Some emerging economies

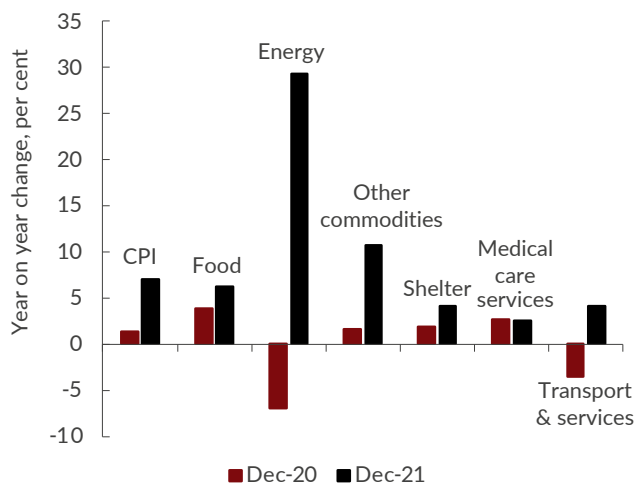
which experienced currency depreciation since 2020 may “import” inflationary pressure (Figure 14). Mexico, Brazil, and Turkey have recorded some of the highest inflation rates thus far (see Box B).

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



Source: NiGEM database and NIESR forecast.

Figure 16 Breakdown of US annual CPI inflation (December, per cent)



Source: Federal Reserve Bank of St Louis databank

Reductions in central bank balance sheet expansion and higher rates in advanced countries present a challenging environment for many emerging markets as weaker exchange rates help boost already high inflation when activity is weak due to Covid-19.

In 2022, we forecast global government debt to stay at record highs— close to 100 per cent of GDP. Our projections are for public debt to GDP ratios to stabilise

as the economic recovery continues. Negative real interest rates, rising policy rates and scaled back central bank buying of bonds all represent challenges to current bond prices as we move towards a monetary policy tightening cycle (Table 4). Thus, government borrowing costs are likely to increase.

Emerging markets with high external debt and expected low growth (e.g., South Africa, Brazil and Mexico) will remain exposed to financial market stress, particularly should investor risk sentiment deteriorate because of increased inflation pressures in advanced economies. In particular, high debt levels expose the financial system to a sharp rise in interest rates, which might be triggered by increased risk aversion, higher-than-expected inflation, and monetary tightening (Holland, Küçük, and Macchiarelli, 2021).

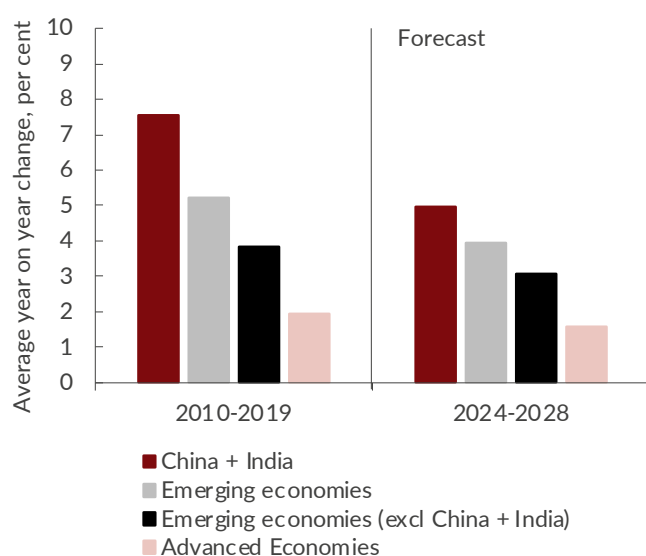
Emerging economies face considerable threats from central bank interest rate tightening in advanced economies, and from a retreat from exceptionally large asset purchases (see our NiGEM Topical Feature). Many emerging markets will need to be cautious about withdrawing fiscal support too soon while keeping 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. The issue of debt sustainability in emerging markets remains crucial and could come more into focus as our forecast progresses.

Inflation

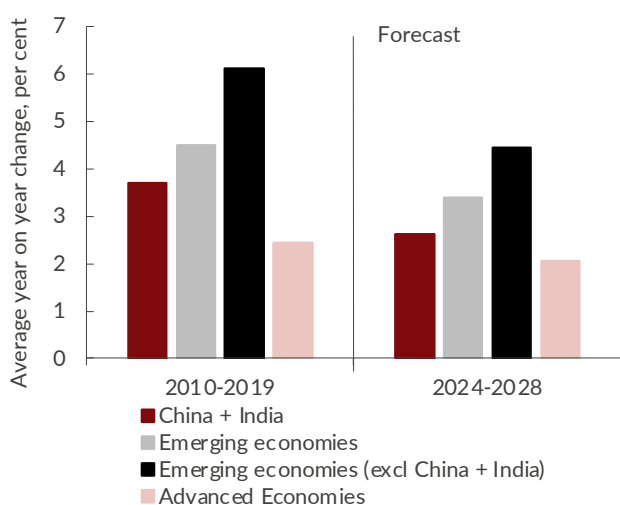
Our main case scenario is that annual price inflation will continue to rise in the short-term (Figure 15). Annual OECD inflation is forecast to rise from 1.7 per cent in 2020 to nearly 3.6 per cent in 2021, and 5.2 in 2022, before edging down to 2.9 per cent in 2023. We expect inflation to recede further over the medium term.

Aggressive fiscal and monetary loosening have contributed to rapidly rising inflation, especially from energy and commodity prices, which has been exacerbated by supply chain disruptions caused by Covid-19 restrictions. Commodity price inflation is set to continue increasing as output ramps up. As vaccines become more widely available, we expect an increase in travel-driven demand for energy, particularly in advanced economies.

Although underlying consumer price inflation (excluding food and energy) has increased, we forecast it will go back to running at around the same pace as before the pandemic by next year in Japan, the Euro Area and the BRICS+ countries (Figure 15). Recent price increases have been especially noticeable for durable items, such as vehicles, where demand has exceeded supply, and in some recently reopened contact-intensive service industries.

Figure 17 GDP growth rates (average annual, per cent)

Source: NiGEM database and NIESR forecast.

Figure 18 Inflation rates (average annual, per cent)

Source: NiGEM database and NIESR forecast.

In the final month of 2021, the annual inflation rate in the US surged to 7 per cent, a new record since June 1982, up from 6.8 per cent in November. The largest contribution to the increase was energy (Figure 16) (see NiGEM Risk Simulation). However, inflation has increased also for shelter, food, new vehicles, apparel and medical care services. Inflationary pressures are expected to persist far beyond 2022, and Fed Chair Powell recently committed to do everything it takes to keep inflation in check, including raising interest rates (see also Sanchez-Juanino et al., 2021).

The interplay of inflation expectations and wages will have

a significant impact on inflation in advanced economies. A sustained rise in inflation above the low levels seen before the pandemic requires significantly higher wage inflation. One source of uncertainty is wage evolution in the face of increased labour demand clashing with labour shortages. Wage pressures are mounting in contact-intensive industries, such as leisure and hospitality. Survey indicators such as the IHS Markit/CIPS Purchasing Managers' Index (PMI), suggest that capacity constraints and staff shortages in face-to-face services sectors meant that many service providers have struggled to keep up with new orders in the US and Europe. Companies trying to meet a surge in demand were able to increase prices, thereby passing these costs to consumers to avoid an erosion of profit margins.

If these forces continue, we expect increased labour bargaining power in contact-intensive sectors, leading to higher wages at the bottom of the wage distribution together with longer than expected frictional unemployment. In the light of the continuation of international restrictions to labour mobility, this could be particularly acute for small firms and industries that rely on seasonal and cross-border employees, pointing to upside risks to inflation if the labour supply does not recover fully.

Inflation risks remain on the upside, especially if consumer demand is greater than expected or if supply bottlenecks take a long time to resolve. Even if there are no further cost increases, the impact of past rises in shipping and transportation costs, and commodity prices is already significant across the G20 nations, accounting for much of the rise in inflation over the last year. Indicators such as the Baltic Dry Index has come down a lot, suggesting that supply side pressures should not persist into much of 2022, however. Our overall expectation at this stage is that the higher rates of inflation are most likely to be transitory rather than permanent.

Medium-term outlook

Our assumption is that the disruptive effects of Covid-19 on economies will diminish as time passes. As a result, the global economy is forecast to return to a steady growth path with inflation stabilising.

Our outlook for global GDP growth in the medium term is for the slowing in growth that was evident before the pandemic struck to continue. This results primarily from the continued slowdown in annual GDP growth in China and India (as shown in Table 2) as the development phases of these economies, which comprise around 25 per cent of global GDP on a PPP basis, continue to change. Advanced economies, which comprise around 42 per cent of global GDP on a PPP basis, are forecast to show a slight slowing in their aggregate growth rates of the past two decades, with growth of around 1.5 per cent a year over 2024-28 (Figure 17).

We project growth of other emerging economies (which as a group account for around one third of global GDP) to continue to be faster than advanced economies but the gap has reduced over the past two decades and is expected to remain narrow. The diversity of experiences within this group of economies will continue, not only in growth but also in inflation.

We expect that the current increase in inflation will subside as supply chain issues are cleared, central banks raise policy interest rates and the effects of fiscal policy boosts wane. Interest rates have already increased in emerging economies such as Brazil and Russia because of depreciating currencies and rising inflation. In the medium-term, we forecast annual inflation of around 4 per cent for this group of emerging economies. China and India are forecast show lower inflation than the 'other emerging economies' grouping. At around 2 per cent a year, it will be slightly lower than in the previous two decades, with India continuing to have higher inflation than China.

Annual inflation in advanced economies is forecast to revert to around 2 per cent once the current inflation episode ends. Such a rate of inflation would be like those experienced in the growth periods of the past twenty years as shown in Figure 18.

With inflation at such rates, we project short-term real interest rates still to be negative in the medium-term. However, they will be considerably less negative than currently, driven by a period of increasing nominal policy interest rates and, after 2023, lower inflation.

At the present time, the key economic uncertainty for the medium-term concerns the possible effects of Covid-19. The possibility of continuing waves of the virus and renewed economic disruption cannot be ruled out, although over such a timescale we may learn to be more able to live with such waves with less economic disruption than we have seen over the past two years.

Risk overview

If inflation persists at higher levels, fighting inflation might come at the expenses of driving down growth of the global economy. The end of the US ultra-accommodative monetary policy stimulus will lead some currencies to experience a depreciation against a stronger US dollar, potentially causing economies to raise their interest rates to limit any adverse effects from foreign exchange market movements and inflation. We have explored this issue in our Topical Feature using our NiGEM model, with a particular focus on the Euro Area and Emerging Market Economies.

Persistent higher inflation would dampen demand and lead to rising market yields in the medium-term. This might increase pressure on fiscal positions particularly for economies facing risks from currency depreciation, which may in turn lead to increased sovereign spreads for those

countries with limited ability to reduce expenditure or raise taxation. While the increase in inflation is projected by financial markets to be temporary (with inflation peaking in 2022), this view could change if higher inflation readings continue to occur this year and next year.

Higher interest rates at a time of substantial increases in government indebtedness would add to dilemmas over the sustainability of debt, especially for countries that are already subject to high-risk premia on vulnerable interest rates. The low level of interest rates is not guaranteed into the future, so there is potential for further pressure on public finances if interest rates were to rise, especially for countries with comparatively higher risk premia such as Argentina, Brazil, Turkey, Indonesia and Russia or countries with a large share of debt at short maturity (see OECD, 2021).

We have previously shown that financial spillovers could impact countries with higher risk premia such as Argentina, Brazil and Turkey, as well as lower risk-rated countries such as Indonesia and Russia, through lower output and trade growth and a slower pace of global GDP growth. We estimated that the effect of these negative spillovers on emerging economies' GDP varies between 0.2 percentage points in India, to 1 percentage point in Brazil and 2.4 percentage points in Argentina (Holland, Kùçük, and Macchiarelli, 2021).

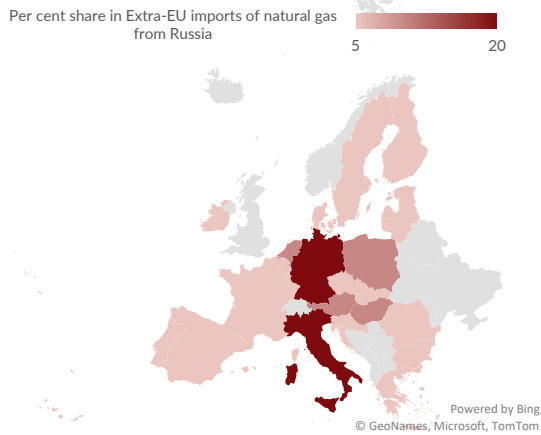
During the pandemic, companies and households in many economies have also taken on more debt, thereby increasing their vulnerability to higher interest rates.

Reduced labour market participation in advanced economies, if permanent, is a major concern, as that could further boost wages in the face-to-face and service sectors. New virus variants, such as Omicron, could delay the timeline for some people to feel comfortable to return to work and cause worker shortages to linger somewhat longer.

The extent to which countries can leave the substantive effects of the virus behind them, as well as the efficacy of existing vaccines, may not be enough to prevent a heterogenous recovery.

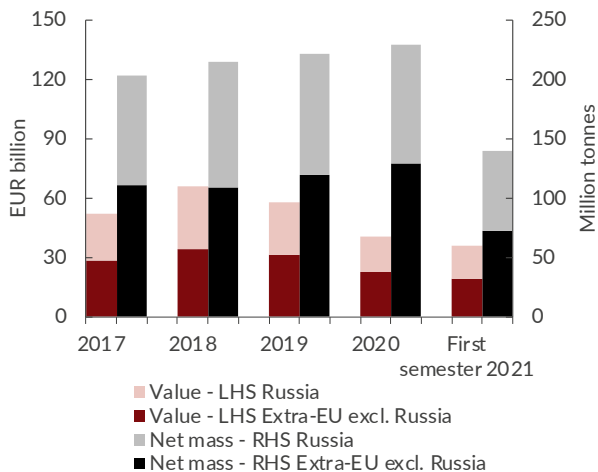
The current spread of the Omicron variant could lead to slower global growth if severely affected countries such as China impose stringent lockdowns. China is facing the highly transmissible Covid-19 variant without the most effective vaccines and with far fewer people protected by it, requiring severe localised lockdowns to control the spread of the virus. There is growing evidence that infections are now leading to fewer hospitalizations and deaths, particularly in the West where the vaccination rates are high. However, the number of reported new cases of the virus globally has risen recently and the number of deaths in developing economies has also increased because vaccination programmes have not progressed at the same pace across countries.

Figure 19 Share of EU imports of petroleum oils and natural gas from Russia by Member State (per cent)



Source: Eurostat, EU imports of energy products – recent developments, updated 22 January 2022.

Figure 20 EU imports of natural gas from Extra-EU countries, 2017 - 2021 (EUR billion and million tonnes)



Source: Eurostat, EU imports of energy products - recent developments, updated 22 January 2022.

Through restrictions on international travel and domestic service sector activity, new infections could slow the pace of global economic recovery or - if sufficiently severe - lead to renewed falls in GDP in some countries.

As the global economy is re-engaging, it is quite possible that GDP growth could be stronger than forecast. GDP growth into 2022 and 2023 might be stronger than expected if vaccination rates pick up and business and consumer confidence increase, while a run-down of savings accumulated during the epidemic could sustain consumer spending.

In addition, there could be accelerating digital transformation (i.e., with companies increasing their

use of digital technology and work-from-home policies implemented during the pandemic) and short-term productivity improvements. This interaction could boost consumers' and firms' confidence and labour force participation, causing potential output to increase.

NiGEM Risk Simulation: Another round of energy price hikes

- We use the National Institute Global Econometric Model (NiGEM) to examine the likely macroeconomic effects of a persistent rise in the global price of natural gas accompanied by a temporary rise in risk in the Euro Area reflecting growing geopolitical tensions.
- In terms of macroeconomic impact, our analysis shows that lower GDP and higher prices result for both the Euro Area and globally. However, the Euro Area experiences around twice as large a reduction in GDP growth than the world economy in 2023 as a result of the shock.

The possibility of continued energy price disruptions on the European and global markets increases the downside risk to our short-term GDP growth forecast and increases the likelihood of inflation overshooting targets. The current security crisis at the border of Europe with a build-up of Russian troops near Ukraine has sparked speculation about further energy price increases, with consequent effects on global and Euro Area demand and inflation.

Were sanctions to be placed on Russia's energy exports or were Russian gas exports used as a tool for leverage through lower supply, European natural gas prices would be expected to rise further. If that happens, European gas prices will probably exceed the 180 euro per MWh threshold as observed in March and early October 2021 as demand is re-gaining momentum after the pandemic shock. We have explored this possibility in this risk scenario using NiGEM.

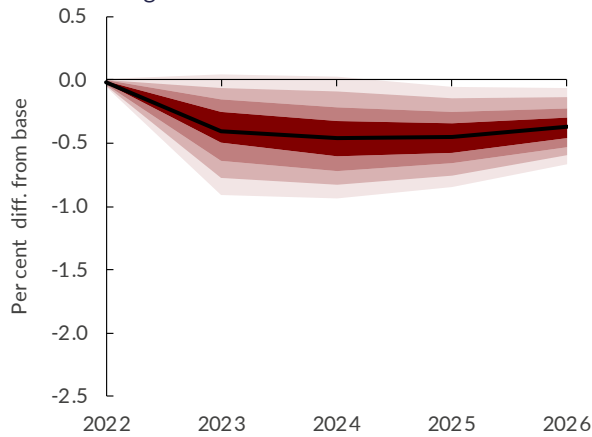
The EU energy dependency rate, measured by the share of net imports (imports minus exports) in gross inland energy consumption (defined as the sum of energy produced and net imports), shows that the EU relies upon imports to meet more than 60 per cent of its energy needs.

The EU mainly depends on a few partners for imports of crude oil, natural gas and solid fuels. Almost one quarter of the extra-EU's crude oil imports, and almost half of the EU's imports for natural gas come from Russia. This means that the reaction to a surge in energy prices in the Euro Area depends not only on the energy intensity and elasticity of imports of Euro Area Member States to gas but also the share of imports of natural gas from Russia, which is particularly high in countries such as Germany and Italy (Figure 19).

Figure 20 shows the value and net volume (or mass) of natural gas imports into the EU from Russia and the rest of the world. According to the most recent data from the Eurostat, imports from Russia have decreased since 2019. However, Russia’s share in the net volume of natural gas imports climbed from 45 per cent to 48 per cent between

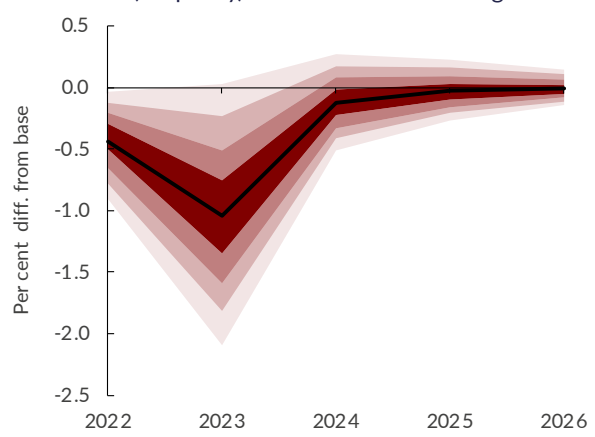
2017 and the first quarter of 2021, indicating Europe’s critical reliance on Russia’s gas exports.

Figure 21 Effect of a global gas price shock on global GDP growth



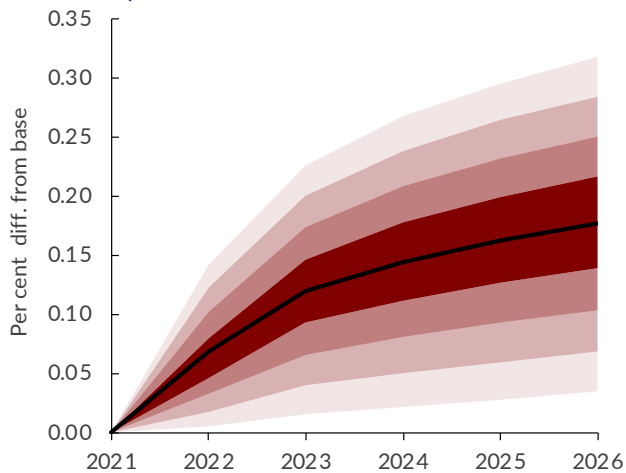
Source: NiGEM scenarios and NiGEM stochastic simulations.
Notes: The black line refers to the median response. The shades within the chart represent a 10 per cent chance that the series will lie within the boundary of that shades in the long run. There is a 20 per cent chance that the series will lie outside the shaded area of the fan chart.

Figure 22 Effect of a global gas price plus investment premium (temporary) shock on Euro Area GDP growth



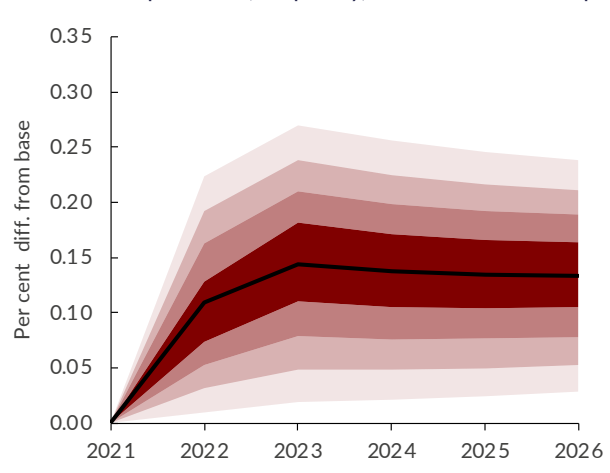
Source: NiGEM scenarios and NiGEM stochastic simulations.
Notes: The black line refers to the median response. The shades within the chart represent a 10 per cent chance that the series will lie within the boundary of that shades in the long run. There is a 20 per cent chance that the series will lie outside the shaded area of the fan chart.

Figure 23 Effect of a global gas price shock on global prices



Source: NiGEM scenarios and NiGEM stochastic simulations.
Notes: The black line refers to the median response. The shades within the chart represent a 10 per cent chance that the series will lie within the boundary of that shades in the long run. There is a 20 per cent chance that the series will lie outside the shaded area of the fan chart.

Figure 24 Effect of a global gas price plus investment premium (temporary) shock on Euro Area prices



Source: NiGEM scenarios and NiGEM stochastic simulations.
Notes: The black line refers to the median response. The shades within the chart represent a 10 per cent chance that the series will lie within the boundary of that shades in the long run. There is a 20 per cent chance that the series will lie outside the shaded area of the fan chart.

Our analysis illustrates GDP growth and inflation risk estimates for both the global economy and the Euro Area based on the possibility of continued natural gas price increases starting from 2022Q1. We supplement this price risk with a 0.5 per cent temporary investment premium shock in NiGEM applied to all Euro Area member states. This additional shock can be thought of as representing an initial view on the possibility that an escalation of the situation in the Ukraine would represent a defence threat in the European immediate neighbourhood.

The downside range of the scenario implies GDP growth being around -0.9 per cent lower for the global economy and about -1.7 per cent lower for the Euro Area in 2023 than in our baseline.

In the case of the Euro Area, while the negative effect on GDP growth is larger because of the combined effect of the gas price and investment premium shock (Figure 22), the return to base is quicker compared to the global economy, as the

assumed temporary nature of the confidence (investment premium) shock pulls the economy back to base.

The simulation also sees a permanent impact on price levels for both the global and Euro Area economies (Figures 23 and 24), with prices permanently higher as countries that are particularly exposed to gas imports would be affected through higher cost-push factors.

The broad implications of this scenario are somewhat reminiscent of the 1970s energy crisis, when OPEC countries effectively raised the price of oil, and subsequent oil price shocks. Higher prices and supply limitations severely disrupted economic activity in the global economy and led to higher inflation. The scale of the shock examined here is, however, much less severe than the earlier oil price crises (see, for example, Kilian and Vigfusson, 2014, for an analysis of oil price rises on the US economy).

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Box A: US Inflation: is it “Back to the Future”?

By Paul Mortimer-Lee

Summary

The US Federal Reserve persistently and sharply underforecast inflation last year. This might just be a temporary run of bad luck, but if it is not then the world’s largest economy could be headed for a sustained period of high inflation that could roil markets, disrupt the economy, and require a recession to stop it.

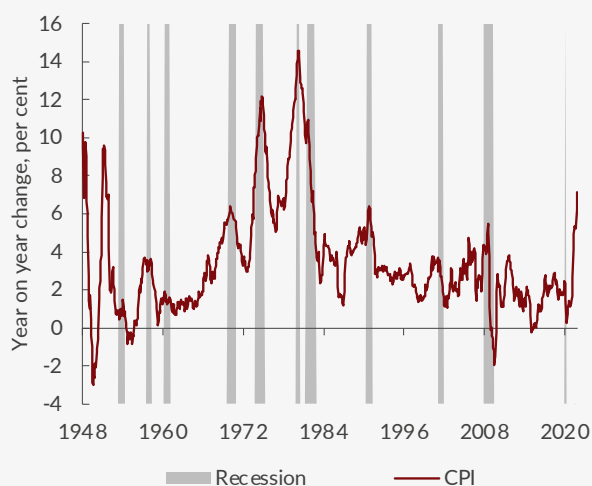
Many commentators see parallels between the current surge in US inflation – the CPI rose by 7.0 per cent in the year to December 2021, the sharpest increase since June 1982 – and the bad old days of high and variable inflation in the 1970s and the early 1980s. Why has the US experienced such sharp price increases, will they turn out to be “transitory” as Federal Reserve Chairman Powell previously constantly tried to assert, or are such sharp increases a signal of a regime change that is taking us back to the bad old days? This box takes the view that while there are good reasons for the Fed to believe inflation will decline, there are also worrying signals in the inflation data pointing strongly towards inflation staying stronger for longer than the Fed predicts. With massive fiscal expansion and too slack monetary policy, the US macro-scene in the last two years resembled the late 1960s. That being so, the US is now one adverse inflationary shock away from lurching sharply through a time warp into the inflationary decades of the 1970s and 1980s. However, too sharp a rate hike cycle from the Fed could send the economy into a tailspin, since consumer confidence is at recessionary levels due to squeezed real incomes, and previously hugely expansionary fiscal policy is normalizing.

The rest of this box is in three parts. The first considers the acceleration in inflation we have seen since the start of 2021, and looks at what may be transitory, and what may not be. The second section examines the similarities between the policy environment in the late 1960s and that now. The third concluding section considers under what circumstances we might go “back to the future.”

Highest inflation for forty years

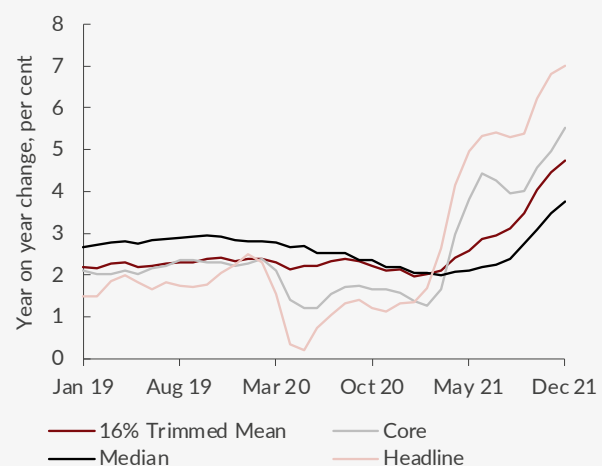
US CPI inflation has soared this year, with the headline annual rate reaching 7.0 per cent in December the highest since the 1980s. Only once since World War II has the US escaped from such high inflation without a recession (figure A1).

Figure A1 US Inflation through Boom and Bust



Source: BLS, FRED, NBER

Figure A2 US Core and Headline inflation

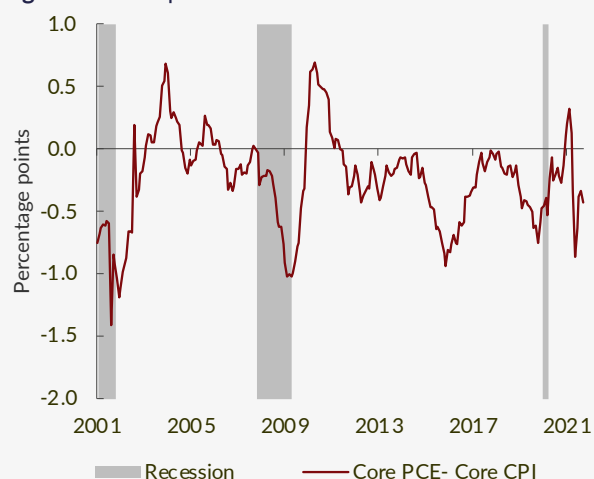


Source: Federal Reserve Bank of Cleveland

These inflation figures are average of all price changes over the previous 12 months. Simple averages are not robust – outliers distort them and so they are a poor guide to the appropriate policy response. Measures of underlying inflation are lower than the headline, but have also risen sharply (figure A2). “Core” CPI inflation, which excludes food and energy, was 5.5 per cent in December. The 16 per cent trimmed mean measure of CPI inflation, which excludes the 8 per cent of categories with the highest increases and the 8 per cent with the lowest, was 4.8 per cent. At the same time, half of the items in the CPI have an inflation rate above December’s median CPI inflation rate of 3.8 per cent in December and half have lower rates than the median.

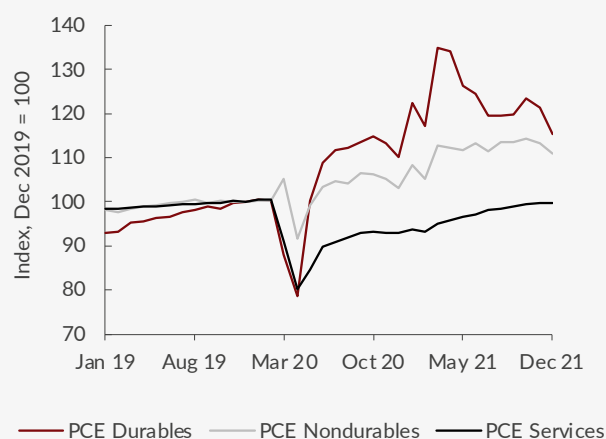
The Fed frames its inflation target as applying to the deflator for Personal Consumption Expenditures (PCE), a number published about a fortnight after the CPI. There are differences in coverage and weighting between the CPI and the PCE deflator. The CPI is based on a survey of purchases by consumers, the PCE on surveys of what businesses sell to consumers. The CPI measures only out of pocket expenses, whereas PCE includes expenditure households do not pay for directly, such as medical coverage provided by employers. This difference, the so-called weight effect, is the main contribution to differences between the two indices; Haubrich and Millington (2014) describe others. In the short-term, the Fed focuses on core PCE, which tends to increase more slowly than core CPI – on average by about 0.3 percentage points per year over the last decade (see figure A3). In December, the core PCE deflator was up by 4.9 per cent as against 5.5 per cent for the core CPI, both the highest for over a generation. The New York Fed’s Underlying Inflation gauge is also signalling widespread inflation pressures, with a reading of 4.5 per cent in December for their “full data set” measure, with “prices only” measure at 4.8 per cent (Federal Reserve Bank of New York, n.d.).

Figure A3 Gap Between Core Inflation Measures



Source: FRED, BLS, NBER

Figure A4 Shifts in Consumption Patterns due to Covid-19



Source: Federal Reserve Bank of St Louis databank.

An uneven pattern of demand has spurred inflation

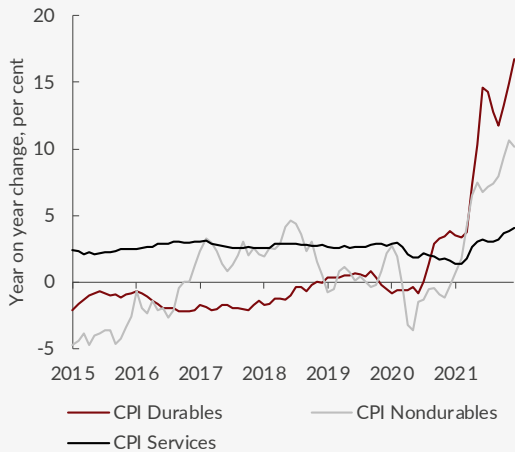
The pattern of price increases between the subcomponents of US price indices has been divergent. This has reflected overall strong consumer spending that has been unusually uneven in strength between consumption categories. The consumption surge, focused on goods but lagging in services, has been fuelled by the bounce back in consumer spending from pandemic lows, a substantially enhanced stock of consumer saving, and a sharp drop in the savings ratio, supported by a leap in house prices and the lagged effects of previous fiscal stimulus.

At the same time, supply restrictions have followed from a reduction in the labour participation rate and well-known supply chain bottlenecks, which have resulted from Covid-19 (e.g., restrictions on port handling capacity). The pressure of excess demand in many markets has been pushing up prices. These price increases are most prominent for consumer durables, where demand has rocketed as people switched away from services and towards goods (figure A4). Consequently, goods prices have risen well ahead of services prices (figure A5). However, services prices also are now showing clear signs of acceleration. Recent increases in durables prices contrasts with years of persistent durable price deflation over the last quarter of a century.

Goods price inflation should slow-eventually

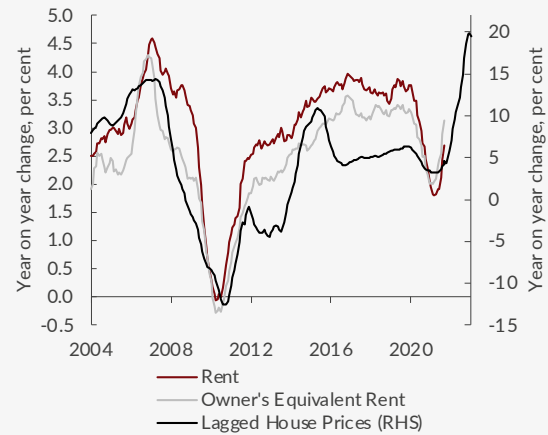
As supply capacity recovers, and once the surge in consumer demand calms down, price pressures should diminish for goods. However, inventory levels are low, and firms are likely to have switched from “just in time” inventory management to “just in case” inventory management. Thus, tight markets are likely to persist for several months, with the threat amplified by potential new virus mutations. Moreover, pipeline pressures from producer prices, boosted by energy and transport costs, are likely to feed through over the coming months.

Figure A5 CPI Inflation Components



Source: FRED, BLS

Figure A6 US House Prices Lead Rent and OER Inflation



Source: FRED, BLS, S&P

Watch out for rents and OER

A critical pipeline pressure, however, is in the housing market. We mentioned above that median price measures have not accelerated much – yet. Median inflation, especially in the CPI, maps closely to inflation in rents and owners' equivalent rent (OER) imputed rental price of owner-occupied housing. Rent and OER have a weight of about 17 per cent in core PCE and almost 40 per cent in the core CPI. Rents and OER tend to follow housing prices, with a lag of around eighteen months. The Case-Shiller measure of US house prices is up by almost 20 per cent on a year earlier, meaning that an acceleration of rents and OER looks baked into future inflation (see figure A6). Researchers at the Dallas Fed reckon that rent and OER could add 0.6 percentage points to core PCE inflation in 2022 and 1.2 pp in 2023 (Zhou and Dolmas, 2021). The impact on core CPI would be even more significant.

How price dynamics will resolve distortions is uncertain

The recent surge in demand for goods, and supply constraints, have together distorted relative prices. When the economy normalises, relative prices will readjust. The aggregate implication for inflation depends on whether the prices that have recently spiked fall back or whether other prices catch up. “Team Transitory” expects those prices distorted upwards prices will fall back. For example, we have seen some of that with car rental prices and lumber prices. However, many prices are less flexible downward than they are up, most importantly wages. In the absence of evidence over recent decades over how such a large, and already spreading, price shock will propagate, the inflation outlook, and therefore the appropriate policy response, is exceptionally uncertain.

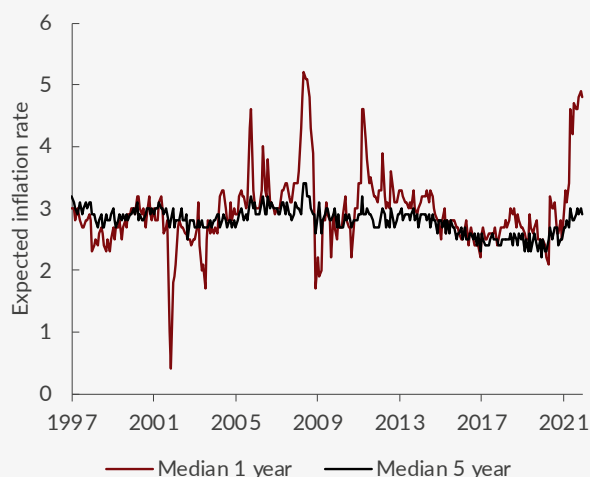
The labour market in the US is tight. The unemployment rate fell to 3.9 per cent in December, a tenth of a percentage point below the rate the Federal Reserve judges to be sustainable in the long run without sparking inflation. The Fed has been surprised by how many workers have not re-entered the labour market after withdrawing during the pandemic. Sickness, early retirement, and a reluctance to work in-person-to-person services may be depressing labour market participation. In December, some 1.1 million people said the pandemic prevented them from looking for work. The results of the tight labour market are apparent. In November, average hourly earnings for employees on nonfarm payrolls rose by an annual 4.7 per cent, down from 5.1 per cent in

November and 5.0 per cent in October. With the trend of US hourly productivity less than 2 per cent per annum, US unit labour costs are inconsistent with the Fed hitting its target of 2 inflation.

Expectations are key

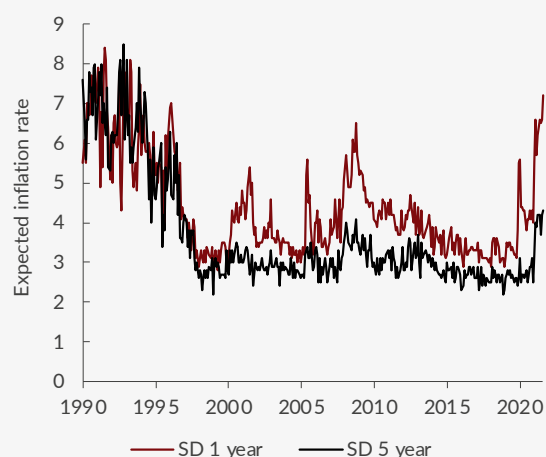
Whether or not the Fed hits its target over the medium term depends significantly on inflation expectations, which influence firms' price-setting behaviour and the evolution of wages. The University of Michigan survey of consumers shows that they expect inflation of 4.8 per cent over the next year and 2.9 per cent over the next five years (figure A7).

Figure A7 Michigan 1 and 5 year Inflation Expectations



Source: University of Michigan, Quandl

Figure A8 Michigan Standard Deviation 1 and 5 year Inflation Expectations



Source: University of Michigan, Quandl

The one-year expectation reflects where inflation is at the moment, so policymakers pay more attention to the five-year measure. The sustained upward drift in the five-year expectations, up by about half a percentage point since Spring 2021, would be worrying if it continued, though the level of five-year inflation expectations broadly equivalent to that in the early years of this century. With inflation likely to move higher in the short run, the risk of inflation expectations de-anchoring has risen. Worryingly, the University of Michigan reports that consumers are as uncertain about inflation as they have been in any period over decades. The volatility of Michigan inflation expectations has risen, as reflected in figure A8.

This uncertainty is concerning because it suggests that inflation expectations are becoming unanchored, and so another significant inflationary shock could see inflation expectations break sharply higher, as indeed was the case with the oil price shock in 1973.

Federal Reserve policy is crucial

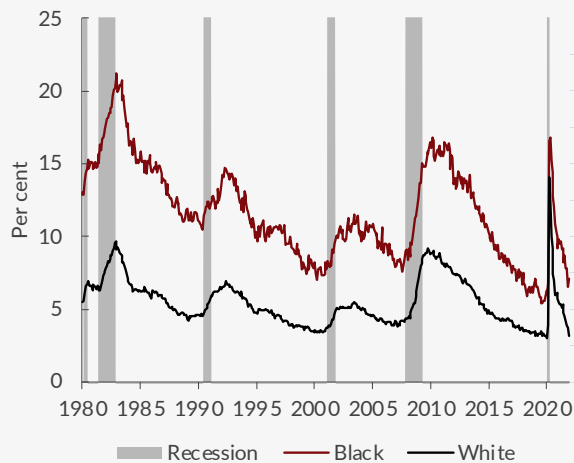
Whether or not the US will be subject to an inflationary shock is unforeseeable, and the Fed can do little about that. However, it can help to fashion how expectations might respond to an inflationary shock through the credibility of its commitment to keep inflation low. The Fed's credibility has been damaged by its persistent under-forecasting of inflation and the Chair's repeated assurances that inflation was transitory, which he eventually had to abandon. What matters is how economic agents see the Fed as likely to respond to an inflationary shock and how they perceive it as likely to act in the future, including prioritizing inflation relative to other policy goals. The Fed will likely to be too optimistic on inflation

Because central banks try to condition inflation expectations through their inflation projections; this will not help credibility, however. The Fed changed its policy framework in August 2020 (Federal Reserve, 2020; Bullard, 2021), which looks to be bad timing because the Fed's mission changes increase doubts about its willingness to be as tough on inflation as formerly. The significant shifts in the Fed's policy framework were:

- The Fed stressed that its employment goal is inclusive, “Affecting all parts of the labour market and not just certain segments” (Bullard, 2020). This modification adds a distributional objective for the Fed. The addition reflects the empirical regularity employment rates for minority groups improve relative to the average only late in the cycle (see figure A9). This objective signals an increased willingness to try to extend recoveries and avoid recessions – when minorities do particularly badly.
- It would aim to minimise shortfalls from maximum employment. Previously, the Fed aimed to minimize “deviations” from maximum employment. This shift seems likely to increase the average future deviation from maximum employment, increasing inflationary risks.
- The Fed would aim to average 2 per cent inflation over a period of time and would aim for inflation “moderately higher than 2 per cent” for a period.

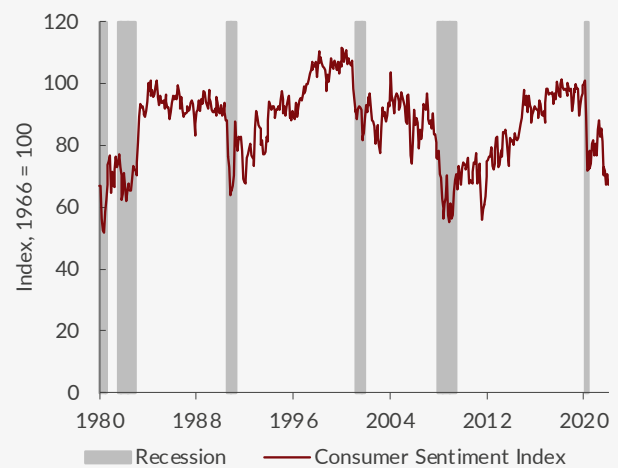
The upshot of these shifts is to ease the inflation target. This ease is explicit with the third change, but that is also the implication of an asymmetric employment target and aiming for inclusivity in achieving maximum employment, which implies extending the cycle for as long as possible.

Figure A9 US Unemployment, Racial Disparities



Source: BLS, FRED

Figure A10 US Consumer Sentiment



Source: University of Michigan, FRED

Large fiscal deficits, slack money, ambitious social targets

To a degree, the Fed’s latest policy guidance mirrors the policy framework at the end of the 1960s. The Fed seeks to promote goals relating to the real economy and, therefore, reduce the relative emphasis on nominal values like inflation. In the 1960s, the fiscal deficit was (by the standards of the day) seen as large, although it is much more substantial now. President Johnson was simultaneously paying for the Vietnam war and trying to promote his “Great Society” programme. As it is now, the Fed was aiming for low unemployment - a rate of 4 per cent, which is the current ambition (though the inclusivity goal was lacking in the late 1960s). However, there is now a clear monetary goal low inflation whereas the objectives of policy were more vague in the 1970s. Moreover, the collapse of the Bretton Woods international monetary system at the start of the 70s, after years of being under threat from rising inflation, effectively abandoned the monetary anchor. That is not happening now: institutions are more robust against inflation now.

In recent years, the federal budget deficit has rocketed. Before Donald Trump’s presidency, it was under 3 per cent of GDP. President Trump’s tax cuts took it to 4.6 per cent of GDP in fiscal year 2019. Lower tax revenues due to the pandemic and substantial fiscal stimulus packages by the Biden administration swelled the deficit to 15 per cent of GDP in fiscal 2020, with 13.4 per cent projected for fiscal 2021, falling to under 5 per cent in fiscal 2022 (US fiscal years run from October 1 to September 30 and are named for the calendar year in which they end). In the US, coronavirus fiscal support included direct cash payments to households, whether household members were in or out of work, which boosted consumer demand strongly, whereas in the UK the most important fiscal support was the coronavirus job retention scheme.

What next?

The Fed is in a bind. On the one hand, policymakers, at last, see a significant risk of high and lasting inflation. Inflation is relatively insensitive to unemployment in the US, so getting rid of it could be very costly if it becomes it would require a big slowdown to curb inflation. At the same time as being concerned about inflation, the Fed is worried about growth. High inflation has severely damaged consumer confidence; this is now at levels usually seen in recessions (figure A10).

Fiscal policy, which boosted the economy during the pandemic, is now subtracting from growth (Brookings, 2021¹). The fiscal deficit is set to fall sharply from over 13 per cent of GDP in 2021 to under 5 per cent in 2022 – an extraordinary turn-around. Supply constraints and concerns about Covid-19 variants may damage growth further. Any Fed tightening now would hit future growth – when the fiscal brakes will be on hard. Moreover, house prices have surged on the back of substantially negative real interest rates and what was, in effect, a monetary-financed fiscal expansion. A sharp rise in interest rates and interest rate expectations, particularly if the economy slows down for other reasons, could wreck the housing market and provoke a recession. Stocks and other financial markets that are accustomed to easy monetary policy could convulse. If the Fed were to cause a recession, resulting in ultra-low inflation, the threat of deflation might re-emerge. If the Fed cannot manufacture lasting inflation in the current environment, any return of near-deflation would see the US become Japan – stuck with permanently super-low inflation.

This complex menu of unpalatable choices facing the Fed is a recipe for a high degree of caution from the central bank, particularly as slowing the economy to combat inflation could imply not hitting its inclusivity objective, which it has only recently adopted. Thus, if the Fed errs, it is very likely to be on the side of caution, tightening monetary policy too little and too late. It is very unlikely to press hard to bring inflation down quickly and will probably talk a lot about returning inflation to 2 per cent but act less aggressively. This likely pattern of soft policy maintained for a considerable period, which we are currently in the midst of, leaves the economy vulnerable to an inflationary shock. The Fed is leaving the door open to inflation in order to close the door on recession.

The Fed looks out of its depth in forecasting inflation, has been complacent, has shifted its focus to other priorities, and has lagged in moving to tighten policy, other than tapering its asset purchases, despite inflation looking more threatening than at any time in over a generation. With the banks awash in a sea of liquidity after years of QE, and globalization in reverse gear due to trade frictions with China and Covid-19 (thus removing a negative pressure on prices), there is a significant risk that we are just one inflationary shock away from returning to the 1970s; the crux will be whether the Fed is prepared to pay a price in terms of higher unemployment to bring inflation down.

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Box B: Turkey's unorthodox monetary policy

By Turalay Kenc¹

Summary

Economic history resoundingly shows that monetary stimulus alone to boost economic growth against the backdrop of low potential growth is a 'divine sin'. The ongoing economic policy in Turkey is a perfect example of such a case. Turkey's recent economic growth policy has led to the initiation of several monetary and credit incentive programmes, resulting in substantial deterioration in its price stability, external balances and asset allocation equilibrium. In the presence of Turkey's significant external imbalances, the increased consumer and producer prices rapidly depreciated the Turkish lira against major foreign currencies: Since mid-2013, the dollar has appreciated against the lira more than 650 per cent. The worsened outlook hit external financing hard, forcing The Central Bank of the Republic of Turkey (CBRT) to sell its foreign currency reserves.

However, the worst development was the loss of central bank independence and the monetary policy of cutting policy rates despite plummeting lira. Markets alarmingly reacted to these unorthodox policies, causing additional heavy value losses for the lira. To stop the bleeding of the currency, the Turkish government had to reintroduce an old measure of foreign currency linked deposits from dusty shelves, and simultaneously the CBRT further significantly depleted its foreign currency reserves. This loss of anchor in the policy-making space and the prospective fiscal burden of the new lira saving measures will play a crucial role in the coming months for the Turkish economy and especially for the lira.

A Brief History of the Turkish Macroeconomic Policy

Turkey transformed its economy during the 2002-2013 period thanks to the well-known orthodox policies such as fiscal discipline, prudent monetary policy and an effective governance structure via independent institutions. Increased economic growth rates, rapidly corrected flow and stock imbalances and deepened financial markets were remarkable successes. Productivity improved significantly; inflation declined from three digits to a single one as low as 4 per cent, lower than the then UK rate. The anchoring role of inflation targeting and sound fiscal policies upgraded policy predictability, leading to lower volatility and lengthening investment maturities. Ultimately, the financial markets did not hesitate to crown Turkey with an investment-grade status in sovereign credit ratings.

However, being an emerging market economy (EME), Turkey was not exempt from the risk of falling into the famous middle-income trap. To this end, the country needed second generation economic reforms to increase potential economic growth and address external imbalances. Turkey should have strengthened the infrastructure of the market economy, increased productivity and efficiency, created competitive markets, and renewed the institutional infrastructure. The political turmoil that took place in recent years missed this crucial agenda. The declining living standards of the citizens has ultimately forced politicians to resort to short-cut policies to boost growth. The outcome of such policies is resolutely similar to those seen earlier in Latin American and Asian countries and even Turkey. The consequences are nothing but heightened inflation, dollarisation and followed up by exchange rate depreciation.

A more interesting story of Turkey is the recent monetary policy experiment. The ongoing growth pressure coupled with pressing conditions of the pandemic has led to the unseasoned implementation of counter-cyclical monetary policy by ever eager policymakers. Earning such a privilege is the holy grail of monetary policy in emerging market economies (EMEs). Ironically, the markets and the IMF have upgraded many EMEs to this policy status. The IMF has even formulated an integrated policy framework of monetary policy, capital controls, foreign exchange intervention, and macroprudential regulation for these small open economies. In contrast to those peer EMEs, Turkey has witnessed gyrations in its foreign currency and stock markets. Figure B1 testifies Turkey's outlier position among them. The Turkish lira is by far the worst-performing currency since 2013.

Despite the substantial depreciation of the lira, Turkey's external balances have not improved much. figure B1 does not show a secular and structural upgrade in the current account balances. It suggests that the increased inflation (see figure B3) has largely evaporated the competitiveness gained from the nominal depreciation of the

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lira. Research papers on exchange-rate pass-through (ERPT) point to a higher coefficient for Turkey than those for the peer EMEs, ranging from 15 per cent to 20 per cent. These numbers are overwhelmingly from single regime models rather than multi regime models in which extreme events in currency markets can generate larger coefficient values. More importantly, the expenditure shifting effect of the currency depreciation is probably low. Its expenditure changing effect is still the chief determinant of the current account balances in the presence of limited structural changes in the economy. Not surprisingly, the current account deficit narrowed and even recorded surpluses only during economic downturns.

Figure B1 EM Exchange Rates

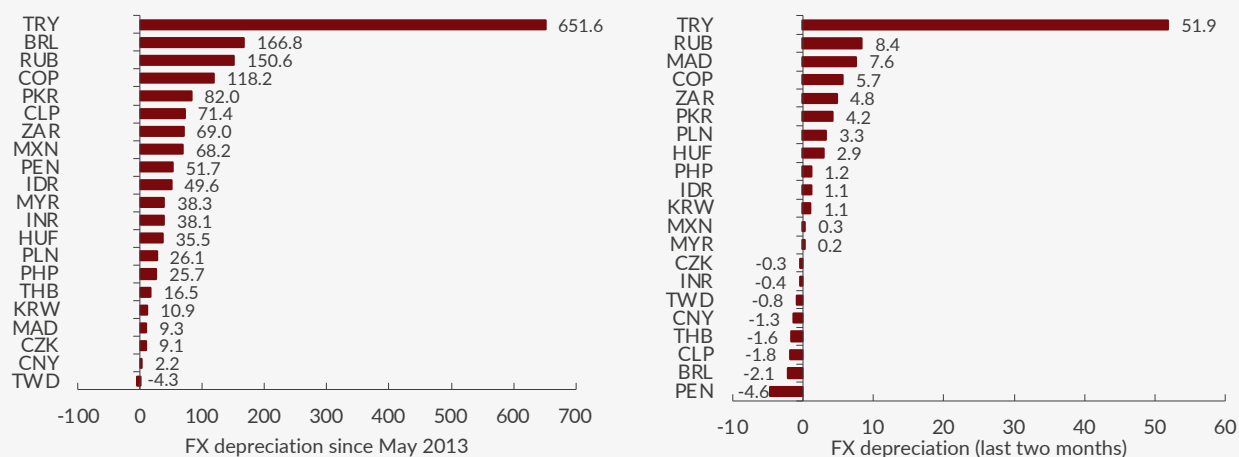
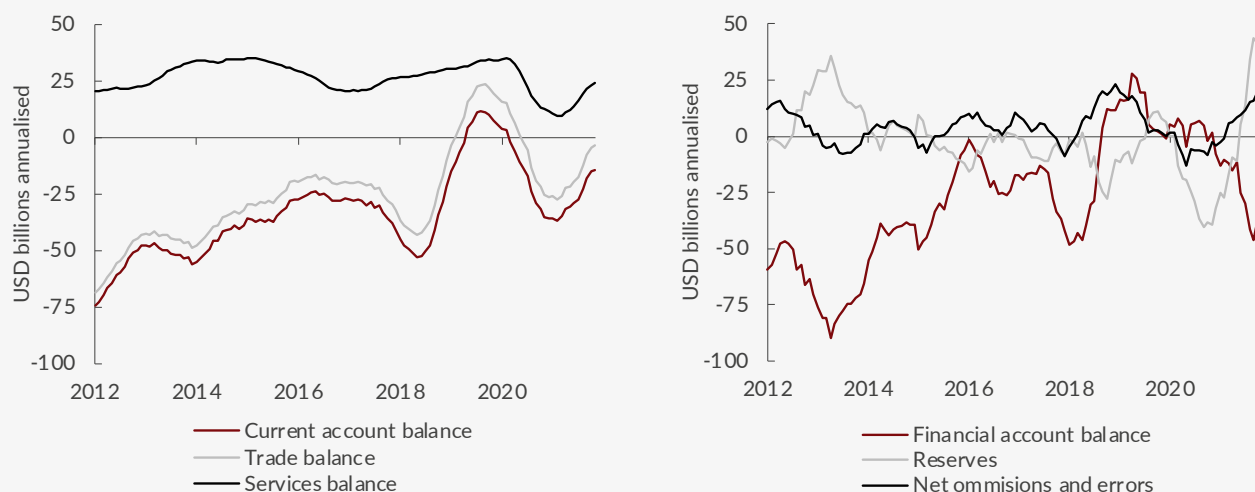
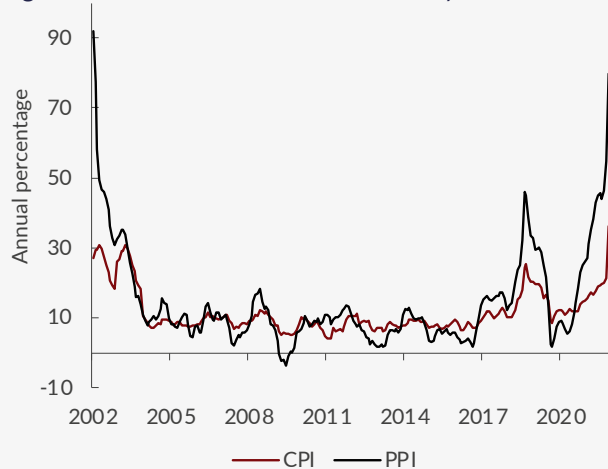
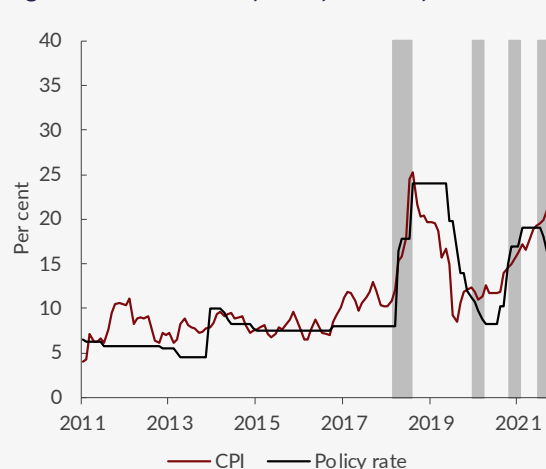


Figure B2 External Balances of Turkey



The Unorthodox Turkish Monetary Policy

The widely agreed recipe to cure inflation, investment and growth problems requires improvements in productivity and prudent macroeconomic policies. However, the president of my country Erdogan has a bold counterclaim: cutting interest rates curbs (producer price) inflation and boosts investment, leading to high growth rates. After refraining for many years, Turkey has cleared the way to pursue such policies by the removal of many finance ministers and central bank governors, qualified Monetary Policy Committee (MPC) members and experienced staff. The CBRT suffered from many pointed attacks by the president and ultimately lost its independence. This loss led to the depletion of a crucial anchor in the policy-making space.

Figure B3 CPI and PPI Inflation in Turkey**Figure B4** Monetary Policy in Turkey

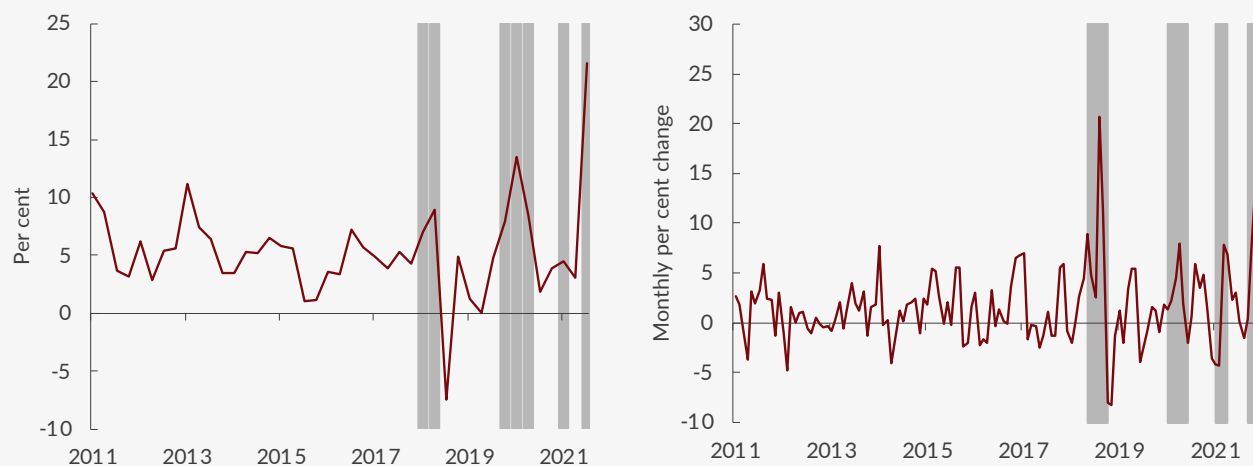
Furthermore, the recent months marked another episode in central banking in Turkey: the MPC delivered cuts of 500 bps within five months despite the fast depreciation of the lira and pronounced rises in inflation. Figure B4 shows how the monetary policy disconnected from the inflationary developments and potential risks coming from the currency market. As a result, the unanchored and unprotected lira got several hits, lost more than 50 per cent of its value against the dollar. The extraordinary measures of guaranteeing the returns on foreign currency positions with currency linked bank deposits and significant foreign currency market intervention have stopped the runaway rises in the exchange rate. In the wake of these measures, the lira has gained significantly, but its current value against the dollar still constitutes a depreciation of nearly 40 per cent (a dollar appreciation of more than 50 per cent) over the last two months.

In sharp contrast to the policies of this period, during the years 2018 and 2020, the central bank sold its foreign currency reserves to support the lira. Given the constraints on its interest rate policy, the CBRT did not have any other option but to use its foreign currency reserves to shore up the foreign currency market. The lack of transparency in these sales and the sheer inappropriateness of the policy did not yield the outcome the CBRT desired. More importantly, this left the CBRT with the foreign currency swaps contracted with Turkish banks as the main item on its accounts. The central bank sold foreign currency reserves of up to 20 per cent of the country's GDP, pushing the net amounts to as low as a negative 8 per cent of the GDP.

Diagnosing the Causes of the Recent Currency Market Developments in Turkey

Figure B5 highlights the close relations between credit growth rates and the depreciation of the Turkish lira against the US dollar. In the last four years, Turkey initiated four credit growth episodes, almost all of them coming with fiscal implications for the government. In the absence of sound improvements on the potential growth and public budgetary fronts, these credit growth episodes quickly ended up with sharp movements in the exchange rate.

Given the delicate nature of Turkey's external balances, such as chronic current account deficits and a sizable gross international investment position of around 80 per cent of GDP as of 2021-Q3, embarking on credit driven growth policies constitutes a recipe for financial turmoils of currency depreciation and inflation spiral. Figure B3 shows that both CPI and PPI inflation rates have gone to their levels observed in the aftermath of Turkey's financial crises of 2001. The recent lira depreciation will likely worsen the inflation outlook. Besides, it may take years to repair the damaged inflation expectations due to the unorthodox monetary policy. In the meantime, the crucial point will be how the residents of Turkey will protect against the loss of purchasing power of their lira positions. Will they invest in the new initiative of currency linked deposits or continue to be holders of foreign currency deposits?

Figure B5 Credit Growth and €/ \$ Exchange Rate Movements

To answer this crucial question, one should consider the financial dollarisation in countries like Turkey. Given the lack of financial instruments for inflation hedging, the evaporated economic governance, and the worsened credibility of monetary policy, Turkey has reverted to dollar deposits as the chief hedging tool. During volatile times, such positions hedge not only inflation risks but liquidity risks. Besides, the presence of the newly introduced deposits is a double-edged sword for the economy. If the residents switch to these deposits, the prospective fiscal deficits associated with them can be very detrimental to the prospects of the lira.