

# 1. General assessment of the macroeconomic situation

## Introduction

The global economy is facing mounting challenges. Growth has lost momentum, high inflation is proving persistent, confidence has weakened, and uncertainty is high. Russia's war of aggression against Ukraine has pushed up prices substantially, especially for energy, adding to inflationary pressures at a time when the cost of living was already rising rapidly around the world. Global financial conditions have tightened significantly, amidst the unusually vigorous and widespread steps to raise policy interest rates by central banks in recent months, weighing on interest-sensitive spending and adding to the pressures faced by many emerging-market economies. Labour market conditions generally remain tight, but wage increases have not kept up with price inflation, weakening real incomes despite the actions taken by governments to cushion the impact of higher food and energy prices on households and businesses. Global GDP growth is projected to be 3.1% in 2022, around half the pace seen in 2021 during the rebound from the pandemic, and to slow further to 2.2% in 2023, well below the rate foreseen prior to the war. In 2024, global growth is projected to be 2.7%, helped by initial steps to ease policy interest rates in several countries. Global prospects are also becoming increasingly imbalanced, with the major Asian emerging-market economies accounting for close to three-quarters of global GDP growth in 2023, reflecting their projected steady expansion and sharp slowdowns in the United States and Europe. Headline consumer price inflation in the major advanced economies is projected to moderate from 6.3% this year to around 4¼ per cent in 2023 and 2½ per cent in 2024 as tighter monetary policy takes effect, demand pressures wane, and transport costs and delivery times normalise, although the pace of decline will vary across countries.

The uncertainty about the outlook is high, and the risks have become more skewed to the downside and more acute. The projections reflect the toll taken by high energy prices over the next two years, but outcomes could be weaker still if there are energy supply shortages in global markets that raise prices further, or if enforced rationing is required to lower gas and electricity demand sufficiently during the next two European winters. Higher policy interest rates could also slow growth by more than projected, with policy decisions difficult to calibrate given high debt levels and strong cross-border trade and investment links that raise the spillovers from weaker demand in other countries. Widespread and rapid monetary tightening also heightens financial vulnerabilities. Financial strategies put in place during the long period of hyper-low interest rates may be exposed by rapidly rising rates and exert stress in unexpected ways. Many emerging-market economies could also face significant difficulties, particularly commodity-importing economies. Higher interest rates, the appreciation of the US dollar and a deterioration in the terms of trade increase the challenges of servicing elevated external debt and deficits, particularly if growth slows sharply and global financial conditions tighten further. Significant risks also remain about the projected steady expansion in China, with the continued weakness in property markets, rising non-performing loans and the disruptions from the continued zero-COVID-19 policy potentially weighing heavily on domestic demand and global growth. On the upside, reduced uncertainty, easier financial market conditions or lower commodity prices would moderate the slowdown in growth.

Elevated uncertainty, slowing growth, strong inflationary pressure and the ongoing impact of the war in Ukraine on energy markets leave policymakers with difficult choices in order to maintain macroeconomic stability and improve the prospects for sustainable and inclusive growth over the medium term.

- Continued monetary policy tightening is needed in most major advanced economies to anchor inflation expectations and lower inflation durably. Domestic policy measures will need to be carefully calibrated and responsive to new data given uncertainty about the growth outlook, the speed at which higher interest rates take effect and the potential spillovers from restrictive policy in other countries. Tighter global financial conditions and persistent inflation

pressures are also likely to prompt further monetary policy tightening in many emerging-market economies, and limit the scope for any easing in countries where growth is slowing and interest rates have already been raised substantially.

- Fiscal support is being provided to help cushion the impact of high energy costs on households and companies. In the absence of such support there would almost certainly be sizeable output declines in many countries, with all of the attendant potential costs these could entail. However, better design is often needed to ensure support is only temporary and concentrated on the most vulnerable households and companies, preserves incentives to reduce energy consumption and can be withdrawn as energy price pressures wane. Short-term fiscal actions to cushion living standards should also take account of the need to avoid a further persistent stimulus to demand at a time of high inflation, thereby ensuring consistency with monetary policy and avoiding adverse effects on fiscal sustainability. Credible fiscal frameworks would help to provide clear guidance about the medium-term trajectory of the public finances and mitigate concerns about debt sustainability at a time of rising spending pressures and higher future payments on public debt.
- The war and the pandemic add to the longstanding challenges for growth, resilience and well-being from the acceleration of digitalisation, population ageing and the need to lower carbon emissions. Effective and well-targeted reform efforts are required to enhance productivity and skills, reduce inequality and improve gender balance, strengthen resilience and boost living standards. Well-chosen policies, such as increased support for childcare and reduced tax wedges for lower paid workers, could help to address the current pressures faced by lower-income households and also offer medium-term benefits for employment and inclusion. Keeping international borders open to trade, removing obstacles to stronger cross-border economic migration, and ensuring faster integration of migrants into the labour market would also help to alleviate near-term supply-side pressures on inflation. Governments also need to ensure that the goals of energy security and climate change mitigation are aligned. Efforts to safeguard near-term energy security and affordability through fiscal support, supply diversification and lower energy consumption should be accompanied by stronger policy measures to enhance investment in clean technologies and energy efficiency.
- The fallout from the war remains a threat to global food security, particularly if combined with further extreme weather events resulting from climate change. Better international cooperation is needed to keep agricultural markets open, address emergency food needs and strengthen domestic supply. Stronger international co-operation on debt relief, including through the G20, is also necessary to minimise the potential adverse economic and social consequences of default, with a rising number of lower-income developing countries already experiencing debt distress and having fragile banking sectors.

### **Table 1.1. Global growth is projected to slow further**

	Average 2013-2019	2021	2022	2023	2024	2022 Q4	2023 Q4	2024 Q4	
		Per cent							
<b>Real GDP growth<sup>1</sup></b>									
World <sup>2</sup>	3.4	5.9	3.1	2.2	2.7	2.0	2.3	3.0	
G20 <sup>2</sup>	3.5	6.2	3.0	2.2	2.7	2.0	2.2	3.0	
OECD <sup>2</sup>	2.2	5.6	2.8	0.8	1.4	1.2	0.9	1.8	
United States	2.4	5.9	1.8	0.5	1.0	0.2	0.3	1.6	
Euro area	1.9	5.3	3.3	0.5	1.4	1.4	0.7	1.7	
Japan	0.8	1.6	1.6	1.8	0.9	2.0	1.2	0.7	
Non-OECD <sup>2</sup>	4.4	6.2	3.4	3.3	3.8	2.7	3.6	4.0	
China	6.8	8.1	3.3	4.6	4.1	4.4	4.5	4.0	
India <sup>3</sup>	6.8	8.7	6.6	5.7	6.9				
Brazil	-0.4	4.9	2.8	1.2	1.4				
<b>OECD unemployment rate<sup>4</sup></b>	6.5	6.2	5.0	5.3	5.5	5.0	5.5	5.5	
<b>Inflation<sup>1</sup></b>									
G20 <sup>2,5</sup>	3.0	3.9	8.1	6.0	5.4	8.0	5.5	5.5	
OECD <sup>6,7</sup>	1.6	3.8	9.4	6.5	5.1	9.6	5.5	5.1	
United States <sup>6</sup>	1.4	4.0	6.2	3.5	2.6	5.5	3.1	2.3	
Euro area <sup>8</sup>	0.9	2.6	8.3	6.8	3.4	9.6	4.9	2.9	
Japan <sup>9</sup>	0.9	-0.2	2.3	2.0	1.7	3.2	1.4	1.9	
<b>OECD fiscal balance<sup>10</sup></b>	-3.2	-7.3	-3.7	-3.6	-3.1				
<b>World real trade growth<sup>1</sup></b>	3.4	10.0	5.4	2.9	3.8	2.4	3.2	4.0	

1. Per cent; last three columns show the change over a year earlier.

2. Moving nominal GDP weights, using purchasing power parities.

3. Fiscal year.

4. Per cent of labour force.

5. Headline inflation.

6. Personal consumption expenditures deflator.

7. Moving nominal private consumption weights, using purchasing power parities.

8. Harmonised consumer price index.

9. National consumer price index.

10. Per cent of GDP.

Source: OECD Economic Outlook 112 database.

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## Growth is slowing and financial conditions have tightened

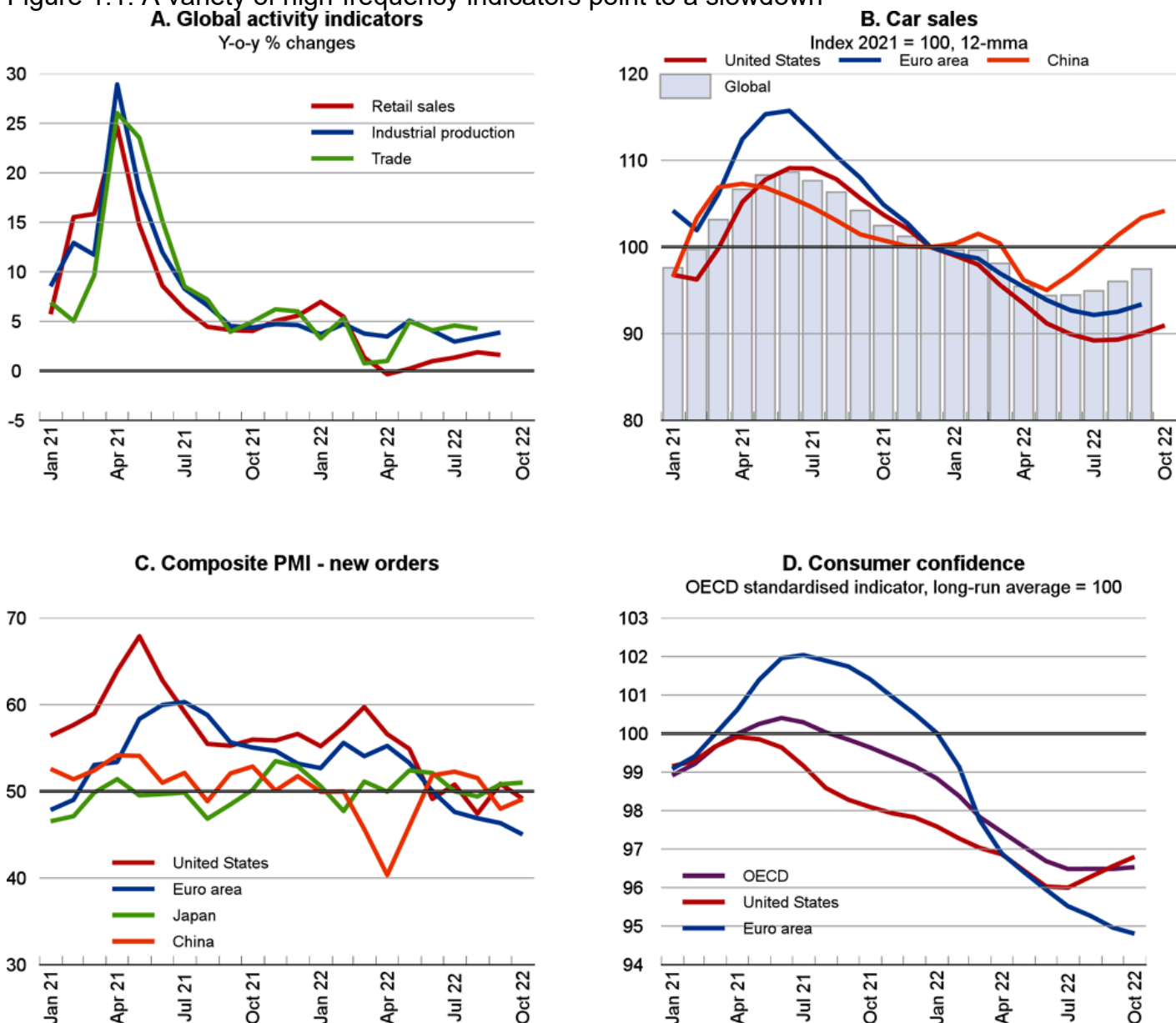
copy the linklink copied!Global growth has lost momentum amidst high inflation

The war in Ukraine is having a persisting adverse effect on economic conditions. Global GDP stagnated in the second quarter of 2022, with sharp falls in output in both Ukraine and Russia, and a contraction of output in both China (reflecting lockdowns due to the zero COVID-19 policy) and the United States. Global growth picked up in the third quarter, helped by a rebound in China and the United States, but remained moderate, with weak real income growth holding back consumers' expenditure and higher energy prices resulting in a sharp slowdown in many economies, particularly in Europe.

In the past few months some indicators of global economic activity, such as retail sales, industrial production and international trade, have stabilised after a particularly weak second quarter (Figure 1.1, Panel A). This has been helped by fewer restrictive anti-COVID-19 measures in China and a consequent rebound in activity, including car sales (Figure 1.1, Panel B). However, survey indicators point to a loss of momentum in many countries, especially in Europe (Figure 1.1, Panels C and D). In the corporate sector, the global all-industry new orders PMI declined steadily for several months through to October, with a broad-based softening across industries. Consumer confidence is notably weak as well, reflecting in part a decline in real household incomes in most OECD economies, with higher inflation not being matched by faster growth in nominal incomes. Low-income households and rural households have been particularly hit, reflecting the large share of food and energy in their expenditures.

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Figure 1.1. A variety of high-frequency indicators point to a slowdown



Note: Data in Panel A are PPP-weighted aggregates. The retail sales measure uses monthly household consumption for the United States and the monthly synthetic consumption indicator for Japan.

Source: OECD Main Economic Indicators database; CPB Netherlands Bureau for Economic Policy Analysis; S&P Global; Refinitiv; and OECD calculations.

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Inflationary pressures have intensified. In the median advanced and emerging-market economy, headline consumer price inflation reached 9.6% and 10.8% respectively in the third quarter of 2022. The unexpected persistence of inflationary pressures this year owes much to the outbreak of the war in Ukraine, which resulted in an immediate spike in a number of key commodity prices – for oil, gas and coal, a range of metals, wheat and corn and some edible oils, as well as fertilisers. While that spike has subsequently been unwound for most commodities, in part due to weak demand from China, the prices of internationally traded gas and coal remain elevated (Figure 1.2).

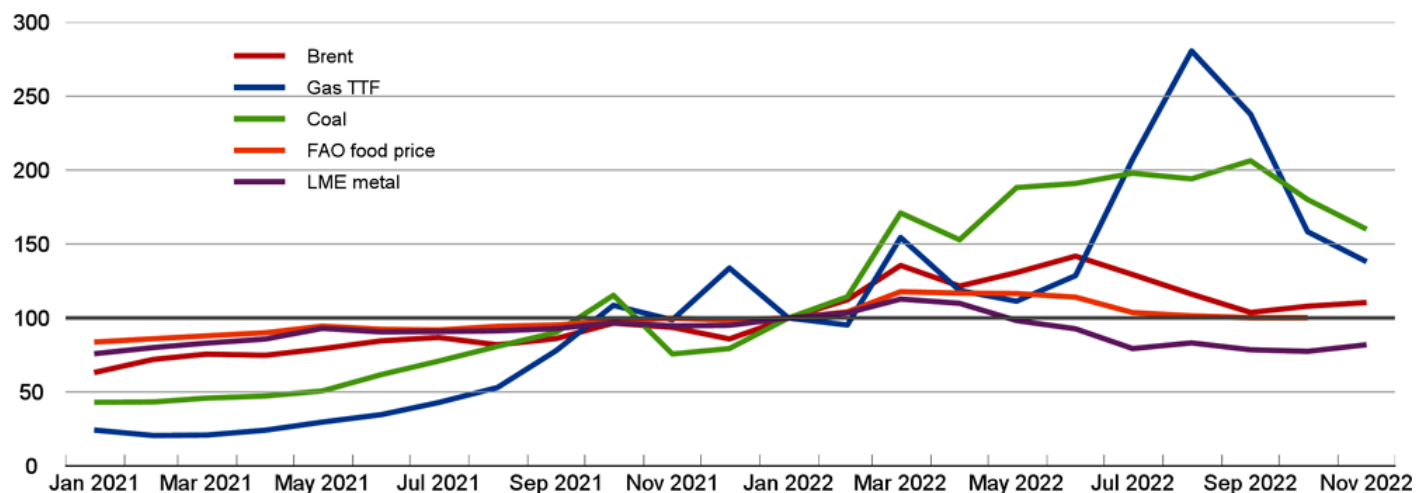
With spot electricity prices generally being linked to the price of gas, the marginal source of electricity generation, record high gas prices have meant similarly extreme wholesale electricity prices in Europe. Only part of that wholesale price surge has so far been reflected in retail electricity prices (Figure 1.3), with many European governments stepping in to shield consumers from the full impact of the increase in the price of imported gas, adding to the usual factors that limit complete pass-through (Kuik *et al.*, 2022), including the delays in adjusting household and corporate supply contracts. However, some large rises have already occurred, and unless wholesale electricity prices continue to decline (as they have in recent weeks), further retail price rises are likely. If these do not occur, there are risks that distribution companies could become insolvent, and that governments implementing price caps could face costly and potentially long-lasting subsidies.

Even prior to the war in Ukraine, inflation pressures had begun to rise, with both demand- and supply-side factors contributing to price increases in the OECD economies (Box 1.1). Some of these factors have subsided or begun to reverse over the past year. Goods price inflation has eased, with the shift in the composition of demand from services to goods (and in particular durable goods) now being reversed (Figure 1.5, Panel A). The normalisation of demand patterns has begun to be reflected in rising inflation rates for services in most countries and, in some, declining inflation rates for goods.<sup>1</sup>

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Figure 1.2. Commodity prices have diverged recently

Index Jan 2022 = 100

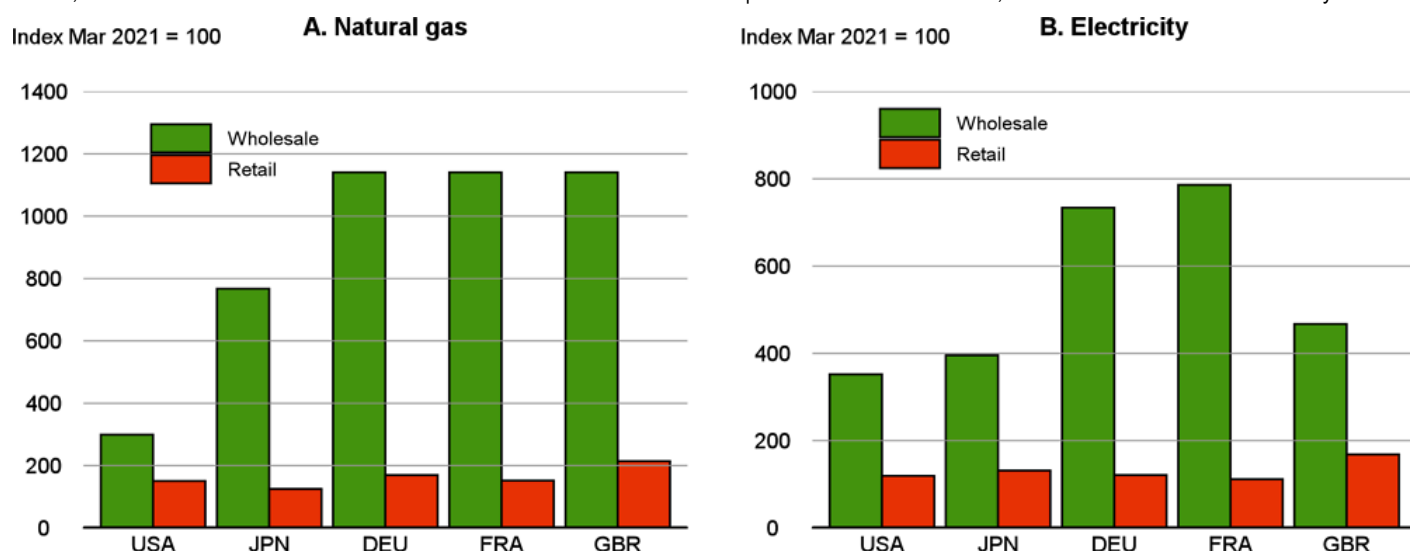


Note: Gas TTF corresponds to the Dutch Transfer Title Facility and coal to the HWWI coal price. November figures are based on the average available data up to November 16.

Source: Refinitiv; and OECD calculations.

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Figure 1.3. Retail energy prices have increased much less than wholesale prices, especially in Europe



Note: Data for both retail and wholesale prices refer to September 2022. Retail price changes based on the personal consumption expenditures deflator in the United States, harmonised consumer prices in Germany, France and the United Kingdom, and national consumer prices in Japan. Natural gas wholesale prices are proxied by the Henry Hub Natural Gas spot price for the United States, the Liquefied Natural Gas price in Asia for Japan and the Dutch Title Transfer Utility (TTF) for Germany, France and the United Kingdom. Wholesale electricity price data come from each domestic electricity market.

Source: Refinitiv; U.S. Bureau of Economic Analysis; Statistics Japan; Eurostat; U.S. Energy Information Administration; Japanese Power; and OECD calculations.

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Another factor that was pushing up inflation until early 2022 but has been ebbing markedly over the past few months is shipping costs. With goods demand in advanced economies easing, and with supply chains being largely restored since the first phase of the pandemic, freight costs have declined sharply of late (Figure 1.5, Panel B). For the G20 countries as a whole, the impact of shipping costs on inflation is estimated to have peaked in the third quarter of 2021, and declined to just 0.18 percentage points by the third quarter of 2022, and zero as of mid-November 2022.<sup>2</sup>

However, inflationary pressures have become more broad-based (Figure 1.6), with higher costs increasingly being passed through into the prices of goods and services, and profit margins rising in some sectors (Brainard, 2022). With many economic agents tending to form their expectations at least partly based on recent experience, it is not surprising in this context that near-term household survey measures of inflation expectations have risen (Figure 1.7), even though market-based indicators of longer-term inflation expectations generally remain well-anchored near central bank objectives.

#### Box 1.1. Supply- and demand-driven inflation in OECD economies

The increase in inflation rates over the past two years in economies around the world has created major challenges for policymakers. One key uncertainty has been whether the surge in inflation has primarily reflected demand factors or negative supply shocks. That question cannot be answered precisely or with certainty, but it is possible to distinguish between demand and supply factors in an approximate way.

One such approach is that of the Federal Reserve Bank of San Francisco, which uses US monthly price and volume personal consumption expenditures (PCE) data to distinguish between items where price and volume shocks move in the same direction and those where they go in opposite directions (Shapiro, 2022a and 2022b). Shocks to prices and volumes in a given month are identified by running vector autoregressions (VARs) for the 10-year period ending in that month for prices and volumes of each item and inspecting the residuals of the respective regressions.<sup>1</sup> The presumption is that price and volume residuals with the same sign reflect demand – greater demand pushes up both prices and volumes and vice versa for lower demand – while residuals with opposite signs correspond to supply shocks – lower supply means a reduction in volume but an increase in price. In addition to items where price changes are identified as clearly demand-

driven or supply-driven, an intermediate range, labelled “ambiguous”, where price and/or volume residuals are too small to be considered significant, is also identified – a threshold is set that results in approximately 20% of movements on average being classified as ambiguous. The contributions of the three groups sum to total headline PCE inflation, and show the relative importance of supply and demand factors.

Other OECD countries do not have matching disaggregated monthly price and volume data for personal consumption, but quarterly national accounts data for household consumption expenditure by consumption purpose (COICOP) can be used to conduct a similar exercise.<sup>2</sup> Figure 1.4 shows the results of this exercise for eight OECD economies, including the United States. The degree of expenditure disaggregation is generally a good deal lower than in the US case, where the PCE data has 136 categories: the number of categories available in the quarterly national accounts data varies from 11 for Denmark to 110 for the United Kingdom.

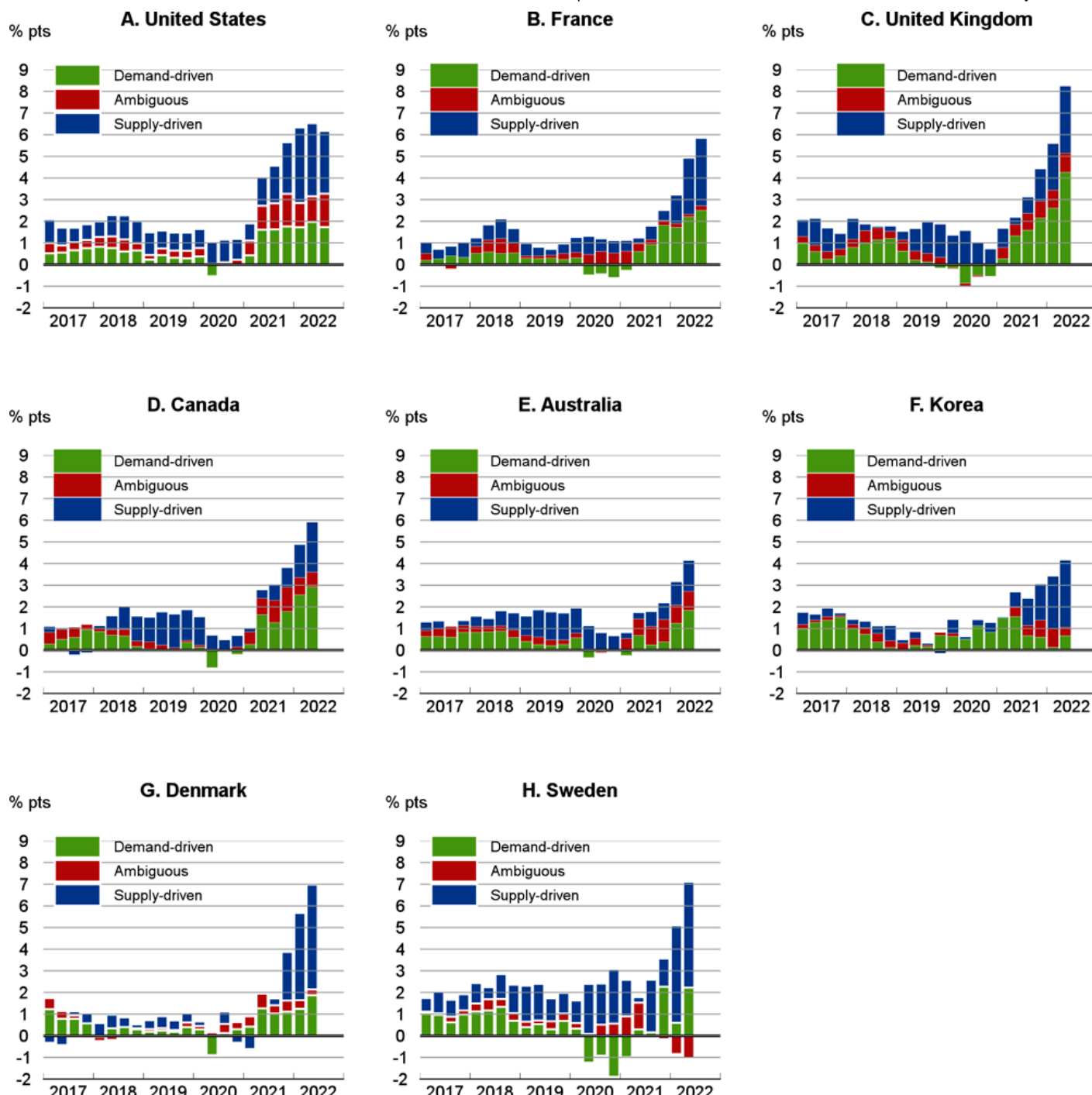
In all countries, the exercise suggests that both supply and demand factors have pushed inflation up since mid-2020. The proportion of inflation accounted for by demand-driven items in the second quarter of 2022 ranges from less than one-quarter in Korea to around half in the United Kingdom and Canada. Supply-driven inflation is estimated to account for roughly half of total inflation on average in the eight countries shown, but well over half in Denmark, Korea and Sweden. The “ambiguous” share is relatively small in all countries in the year to the second quarter of 2022, with the exception of the United States, where it accounts for about one-quarter of total inflation. In general, both supply- and demand-driven contributions have increased in recent quarters, with Korea being an exception: there the demand-driven component peaked in the second quarter of 2021 and has subsequently declined. The United States, for which data are now available through the third quarter of 2022, has had a broadly stable demand-driven contribution for several quarters.

Compared to the immediate pre-pandemic period, when headline inflation was close to, though somewhat below, central bank objectives in all these economies, the estimated contribution of both supply-driven and demand-driven inflation has generally increased. The increase in the contribution of supply-driven inflation has been relatively small in Canada and the United Kingdom. For demand-driven inflation, the increase in the contribution relative to 2019 was largest in the United Kingdom (around 4 percentage points), and also relatively large in Canada and France. The share of inflation classified as ambiguous rose somewhat in Australia, Canada, the United Kingdom and the United States, but not in other countries.

There are several caveats to bear in mind when considering the results of this exercise. First, the method used identifies the price change for each item in a given period as being primarily demand- or supply-driven, but in most cases a mix of supply and demand factors will be operating, even when the exercise allocates the item to the demand-driven or supply-driven category. Also, the pandemic period is clearly atypical, with special factors at play which may make the results less reliable. Finally, the difference in the degree of disaggregation in the available data may limit the extent to which valid conclusions can be drawn from cross-country differences.

Figure 1.4. Contributions of supply- and demand-driven inflation to headline inflation in selected OECD economies

Decomposition of contributions to year-on-year headline inflation



Source: U.S. Bureau of Economic Analysis; Statistics Canada; UK Office of National Statistics; INSEE; Australian Bureau of Statistics; Bank of Korea; Statistics Denmark; Statistics Sweden; and OECD calculations.

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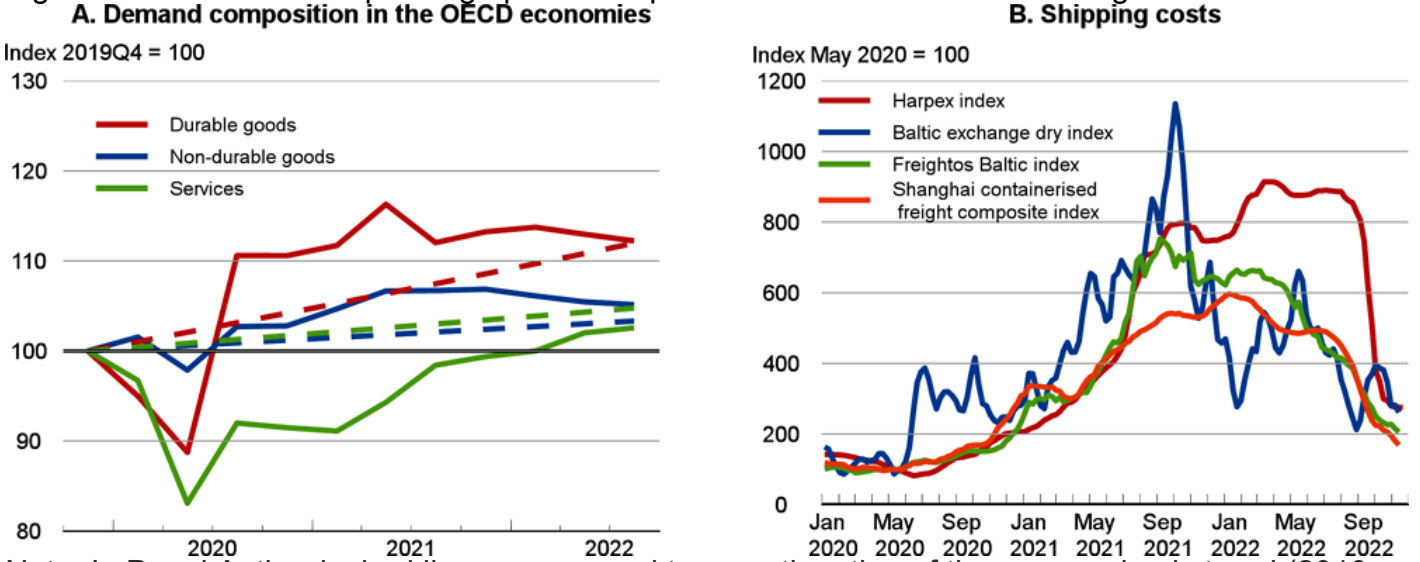
← 1. A two-equation VAR of prices and quantities:  $p_{i,t} = Z_{i,t-1} \gamma + \varepsilon_{i,t}^p$   $p_{i,t} = Z_{i,t-1} \gamma + \varepsilon_{i,t}^p$  and  $q_{i,t} = Z_{i,t-1} \gamma + \varepsilon_{i,t}^q$   $q_{i,t} = Z_{i,t-1} \gamma + \varepsilon_{i,t}^q$  was estimated where  $p_{i,t}$   $p_{i,t}$  and  $q_{i,t}$   $q_{i,t}$  are the logs of the price and quantity indices respectively of category  $i$  in quarter  $t$ ,  $Z_{i,t-1}$   $Z_{i,t-1}$  is a vector of 4 lags of the log price and quantity indices of category  $i$  in quarter  $t$  and  $\varepsilon_{i,t}^p$   $\varepsilon_{i,t}^p$  and  $\varepsilon_{i,t}^q$   $\varepsilon_{i,t}^q$  are the price and quantity residuals for category  $i$  in quarter  $t$ . The equations were estimated over a 10-year rolling window for the period 2005Q4-2022Q2 or 2022Q3. The supply-driven, demand-driven and ambiguous contributions to year-on-year inflation are computed as a weighted sum of the latest four quarterly contributions.



← 2. In its latest Economic Bulletin (ECB, 2022a), the European Central Bank has replicated the Shapiro exercise using monthly core CPI (excluding energy and food) data and turnover data for services and retail trade from Eurostat’s short-term business statistics. The categories are not quite matched, and the turnover data have to be deflated to get volume estimates, but in other respects the exercise follows the US model closely. The ECB finds that the initial surge in core inflation in the euro area was initially mainly supply-driven but that supply and demand factors have played broadly similar roles in recent months.

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Figure 1.5. Some factors pushing up inflation prior to the war are now subsiding



Note: In Panel A, the dashed lines correspond to a continuation of the pre-pandemic trend (2010-19). The OECD index is based on a weighted sum of individual country growth rates using GDP weights in PPP terms. Consumption of durable goods, non-durable goods, and services is available for 35, 27 and 27 OECD countries, respectively, except for 2022Q3, where estimates are based on the subset of countries with available data.

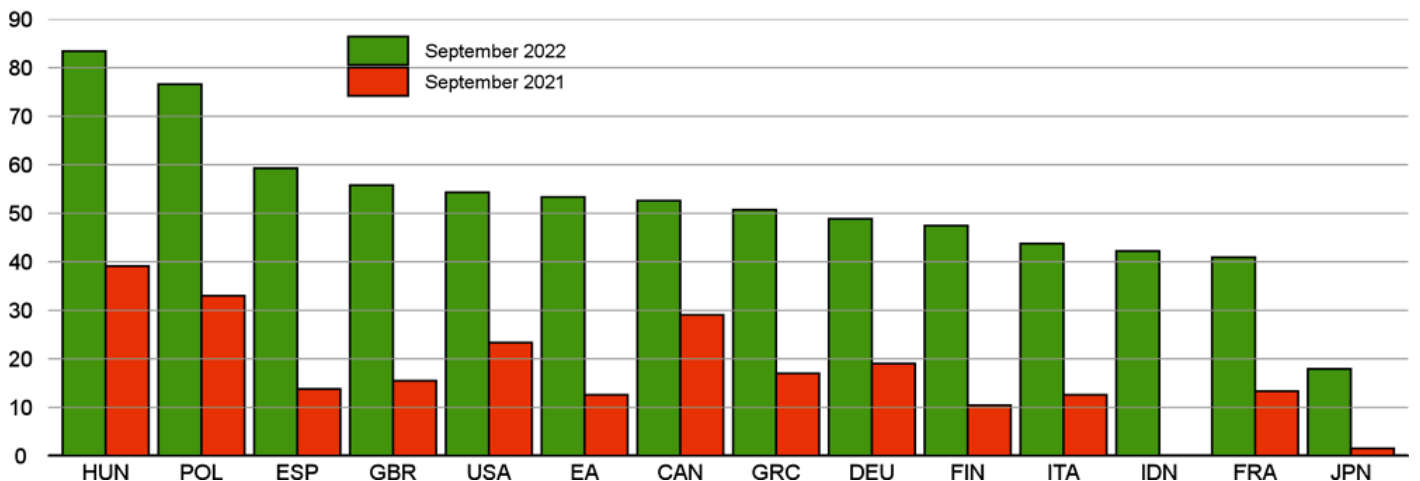
Source: OECD Economic Outlook 112 database; Bureau of Economic Analysis; OECD, Quarterly National Accounts; Refinitiv; and OECD calculations.

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Figure 1.6. Inflation has become increasingly broad-based

Percentage share of products in the inflation basket that have a year-on-year inflation rate above 6%



Note: Inflation based on the personal consumption expenditures deflator in the United States, harmonised consumer prices in the euro area, its member countries and the United Kingdom, and national consumer prices elsewhere. The computation uses about 40 sub-indices for Indonesia, 70

for Japan, 150 for Canada, France, Germany, Greece, Italy and Spain, and more than 200 for the remaining countries.

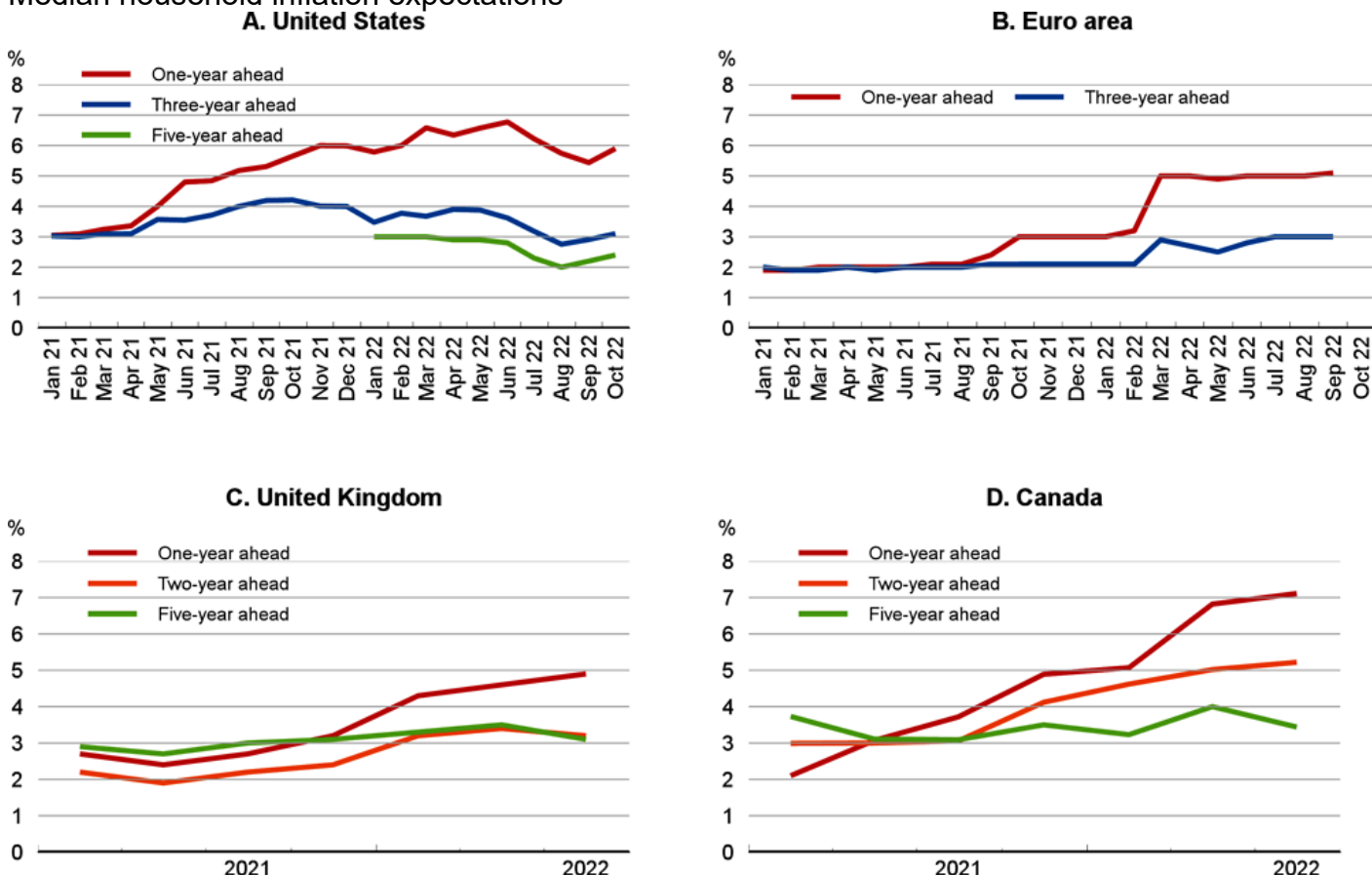
Source: Bureau of Economic Analysis; Eurostat; Statistics Japan; Office for National Statistics; Statistics Indonesia; and OECD calculations.

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Figure 1.7. Short-term inflation expectations have risen in many economies

Median household inflation expectations



Source: Federal Reserve Bank of New York; European Central Bank; Bank of England; Bank of Canada; and OECD calculations.

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Another key measure of the extent to which above-target inflation is becoming entrenched is the pace of unit labour cost growth. Year-on-year unit labour cost growth is estimated to have been around 4% in the median advanced economy and the aggregate euro area in the third quarter of 2022, over 6% in the United States, and above 10% in some Central and Eastern European economies. In contrast, annual unit labour cost growth remained below 1% in Japan, Spain, and several smaller European economies. Nonetheless, labour cost growth is now rising in most economies, reflecting stronger nominal wage increases and weaker labour productivity growth, with firms retaining workers as output growth slows. Output per employee is estimated to have stagnated in the OECD economies over the year to the third quarter of 2022, and declined in some countries, including the United States. In those countries, unit labour costs have risen more quickly over the past year than wages, putting upward pressure on prices and/or squeezing firms' profit margins.

Labour markets generally remain tight. In many OECD economies, unemployment rates are at their lowest levels in the past two decades and vacancy rates are unusually high (Figure 1.8). The pace of employment growth has, however, slowed recently in some countries, with vacancy rates beginning to ease, and unemployment rates edging up. Nominal wage growth (compensation per employee) has picked up in most economies, but has not kept pace with inflation, resulting in a

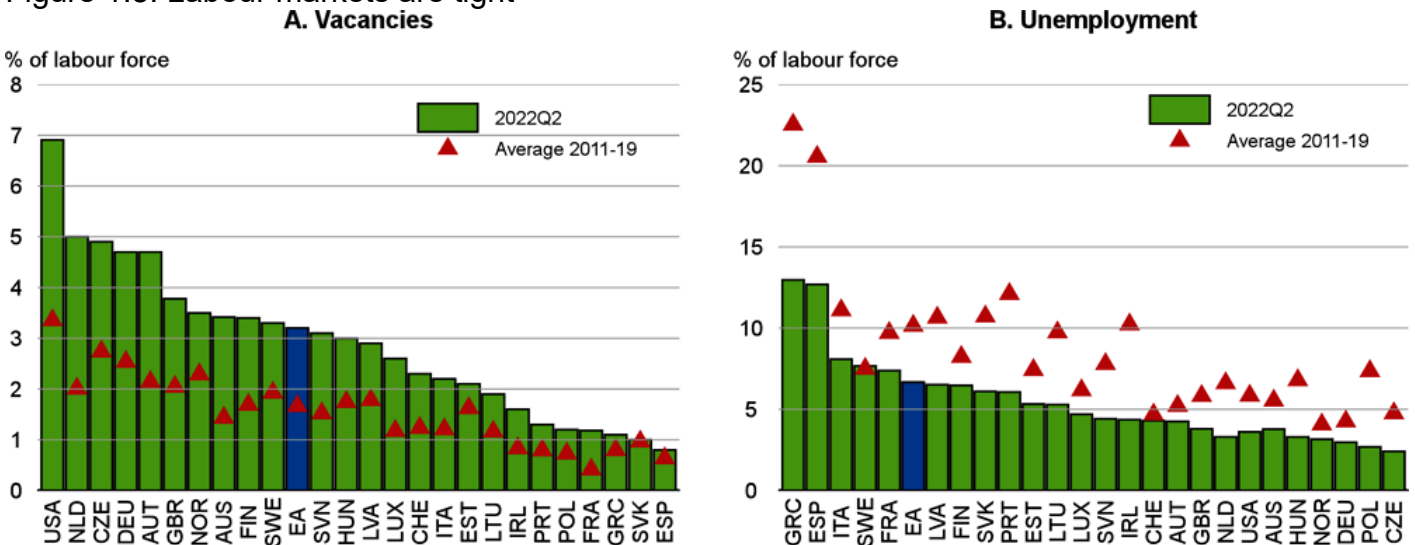
sharp erosion of wages in real terms in many OECD economies (Figure 1.9). With inflation expected to remain well above target over at least the next year, it is probable that many wage demands in 2023-24 will be considerably higher than previously anticipated.

There are some important differences in labour force developments across OECD member countries since the onset of the pandemic. In most countries, participation rates have continued to rise, with inactivity rates substantially below pre-pandemic levels. Exceptions include the United States, the United Kingdom as well as Colombia, Chile and Latvia, with labour force participation remaining below its pre-pandemic level (Figure 1.10). This may help to explain why some measures of labour market tightness, such as vacancies (Figure 1.8) are more acute in countries such as the United States and the United Kingdom than in countries where inactivity declined substantially relative to the pre-pandemic period, such as Greece and Poland. The reasons for such differences in the evolution of labour force participation are complex, but probably include differential impacts of the pandemic on the health of the working-age population. Countries with high rates of COVID-19 illness and mortality in 2020 and 2021 generally have had less of an increase, or some decline, in labour force participation rates relative to the immediate pre-pandemic level.<sup>3</sup> In addition, the labour market recovery in some emerging-market economies has largely been driven by higher numbers of informal jobs, which will not be reflected in the labour force statistics.

Labour market tightness in some OECD economies has also been accentuated by the relatively low levels of immigration during 2020-21. After a slump during the first year of the pandemic, migration to OECD economies recovered quite strongly in 2021: permanent-type migration into a selection of 24 OECD member countries increased by 25% to 4.2 million (OECD, 2022a). Even so, such migration remained lower than pre-pandemic levels in almost all countries (Canada and Spain being exceptions).<sup>4</sup>

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Figure 1.8. Labour markets are tight



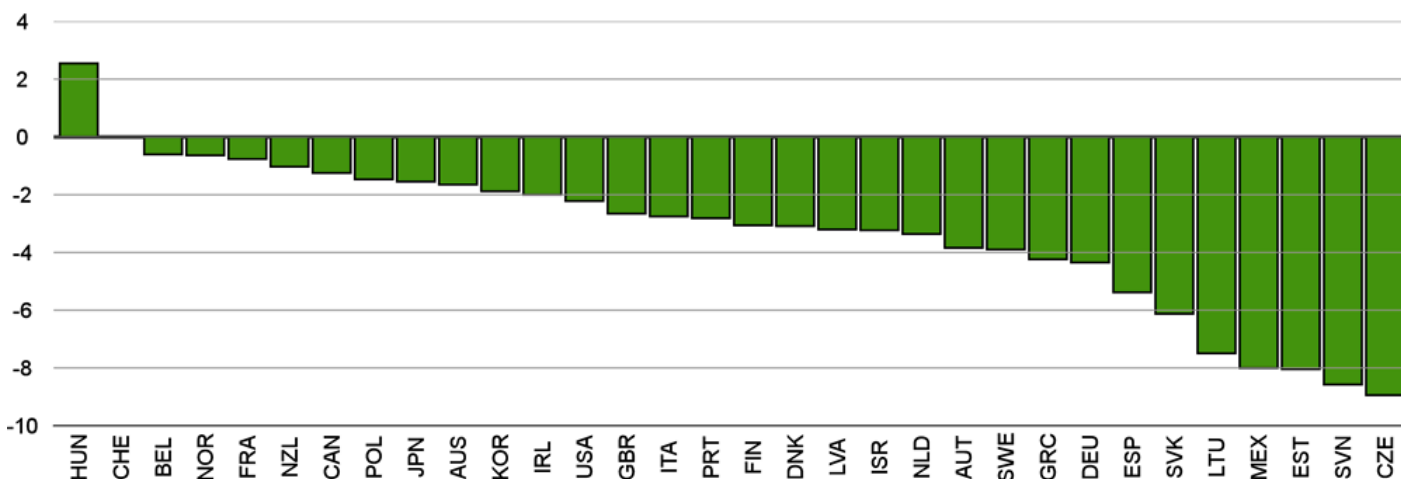
Source: OECD Economic Outlook 112 database; Eurostat; OECD, Labour Force Statistics; France Labour Ministry (DARES); and OECD calculations.

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Figure 1.9. Real wages are declining in most economies  
Real compensation per employee, total economy, 2022Q3

y-o-y % changes



Note: Compensation per employee deflated using the personal consumption expenditures deflator.

Source: OECD Economic Outlook 112 database; and OECD calculations.

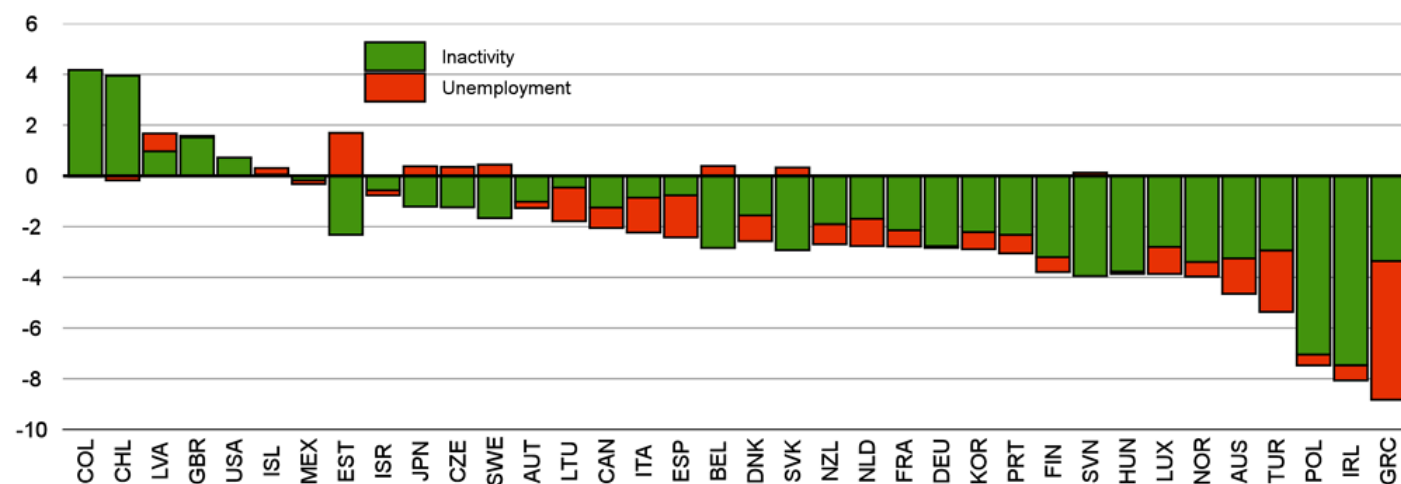
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Figure 1.10. Unemployment and inactivity rates have fallen in most OECD economies

Difference between 2022Q2 and 2019Q4

% pts of population aged 15-64



Source: OECD Labour Force Statistics; and OECD calculations.

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copy the linklink copied! Trade growth held up in the first half of 2022, but recent indicators have weakened

Global trade continued to recover in the first half of 2022, helped by strong demand and some easing in supply chain bottlenecks and port congestion (Figure 1.11, Panel B), alongside the lifting of most COVID-19 restrictions in many countries. This helped to offset a sharp contraction in China's imports in the first half of 2022 as its zero-COVID-19 policy remained in place.

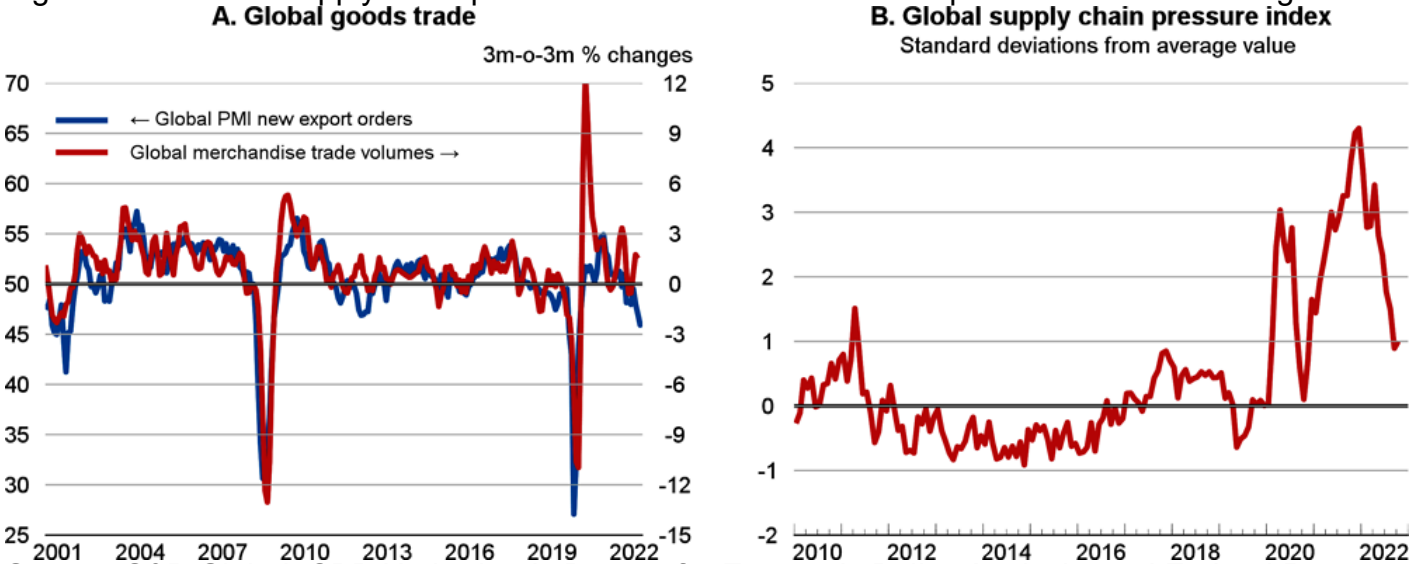
Manufacturing surveys suggest backlogs of work have almost normalised and supplier delivery times have improved. The ongoing recovery in cross-border tourism also boosted services exports in most regions in the first half of the year. By the third quarter of 2022, the volume of global trade in goods and services 2022 was over 7% higher than in the fourth quarter of 2019, despite the incomplete recovery in services trade. The war in Ukraine has disrupted the usual pattern of bilateral trade flows, with sharp declines in trade between the advanced economies and Russia, and rising trade between Russia and some Asian economies. The Black Sea grain initiative allowed the resumption of grains trade from the port of Odessa, which has led to 10 million approved tonnes leaving since the first shipment on 1 August 2022.

Recent trade indicators have been mixed, but there are signals that trade growth is set to slow. Survey measures of new export orders in manufacturing have fallen sharply, particularly in Europe (Figure 1.11, Panel A). Container port traffic volumes continued to rise through to September, but early estimates from the Kiel Trade Indicator suggest that global merchandise trade may have contracted in October.

Changes in the terms of trade and net income transfers from the rest of the world impact countries' disposable income and consumption possibilities in addition to the changes in production activity measured by GDP growth. Sizeable swings in the terms of trade have occurred for many countries in 2022, due to changes in exchange rates and commodity prices. As a result, the growth of real gross national disposable incomes (RGNDI) is projected to be very different to real GDP growth in many countries. The growth of gross disposable national income for Norway and Saudi Arabia in 2022 is projected to be over 14 percentage points higher than GDP growth (Figure 1.12), reflecting high oil and gas export prices. In contrast, the trading gain (changes in the terms of trade) is projected to be negative in most other European economies in 2022, with the increase in RGNDI in the median EU economy projected to be over 1 percentage point lower than GDP growth in 2022, and with income declines in some countries, including Germany.

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Figure 1.11. Global supply chain pressures have eased but new export orders are declining



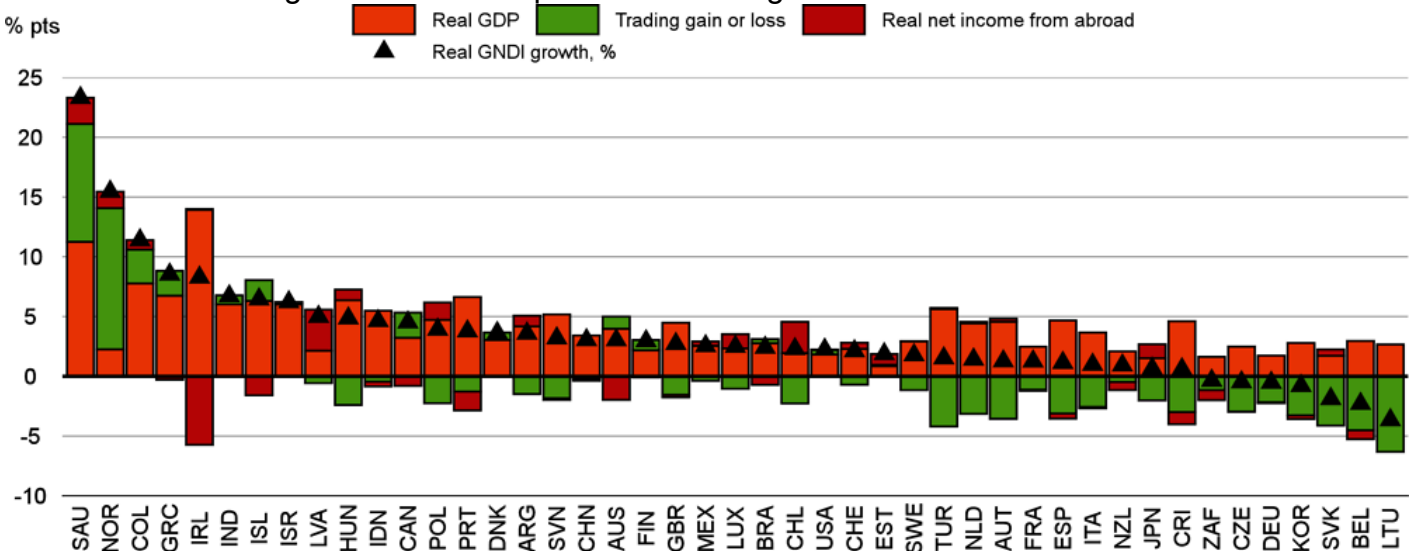
Source: S&P Global; CPB Netherlands Bureau for Economic Policy Analysis; and Federal Reserve Bank of New York.

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Figure 1.12. Terms-of-trade losses have hit incomes in energy importing economies, especially in Europe

Contribution to real gross national disposable income growth in 2022



Source: OECD calculations.

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## copy the linklink copied! Financial market conditions have tightened significantly

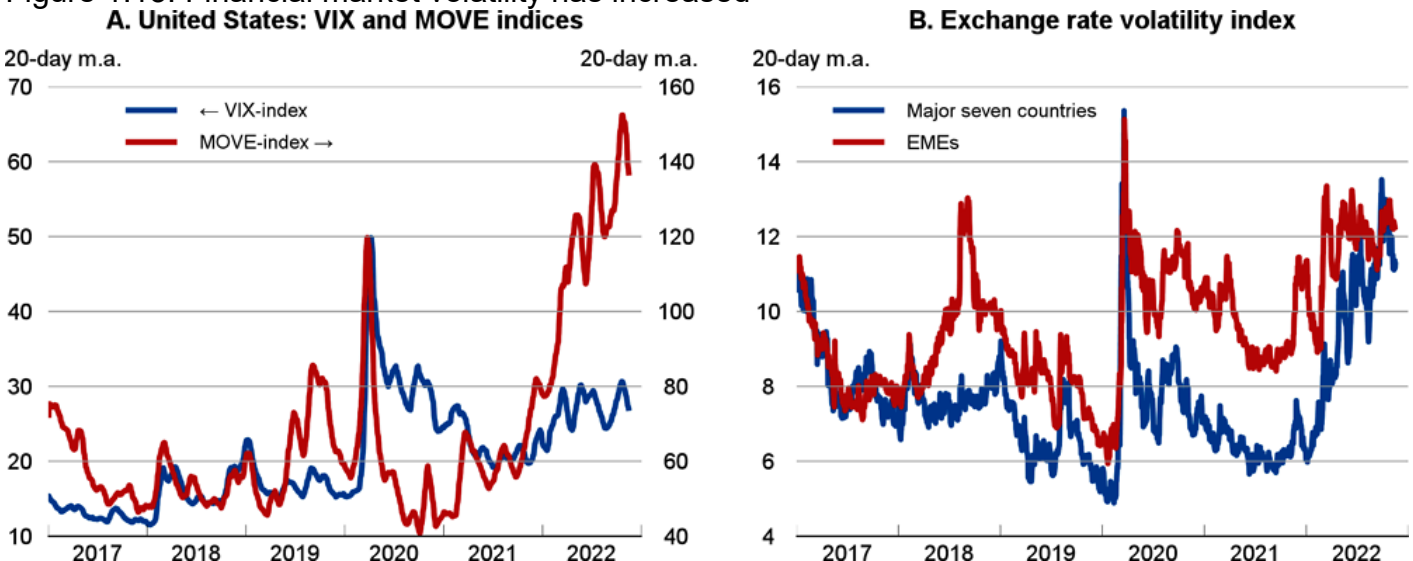
The accelerated pace of monetary policy tightening in major economies and rising risk aversion have led to a further tightening of global financial conditions. Volatility has surged, particularly in government bond markets, surpassing the peak observed at the height of the pandemic (Figure 1.13, Panel A). Larger increases in market interest rates in the United States relative to many other economies have pushed the US dollar to its highest level in the last two decades, contributing to greater volatility in the currency markets of advanced and emerging-market economies (Figure 1.13, Panel B). A sharp deterioration of liquidity conditions in sovereign and corporate bond markets has also exacerbated abrupt price developments (OECD, 2022b; IMF, 2022a).<sup>5</sup> Real long-term interest rates have risen in the United States, the United Kingdom and the euro area, reflecting a fast pass-through from surging policy interest rates to the long end of the yield curve, though they remain lower than typically observed prior to the global financial crisis (Figure 1.14).

Slowing growth and rising interest rates have weighed on equity markets in most advanced economies (Figure 1.15, Panel A). Price declines have been relatively large in many Central and Eastern European countries, reflecting weakening growth prospects. Recurring waves of COVID-19 outbreaks in China and moderating growth in Korea have led to capital outflows and also hit equity markets. In contrast, equity prices have risen in a few commodity exporters, as well as in India, where new free trade agreements have attracted foreign capital, and Türkiye, reflecting strong domestic investor demand to hedge against high inflation risk.

Government bond yields have increased in almost all countries since May (Figure 1.15, Panel B). In the euro area, government bond yields have increased broadly in line with those in the United States, despite the earlier start to US monetary policy tightening. The announcement of the Transmission Protection Instrument by the ECB in July and a significant use of flexibility across countries in bond reinvestments have limited the increase in sovereign spreads within the area. Yields have increased significantly less in emerging-market economies and have remained stable in Japan, reflecting the yield curve control policy.

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Figure 1.13. Financial market volatility has increased



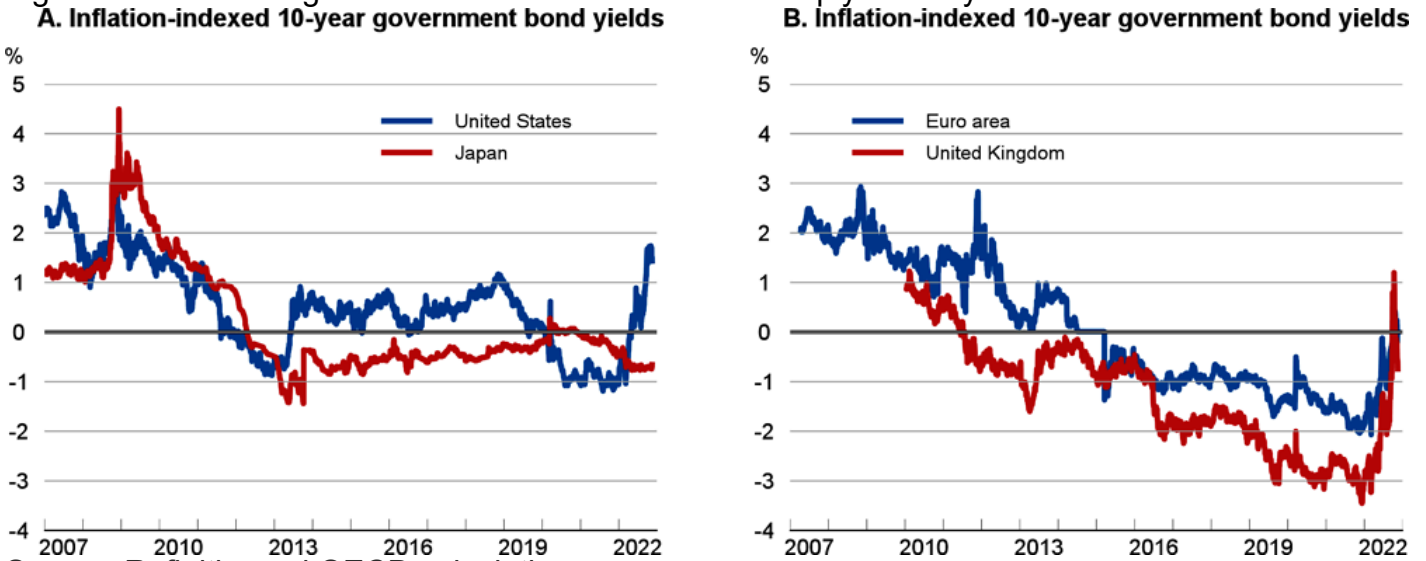
Note: Implied volatility as measured by the VIX index can be interpreted as the market expectation of risk (future volatility). The MOVE index is a yield curve weighted index of the normalised implied volatility on 1-month Treasury options which are weighted on the 2, 5, 10 and 30 year contracts.

Source: Refinitiv; and OECD calculations.

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Figure 1.14. Real long-term interest rates have risen sharply in many countries



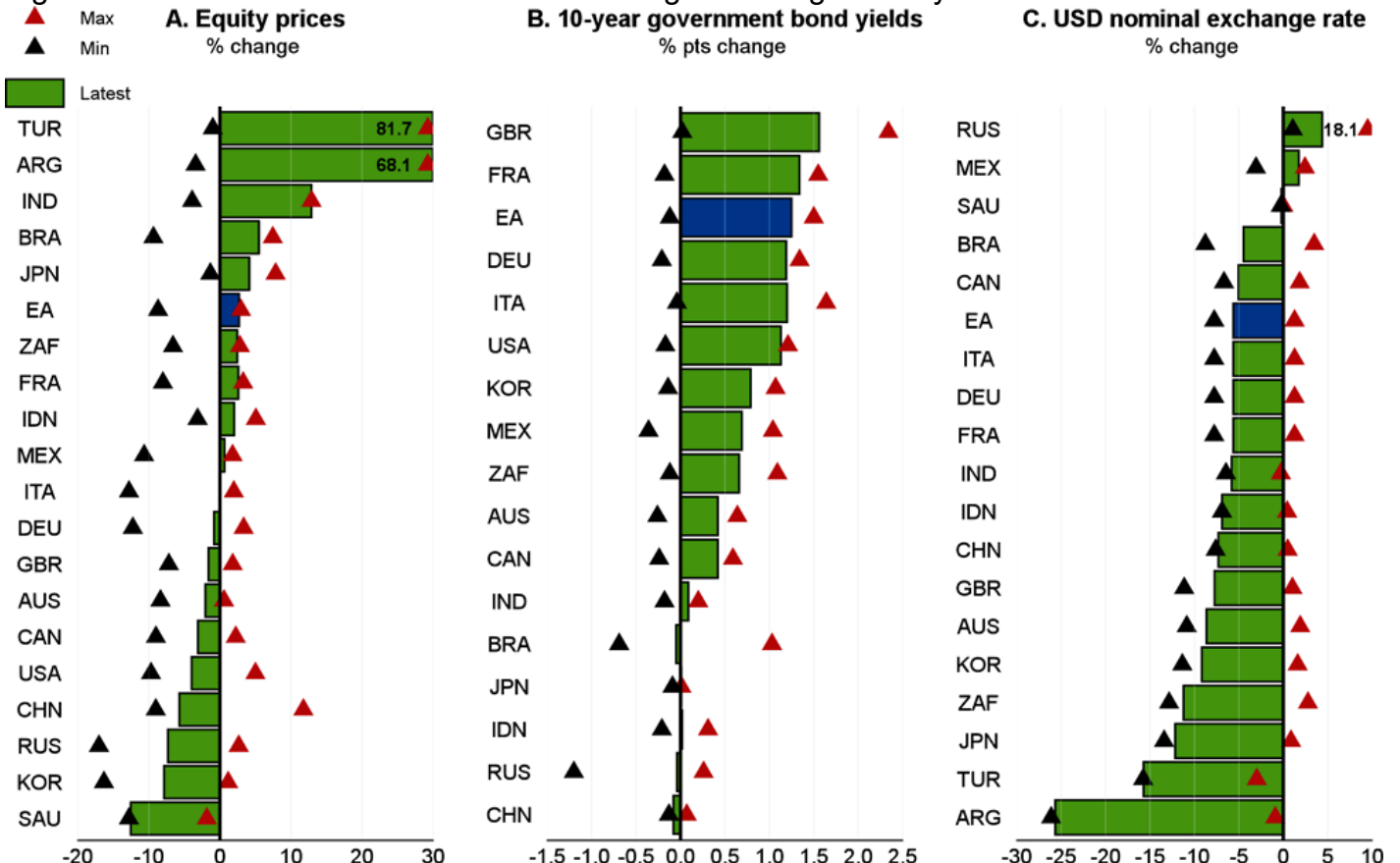
Source: Refinitiv; and OECD calculations.

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The US dollar has appreciated further against most advanced economy currencies since May (Figure 1.15, Panel C), reflecting a faster pace of monetary policy normalisation in the United States, particularly vis-à-vis Japan, and sharply deteriorating growth prospects in the euro area and the United Kingdom. With the exception of a few commodity exporters, almost all emerging-market economy currencies have depreciated against the US dollar.

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Figure 1.15. Financial market conditions have tightened significantly



Note: 'Latest' refers to the change between the average of May 2022 and the latest available data up to November 16. 'Maximum' and 'Minimum' refer to the largest increases or falls relative to the average of May 2022. Based on a 10-day average of daily observations.

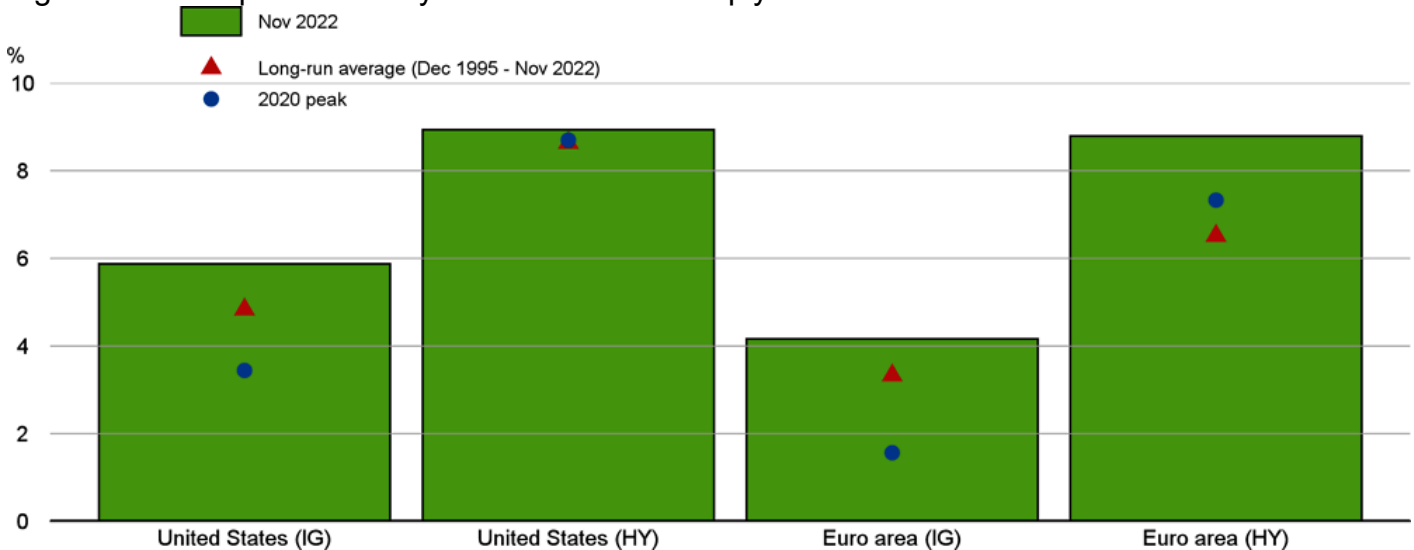
Source: Refinitiv; and OECD calculations.

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Financing conditions have continued to tighten for firms and households. In the euro area, interest rates on new lending to businesses in September were 120 basis points higher than their 2021 low, and corporate bond yields have also increased. In the United States and the euro area, yields on high-yield bonds and leveraged loans have reached levels close to or above those at the height of the pandemic (Figure 1.16) and recent issuance of high-yield bonds has slowed to its lowest level since the global financial crisis. Corporate bond and credit default spreads have also widened, particularly in Europe in the face of rising concerns about energy shortages and the sustainability of leveraged firms (OECD 2022b). Current and expected increases in policy rates have also passed through swiftly to new fixed-rate mortgage lending rates in many countries, and are also affecting countries with a relatively high share of adjustable-rate mortgages, adding to potential vulnerabilities (see below).

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Figure 1.16. Corporate bond yields have risen sharply



Note: IG and HY refer to Investment Grade and High Yield bonds, respectively. The 2020 peak for the United States corresponds to March 2020 and for the euro area to April 2020.

Source: ICE BofA Indices database; and OECD calculations.

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## Global growth is projected to weaken further with inflation slowing gradually

The global economy is facing a period of weak growth and persistent inflation, with elevated downside risks. Tighter monetary policy and higher real interest rates, elevated energy prices, weak household income growth and declining confidence are all expected to take a toll on growth, especially in 2023. Fiscal support to cushion the impact of high food and energy costs will help to limit the slowdown, although mild consolidation is still projected in most economies. Job losses may also be more limited than would be expected on the basis of past downturns if firms wish to retain workers that have been hard to recruit after the pandemic. Savings accumulated during the pandemic also provide some buffer for the household and corporate sectors, although these are not evenly distributed. High uncertainty could limit the extent to which savings are drawn down and deter firms from making longer-term investments.

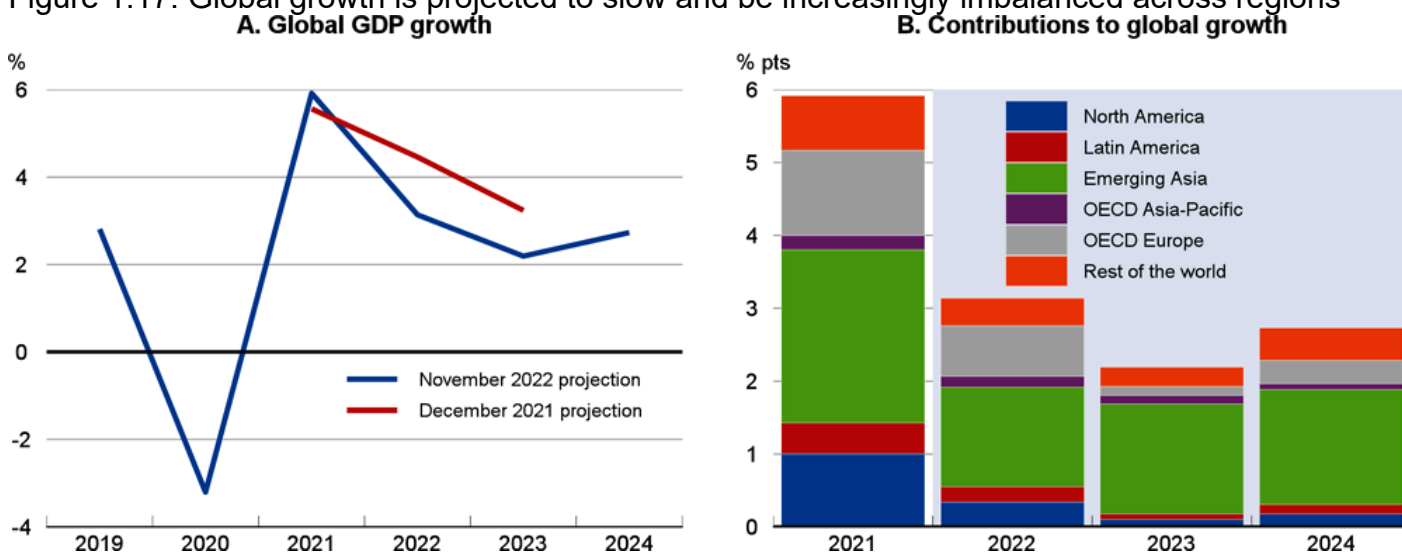


The projected slowdown in global GDP growth in 2023 (Table 1.1; Figure 1.17, Panel A) is cushioned to some extent by an expected further fall in household saving rates in several major advanced economies, though not in the United States, where the saving rate has already dropped below pre-pandemic levels. A mild recovery is projected to get underway in most countries in 2024, with real income growth recovering and fading inflation pressures providing space for initial steps to ease monetary policy in North America, Central and Eastern Europe and many emerging-market economies.

Prospects in the Asia/Pacific region, where many countries have relatively low inflation and policy support is projected to help growth recover in China, appear stronger than in the Americas or Europe. Near-term output declines are projected in many European countries, including Germany, Italy, the United Kingdom and the overall euro area. This results in an unusually imbalanced projection, with outcomes heavily reliant on the absence of any significant downside shocks in the major Asian emerging-market economies, which collectively account for close to three-quarters of global growth in 2023 and around three-fifths in 2024 (Figure 1.17, Panel B). Europe is being affected particularly heavily by the impact of the war in Ukraine and high energy prices, which are expected to persist throughout the projection period.

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Figure 1.17. Global growth is projected to slow and be increasingly imbalanced across regions



Note: In Panel B, Emerging Asia comprises China, India, Indonesia and the Dynamic Asian Economies. Latin America comprises Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico and Peru. Contributions calculated moving PPP shares of global GDP.

Source: OECD Economic Outlook 112 database; OECD Economic Outlook 110 database; and OECD calculations.

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The prospects for individual major economies over the next two years differ widely.

- High inflation and rising interest rates are restraining growth in North America. In the United States, real wages have fallen, and the tightening of monetary policy has pushed up interest rates at all maturities, weakening investment, especially in the housing market. Higher interest rates have also resulted in a strengthening of the dollar, exerting a headwind on export activity. GDP growth is projected to slow from 1.8% in 2022 to 0.5% in 2023, before picking up to 1.0% in 2024. Slower growth will lessen the tightness of labour markets, with a rise of about 1 percentage point in the unemployment rate over the projection period. Together with weaker demand pressures and easing of supply chain bottlenecks, this is projected to allow inflationary pressures to gradually recede. Core inflation is expected to get back close to the Federal Reserve's 2% target towards the end of 2024, permitting some easing of monetary policy. Canada's economy is subject to many of the same forces and expected to have a similar profile of growth and inflation through 2023-24, with both headline and core inflation converging towards the 2% target by the end of 2024, permitting some easing of monetary policy in the second half of that year.

- The major advanced economies in Asia are projected to experience less of a slowdown than other regions. Growth in Japan is projected to remain above potential, but moderate gradually. Higher energy prices have hindered real household income growth and dented confidence and business investment, and a loss of economic momentum in key trading partners is checking export growth. Fiscal policy is projected to be more supportive in 2023, but then tighten in 2024. GDP growth is expected to be 1.8% in 2023 and 0.9% in 2024, after 1.6% in 2022. The unemployment rate is projected to continue to edge down in 2023-24, reaching 2.4%, and the further tightening of labour markets is reflected in a projected increase in core inflation from 0.3% in 2022 to 1.6% in 2023 and 1.7% in 2024. Weak external demand is also a factor in the projected slowdown in Korea, along with modest disposable income growth and a soft housing market. GDP growth is expected to slip from 2.7% in 2022 to a little under 2% in 2023 and 2024. Inflation will remain high for some time in 2023 due to service and utility price pressures, but will gradually moderate to under 2% by the end of 2024.
- Growth in Europe is slowing sharply in late 2022 as a result of the war in Ukraine and weak external demand, with output projected to decline in several countries over the winter. Held back by high energy and food prices, weak confidence, continuing supply bottlenecks and the initial impact of tighter monetary policy, annual growth in the euro area in 2023 is projected to be 0.5%, after 3.3% in 2022, before picking up to 1.4% in 2024 as spending starts to recover. The implementation of Next Generation EU plans should underpin investment. Subdued demand growth will help to moderate inflation, but tight labour markets, and the prospect that high wholesale energy prices will continue to feed into retail prices in 2023 and 2024, means that inflation will subside only gradually, remaining above target in 2024. Higher interest rates, elevated energy and food prices and weak confidence are affecting the United Kingdom, where output is projected to contract by 0.4% in 2023 and rise by only 0.2% in 2024, with tighter fiscal policy restraining the rebound. As in the euro area, weaker demand is projected to help bring inflation down steadily, to 6.8% in 2023 and 3.4% in 2024.
- In China, recurring waves of lockdowns have disrupted economic activity in 2022. With weaker housing investment also remaining a significant headwind, growth in 2023 and 2024 will be sustained by infrastructure investment and other measures to moderate the correction in the real estate sector. After 3.3% in 2022, GDP growth is projected to pick up to 4.6% in 2023 before easing to 4.1% in 2024. Consumer price inflation is expected to remain benign, helped by the current policies to manage energy and food prices.
- The other major Asian emerging-market economies are also projected to be relatively resistant to global headwinds next year, and to have only a modest and short-lived overshooting of inflation objectives. In India, growth is projected to dip from 6.6% in the current (2022-23) fiscal year to 5.7% in FY2023-24, before rebounding to 6.9% in FY2024-25, broadly in line with the pre-pandemic trend. Higher food and energy prices have dented households' purchasing power, and the expected weakness of external demand over the coming year will also moderate activity, despite a strong pick up in contact-intensive service sectors, including international tourism. Consumer price inflation will remain above 6% (the upper limit of the central bank's target range) until early 2023 before gradually receding as higher interest rates take effect. Growth in Indonesia is projected to remain buoyant owing to strong demand for Indonesia's main export commodities, as well as pent-up consumption from the pandemic period. GDP growth will remain close to 5% in 2023 and 2024, while inflation should fall back under the 4% ceiling of the central bank's target band by the end of 2023 as the effects of monetary tightening are felt.
- The major Latin American economies have performed better than expected in 2022, especially food and energy exporters which benefitted from improved terms of trade. This rebound is expected to lose steam during 2023 and 2024, amid tighter global and domestic financial conditions, a withdrawal of most remaining fiscal support and less buoyant commodity prices. Inflation in the major Latin American economies is likely to be close to its peak currently, but will recede only gradually, despite early rate increases by many Latin American central banks that have delivered firmly positive real interest rates. In Brazil, slowing export momentum, tight credit conditions and a less expansionary fiscal policy are

projected to curb growth in 2023, with only a modest improvement in 2024. Annual GDP growth is projected to be 2.8% in 2022, 1.2% in 2023 and 1.4% in 2024. As supply bottlenecks fade and the effects of higher policy rates continue to materialise, inflation is projected to decline to between 4-4½ per cent in 2023 and 2024.

- Against the backdrop of slowing global trade and tighter monetary conditions, annual GDP growth is expected to weaken in 2023 in most other advanced and emerging-market economies, before recovering somewhat in 2024. Output is projected to contract in a number of economies in 2023, including Chile, the Czech Republic, Latvia and Sweden. Central and Eastern Europe, the region most directly affected by the war in Ukraine, generally has both markedly weak growth and relatively high inflation through 2023, while countries in the Asia/Pacific region typically suffer less of a growth

slowdown next year and have lower peak inflation rates than elsewhere. In almost all the smaller economies, as in the larger ones, inflation is projected to decline in both 2023 and 2024, but often to remain above central bank targets even at the end of that period.

The slowdown in output growth in 2023 is not generally expected to be reflected in large rises in unemployment. The OECD-wide unemployment rate is projected to increase to around 5.5%, some 0.5 percentage points above the low point in mid-2022, with many firms holding on to workers that have been hard to recruit since the pandemic, amidst softer labour force growth and only small increases in participation rates in most OECD economies over the next two years. Job growth is also projected to slow sharply, from around 3% this year in the OECD economies to 0.5% per annum on average in 2023-24, with declines in employment in 2023 in several Central and Eastern European economies, Denmark, Finland, Italy and Sweden. Such labour market outcomes would nonetheless be mild by the standards of past slowdowns, and a risk is that this could prolong elevated cost pressures for longer than expected.

Consumer price inflation in many economies is projected to stay higher for longer than previously foreseen, despite a larger and more rapid tightening of monetary policy in much of the world and the gradual easing of some supply bottlenecks in goods markets. This reflects in part the war in Ukraine, especially in Europe, where the implications of the sharp rise in the price of imported natural gas in 2022 will continue to be felt in 2023 and 2024 as delayed retail price increases for electricity and gas come through and existing price caps become less generous. Nonetheless, with policy interest rates generally rising into 2023 and then being maintained at high levels throughout the projection period, resource pressures diminishing and energy price inflation slowing, inflation is projected to fall and approach central bank objectives in many economies in 2024.

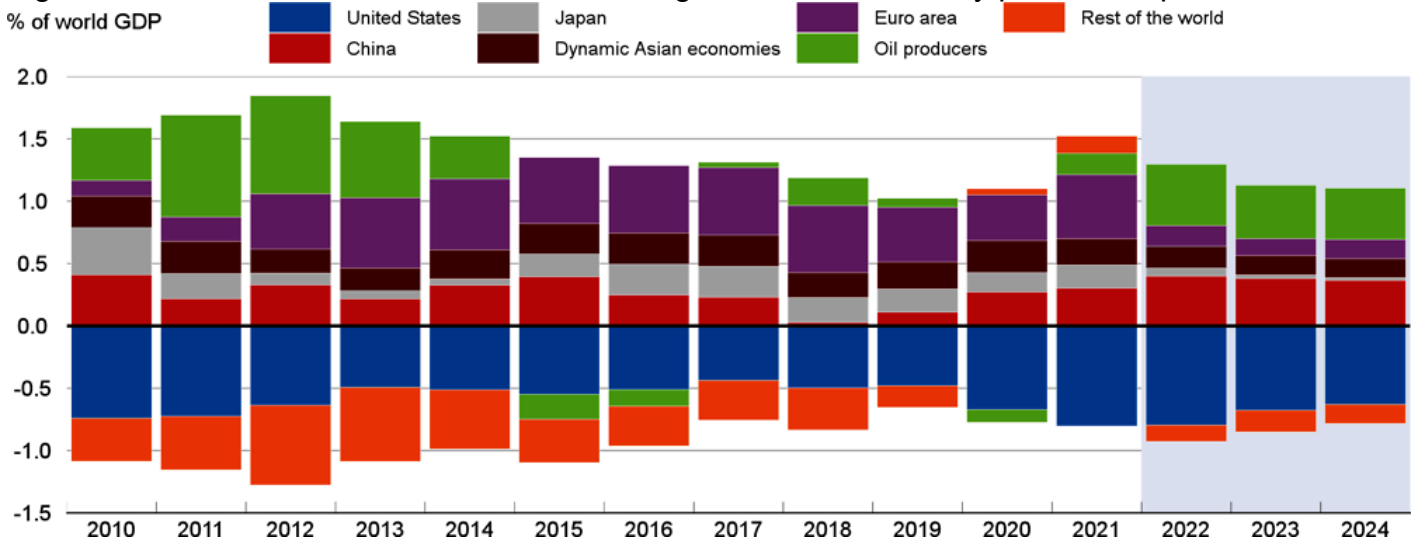
Annual inflation in the OECD economies is projected to decline, from 9.4% in 2022 to 6.5% in 2023 and 5.1% in 2024. Inflationary pressures are projected to ease in all countries, but this is likely to take some time in those with very tight labour markets and broad-based inflation pressures at present. In 2023, headline inflation is projected to be over 10% for a second successive year in Hungary, Poland, the Slovak Republic and the Baltic States, and be 8% in Germany and over 6½ per cent in the euro area as a whole. In contrast, price pressures are expected to ease considerably in 2023 and 2024 in the United States, Canada, Australia and Korea, and remain mild in Japan. Inflation is projected to continue to diverge in the emerging-market economies, with continued low inflation in China, very high inflation in Argentina and Türkiye, and inflationary pressures generally receding in other countries as tighter monetary policy takes effect.

Global trade volume growth is projected to slow to 2.9% in 2023 as demand softens and price pressures mount, with the slowdown particularly noticeable in Europe and the United States. The resumption of growth in China will help to offset some of the softness in OECD activity, but import demand is also expected to be subdued in many commodity-importing countries. A mild upswing is projected in 2024, with global trade growth picking up to 3¾ per cent. Global current account imbalances are expected to remain higher than prior to the pandemic (Figure 1.18). China's trade surplus will remain elevated as exports grow robustly and international tourism imports remain well below pre-crisis levels over the projection period. This increase is offset by a lower surplus in Japan and in Europe, in part due to the adverse terms of trade shock from higher imported energy

prices. The US current account deficit will only decline marginally over the projection period. As commodity prices are assumed to remain unchanged at high levels in the projections, many oil-exporting economies are expected to have persistent and sizeable current account surpluses.

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Figure 1.18. Current account imbalances are higher than immediately prior to the pandemic



Note: The Dynamic Asian Economies aggregate includes Hong Kong (China), Malaysia, Chinese Taipei, the Philippines, Singapore, Thailand and Vietnam. The oil producers aggregate includes Algeria, Angola, Azerbaijan, Bahrain, Brunei, Chad, the Republic of Congo, Ecuador, Equatorial Guinea, Gabon, Iran, Iraq, Kazakhstan, Kuwait, Libya, Nigeria, Oman, Qatar, Saudi Arabia, Sudan, Timor-Leste, Trinidad and Tobago, Turkmenistan, United Arab Emirates, Venezuela and Yemen. The rest of the world aggregate includes all other non-OECD countries which are not listed.

Source: OECD Economic Outlook 112 database; and OECD calculations.

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## copy the linklink copied! Key risks and vulnerabilities

copy the linklink copied!The impact of lower energy imports to Europe from Russia could prove more severe than expected

European economies continue to face significant challenges from the current and planned embargos on Russian coal and seaborne oil imports, and from the dwindling supply of gas from Russia into the European market. A key risk around the projections is that the associated increase in energy prices proves much more disruptive and persistent than assumed in the baseline. Past experience suggests that sizeable increases in energy expenditures in OECD economies are often associated with recessions (Box 1.2).

The search for alternative sources of supply has been an important factor pushing up energy costs this year, with European countries bidding to attract supply from other markets amidst tight global supply conditions. There are sizeable differences across European countries and industries in the energy mix and the reliance on different types of energy inputs. The ongoing shift away from Russian imports is thus affecting sectors in different ways according to their initial dependency on energy imports from Russia, the scope to obtain alternative energy supplies, and the extent to which they are impacted by cutbacks elsewhere in their supply chains. Such challenges are particularly acute in Germany, as well as in many Central and Eastern European economies, and in energy-producing sectors, transport (where specialised refined fuels from Russia can be hard to replace), minerals and metals manufacturing and the chemicals industry.

For OECD Europe as a whole, estimates derived by combining input-output and sectoral energy use data suggest that output in manufacturing and market service sectors could decline by between 2<sup>3</sup>/<sub>4</sub>-3 per cent, if energy inputs from Russia were not offset by drawing down stocks or by substituting other energy inputs (OECD, 2022c). Such estimates are very uncertain, as energy supply disruptions to key production processes, or shortages of fuels for transportation could force companies to shut down production completely rather than reduce it proportionally. The near-term impact of a simultaneous sharp contraction in production across many sectors and countries is also likely to be larger than if only one country is affected.

Gas supplies are a particular concern in Europe over the next two winters. Gas and electricity prices are already elevated and could jump further in the event of shortages emerging in Europe. Such shortages could occur if non-Russian gas supplies from outside the EU fail to materialise to the extent expected, or if the demand for gas is exceptionally high due to a cold winter (Haas *et al.*, 2022; IEA, 2022a). EU gas storage levels have been raised considerably through 2022, and in October were over 92% on average in EU member states and full in many. Even at this level, there is still some uncertainty about whether demand in a typical winter can be met without storage levels in the European gas market being pushed below effective operational levels unless the reductions in energy consumption in the last few months are maintained. In this respect, it is important that fiscal measures to support households and companies continue to allow price signals to operate to help to bring about the necessary adjustment of consumption. A prolonged cold winter would be more likely to result in shortfalls unless additional gas supplies could be obtained in the near term, which would inevitably require substantially higher prices, or demand is reduced strongly. Even if supplies prove adequate for the forthcoming winter, significant challenges are likely to persist through 2023 and keep gas prices elevated, with European economies continuing to face substantial difficulties in securing sufficient supplies to rebuild storage capacity ahead of the 2023-24 winter (Fulwood, 2022; IEA, 2022b). In turn, such efforts will push up gas prices and reduce the quantities of LNG available outside Europe, especially in Asia, with detrimental effects on some developing economies.

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### Box 1.2. Energy expenditures since the 1970s

Fluctuations in the share of energy expenditures in total spending are closely associated with cyclical changes in economic activity. With energy an important input for firms, a rise in energy prices typically shifts the aggregate supply curve of the economy upwards, all else equal, lowering output and raising the price level. Higher energy prices also erode the purchasing power of households: when energy prices surge, energy expenditures tend to increase, crowding out other spending. The negative effect on aggregate demand amplifies the effect of the supply shock on output while somewhat offsetting the impact on overall consumer prices. The negative demand effect could be mitigated to the extent that domestic energy producers spend their windfall profits, or distribute the extra income to households who spend it, but most OECD countries are importers of fossil fuels, and recipients of energy price windfalls generally tend to spend their extra income slowly (Cookson *et al.*, 2022).

Estimated expenditures on energy – oil, natural gas, coal and electricity – have risen sharply this year in OECD economies (Figure 1.19), with relatively similar fluctuations over time across most OECD countries. The estimates use consumption volumes and end-use prices – which include taxes – from the International Energy Agency. For 2022, the volumes consumed are assumed to be equal to the average of those in 2019 and 2021, with price levels estimated using the average of observed 2022 data compared to 2021 for reference prices for each category (in local currency terms): Brent for oil products, ICE Newcastle futures for coal, and national wholesale prices for electricity and natural gas.

The expected relationship between energy expenditure shares and economic cycles in the OECD region is clearly visible. During the past five decades, OECD-wide recessions have – with the exception of the COVID-19 recession in 2020 – only occurred when the ratio of energy expenditures to GDP has been at a high level (always at least 13%) and rising. These findings are consistent with the results of studies of even longer periods (Fizaine and Court, 2016) and studies

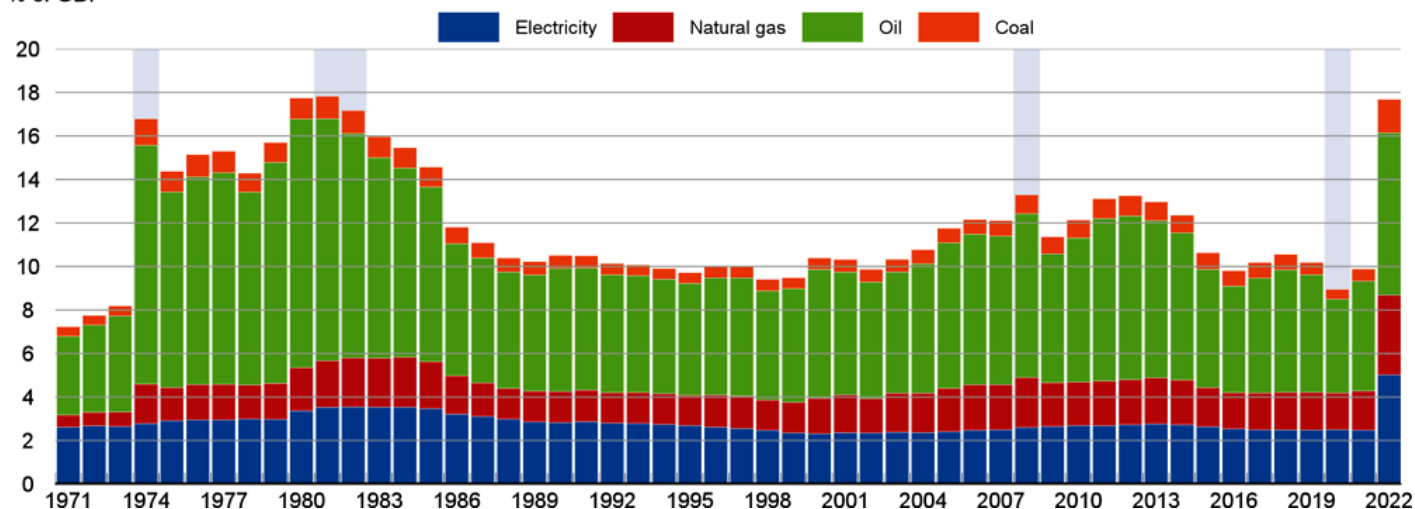
of the link between oil price increases and US recessions (Kilian and Vigfusson, 2017). The rapid rise in estimated OECD-wide energy expenditures this year, to around 17% of GDP, is a warning signal about the near-term risk of widespread recessions among OECD economies.

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Figure 1.19. Periods of high energy expenditures are often associated with a recession

Estimated energy end-use expenditures for the OECD economies

% of GDP



Note: Recessions (shaded areas) correspond to years in which there were at least two negative quarterly GDP growth rates for the OECD aggregate. Estimates of the level of energy expenditure, computed as end-use prices in local currency multiplied by volumes consumed, are produced at the country level for 29 OECD countries. GDP shares are then aggregated using moving GDP weights in PPP terms. End-use prices (defined as the average unit price effectively paid by industrial and household consumers as well as for electricity generation) include taxes. Prices start in 1978 in the IEA database; they were backcast to 1971 using the Brent price for oil, and prices for coal products and natural gas, and the rate of increase of the electricity price in the US CPI for electricity. Prices are extended to 2022 using the growth rate of reference prices converted in local currency (average of observed 2022 data compared to 2021): Brent for oil, ICE Newcastle futures for coal, and wholesale prices for electricity and natural gas (available for 25 and 27 OECD countries, respectively). For 2022, the volumes consumed correspond to the average of 2019 and 2021.

Source: International Energy Agency; OECD Economic Outlook 112 database; Refinitiv; US Energy Information Administration; Japanese Power; German Federal Network Agency (SMARD); Korea Electric Power Statistics Information System; Canada Independent Electricity System Operator; and OECD calculations.

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At the same time, the composition of the current surge in energy expenditure is different to that seen in earlier episodes. Past swings in expenditures on energy have been mostly driven by spending for oil products, whereas the upswing in 2022 is more broad-based, with large contributions from gas and electricity. It is possible that this difference is relevant for the relationship between overall energy expenditure and OECD-wide downturns. For one thing, the most extreme increases in the prices of gas and electricity have taken place in Europe: it is likely that the consequences for output will likewise be skewed. Indeed, the United States and a number of other OECD countries are net exporters of gas (and oil) and thus benefit from terms of trade improvements resulting from the surge in energy prices.

The first large increase in OECD-wide end-use expenditures happened in 1974 with the ratio of energy spending to GDP rising by nearly 8½ percentage points in one year, of which over 6½ percentage points came from oil products. This was due to the first oil crisis, following the announcement by Arab members of OPEC of an oil embargo in October 1973, which pushed the oil price sharply higher: the average price in 1974 tripled relative to 1973.

In subsequent decades, spending on oil products has been a key driver of the evolution of energy expenditures, reflecting oil's large share in consumption volumes and its relatively high degree of price volatility. The second oil crisis, in 1979, resulted in an increase in energy expenditure of 3½ percentage points of GDP over two years, while the mid-1980s oil glut caused spending to decline by around 8 percentage points, after which it stabilised at around 10% of GDP. It was only in the second half of the 2000s that energy expenditures started to increase again, peaking in 2008 at around 13% of GDP, with two-thirds of the increase being explained by spending on oil products. The relative stability of energy expenditures from the mid-1980s to the early 2000s hid a decline in energy intensity (energy consumed per unit of real GDP) of about 15% which was offset by a similar increase in the relative (weighted) price of energy. Indeed, energy intensity in OECD economies has declined steadily since the first oil crisis, falling by more than 50% over the period 1971-2021. This was driven by falls in the GDP intensity of oil and coal, with intensity remaining relatively stable for electricity and increasing for gas.

For 2022, the estimated increase of 7¾ percentage points is similar to that observed in 1974, and takes the ratio of energy spending to GDP back to the levels seen from the mid-1970s through to the mid-1980s. Expenditures related to all energy products are increasing significantly, with spending on electricity, oil products, natural gas and coal products increasing by 2½, 2¼, 2 and 1 percentage points, respectively.

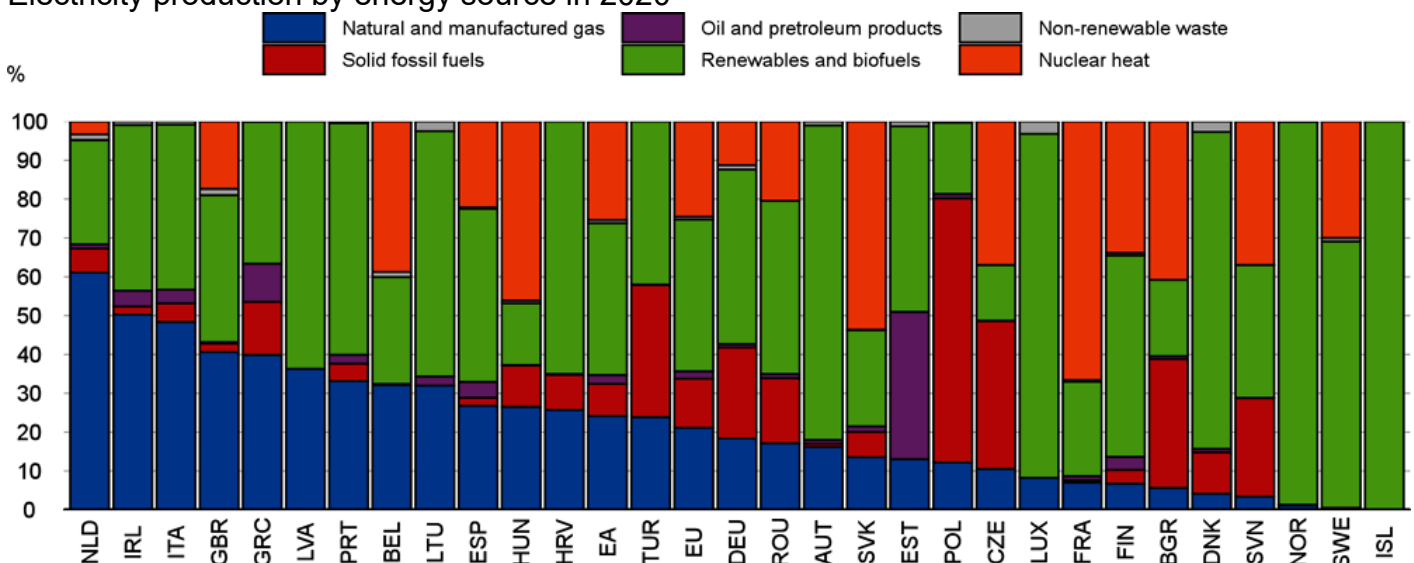
One of the key unknowns about the current episode is the speed and extent of the pass-through from global or wholesale prices to end users (Figure 1.3). The increase in global and wholesale prices that has already occurred could be spread into 2023 or beyond, or may never even reach end users, depending on public policies and the future evolution of prices. To the extent that end users are not exposed to the full price impact, the implications for aggregate demand may be more muted than suggested by the underlying swing in energy costs.

EU member countries have already agreed on efforts to lower energy consumption in the near term, and higher prices have also begun to slow demand to some extent. Nonetheless, risks of enforced reductions in usage remain, implying potentially sizeable declines in energy consumption in some countries and industries where there is either a relatively high direct use of gas or a high indirect use via electricity production (Figure 1.20). Some industries that use gas intensively, such as metals manufacturing and chemicals, could see declines of between 4-6% in the median EU economy in the event of a 10% decline in gas usage and a 10% reduction in the use of gas for electricity (OECD, 2022d).

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Figure 1.20. Gas is an important energy source for electricity generation in many European countries

Electricity production by energy source in 2020



Source: Eurostat.

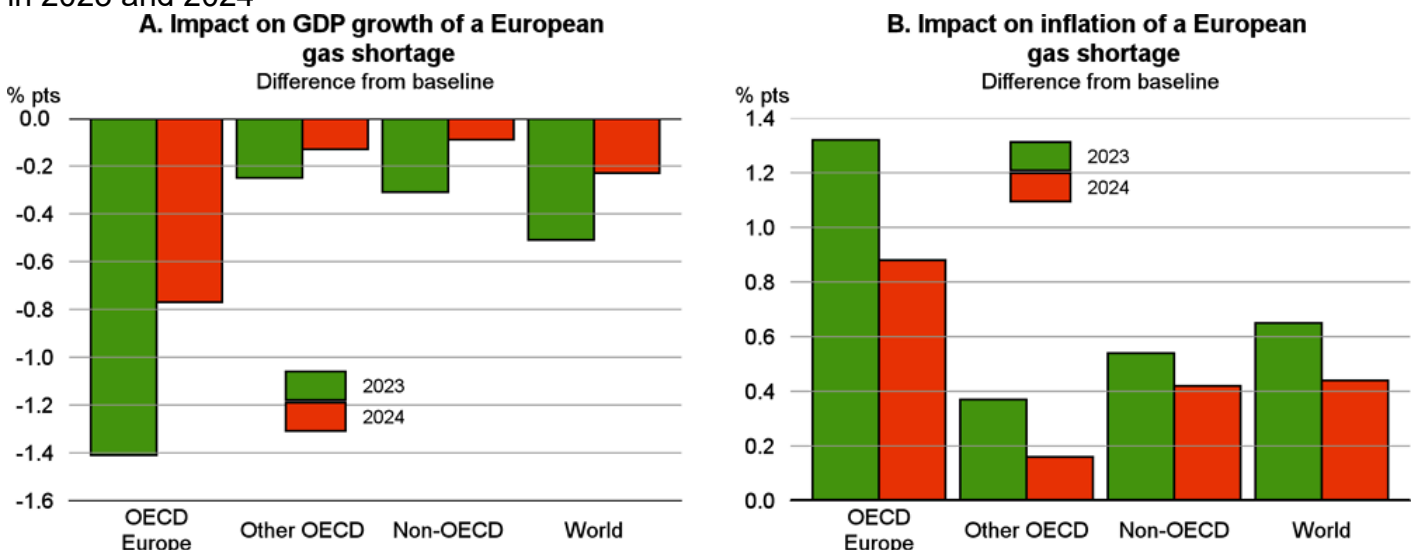
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Illustrative simulations, using the NiGEM global macroeconomic model, highlight the potential hit to growth and additional inflation in 2023 and 2024 that could arise from gas shortages in Europe and the associated uncertainty that might arise. Shortages are assumed to push up global gas, fertiliser and oil prices (as European countries bid for additional gas supply in world markets), hit confidence and financial conditions and require a temporary period of enforced reductions in gas use by businesses in early 2023 and again in early 2024 (OECD, 2022d).

Taken together, the shocks could reduce growth in the European economies by close to 1½ percentage points in 2023, relative to baseline, and raise inflation by over 1¼ percentage points (Figure 1.21). This would push many countries into a full-year recession in 2023. Growth would also be weakened in 2024 by around ¾ percentage point in Europe, and inflation raised by 0.9 percentage points. Higher prices and reduced working hours would hit real incomes, with household spending falling by around 2% in the European economies, and private sector investment would be hit by the higher user cost and weak demand, declining by close to 10% by 2024. Within the European Union, the countries in Central and Eastern Europe would collectively be hit harder than others, with output lowered by around 1.6% in 2023, compared to a decline of 1.3% in the rest of the European Union. Outside Europe, the impact of the shocks would be smaller, but there would still be adverse impacts from higher inflation on real incomes (except in gas-producing economies) and weaker demand from Europe. For the world as a whole inflation would be pushed up by 0.6 percentage points in 2023 and 0.4 percentage points in 2024, with growth reduced by ½ percentage point and ¼ percentage point respectively.<sup>6</sup>

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Figure 1.21. Prolonged gas shortages and greater uncertainty would hit growth and raise inflation in 2023 and 2024



Note: Illustrative scenario of the impact of gas shortages in Europe. The scenario assumes that global gas, oil and fertiliser prices rise by 50%, 10% and 25% respectively in 2023 and 2024. Greater uncertainty is modelled as an ex-ante increase of 1 percentage point increase in the household saving rate and a 1 percentage point rise in the user cost of capital and investment risk premia in all EU economies and the United Kingdom in 2023 and 2024. A temporary period of enforced rationing in industry use is modelled by a 3% reduction in potential output in all EU economies and the United Kingdom in the first quarter of 2023 and 2024 via a combination of reduced technical efficiency and a fall in average hours worked.

Source: OECD calculations using the NiGEM macroeconomic model.

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## copy the linklink copied! Monetary policy tightening highlights pre-existing financial vulnerabilities

There are increasing risks that fast-rising interest rates, tighter global financial conditions and significant asset repricing could expose longstanding financial vulnerabilities in advanced and emerging-market economies.



# copy the linklink copied! Rising private sector debt-service burdens and lower bond market liquidity are keys risks in the advanced economies

For households and companies, faster-than-expected rises in interest rates increase debt payments and make rollovers more difficult. A sharp increase in interest rates may jeopardise the ability of households and corporates to service their debts, potentially leading to defaults and bankruptcies, and to corrections in house prices. Prices have already started to decline in some OECD countries, albeit from very high levels, with house price-to-income ratios at record highs across most OECD countries in the second quarter of 2022. Population growth and rising disposable income are more important long-term drivers of house prices than real interest rates (Cournède *et al.* 2020), though the impact of the changes in the latter could be non-linear, with a larger response of house prices to a given increase in rates when these are at a low level (Nocera and Roma, 2017).

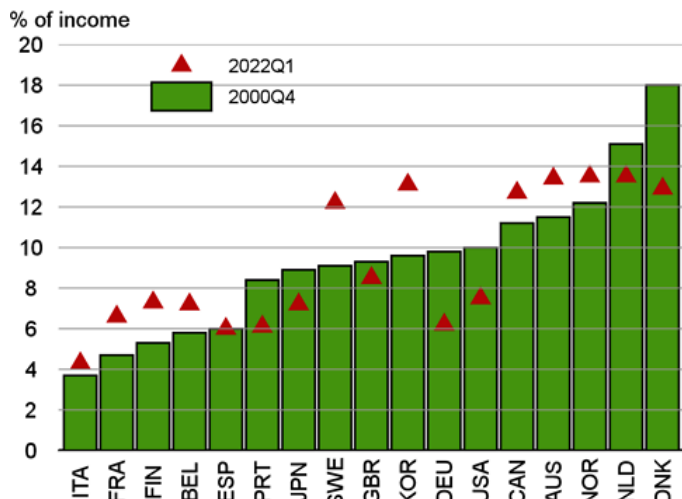
As interest rates continue to rise, households' financial positions can fall under stress given elevated debt levels. Even prior to the large increase in interest rates this year, household debt service ratios in the first quarter of 2022 were already often above those in the early 2000s, when interest rates were significantly higher (Figure 1.22, Panel A), reflecting higher debt levels. At the same time, declines in the share of variable-rate mortgages in some countries over the past two decades should cushion the impact of rising interest rates in the short run, although the share remains high in several countries (Figure 1.23). Moreover, even mortgages classified as fixed-rate are subject to rate renegotiation from time to time in many countries. Nonetheless, many households could still face a significant rise in their debt servicing costs. In many advanced economies, rising policy rates have already been passed through into mortgage rates and bank lending standards have also tightened (European Central Bank 2022b; Bank of England 2022a). Low-income families in countries where households are highly indebted and variable-rate mortgages are widely used, such as some Nordic countries, could be particularly vulnerable (OECD 2022c; Norges Bank 2021). Analysis by the Bank of International Settlements indicates that an increase in interest rates of 425 basis points (akin to the increase in the federal funds rate over the 2004-2006 period) could lead to an increase in debt servicing costs of more than 2 percentage points on average across advanced economies (BIS, 2022).

Rising policy rates can also expose financial vulnerabilities in the corporate sector. In the median OECD economy, the debt of non-financial firms reached 141% of GDP in 2021, 29 percentage points higher than in 2000, and debt-service ratios are already close to those prevailing at that time (Figure 1.22, Panel B). Although debt maturities have lengthened during the pandemic, the share of firms unable to service debt payments could increase sharply in the event of additional tightening by central banks. Default volumes on leveraged loans and high-yield bonds in the United States in June 2022 were already three times higher than in mid-2021 (Fitch Ratings, 2022) and downgrades of speculative-rated corporate bonds have outnumbered upgrades since November 2021 (OECD, 2022b).

Increased stress on households and companies, and the possibility of loan defaults, also raises risks of large potential losses at bank and non-bank financial institutions. This could amplify the impact of a shock to higher borrowing costs if it resulted in further significant tightening of financial conditions and lending standards and additional pressures on debt servicing capacity. Stress tests generally suggest that the tighter regulatory measures put in place since the global financial crisis have helped to improve the resilience of the banking sector to shocks (Ding *et al.*, 2022). Nonetheless, many banks could still face substantial losses if a larger-than-expected downturn occurred, especially in emerging-market economies where banks are particularly sensitive to shocks and typically have lower capital ratios than in advanced economies.

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Figure 1.22. Debt service obligations could surge  
Debt service ratios

**A. Households**

Note: Debt comprises loans and debt securities.

Source: Bank for International Settlements; and OECD calculations.

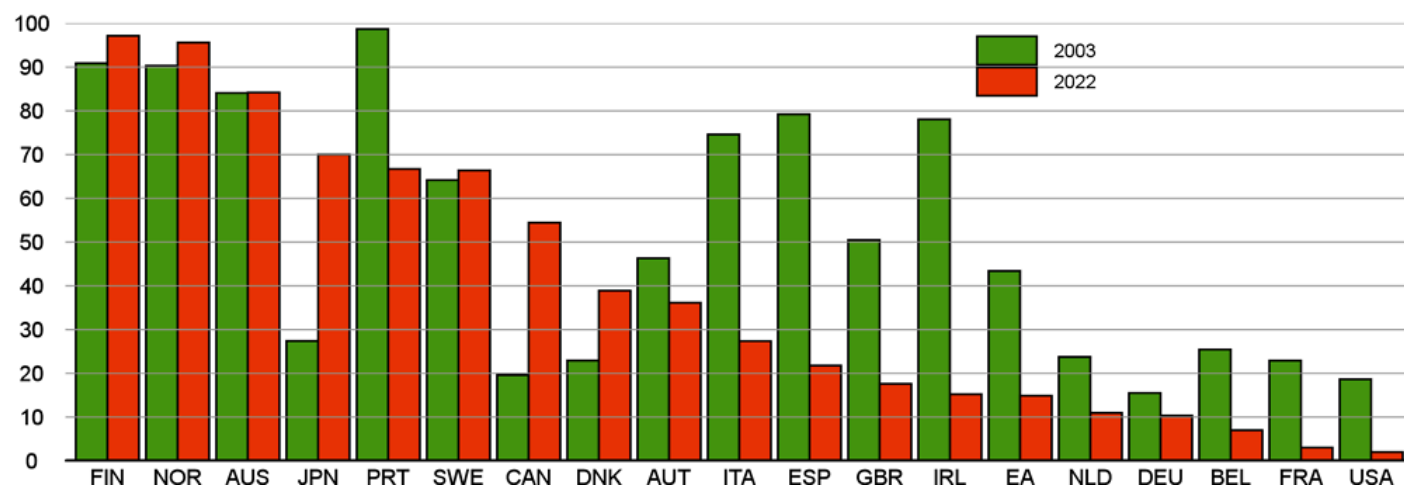
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Figure 1.23. Variable-rate mortgages can exacerbate financial risks

Share of adjustable-rate mortgages in new mortgage issuance

%



Note: Adjustable-rate mortgage loans are new loans issued at variable rate or with an initial rate fixed for a period of up to 1 year. Due to limited data availability, the green bars for Norway and Sweden refer to 2006. For the United Kingdom, Canada and Australia the green bars respectively refer to 2008, 2013 and 2019. Orange bars refer to 2022 or to the latest available data.

Source: ECB; Financial Conduct Authority; Japan Ministry of Land, Infrastructure, Transport and Tourism; Norges Bank; Federal Housing Finance Agency; Bank of Canada; and Australian Bureau of Statistics.

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Rising interest rates can help some non-bank financial institutions, such as pension funds and life insurers, by reducing the net present value of their long-term nominal liabilities. At the same time, rapid increases in interest rates could also expose vulnerabilities in some of these institutions. Repricing of stretched asset valuations could lead to disorderly market corrections and investor outflows. Non-bank financial institutions could also suffer liquidity strains and mark-to-market losses on their assets, including on their portfolios of sovereign bonds, and be confronted with large redemption calls. For institutions that are highly leveraged, or which are subject to severe liquidity mismatches, such as open-ended funds, the impact could be particularly large. Energy utilities could also come under stress, as rising energy prices and high volatility lead to large margin calls on their derivatives positions. Concerns over the liquidity of energy utilities have already prompted several European governments to implement emergency support schemes in the

form of short-term liquidity lines and loan guarantees. If defaults of some non-bank financial institutions and utility companies could not be prevented, they could reverberate across the rest of the financial system, leading to a sharp further tightening of financing conditions for households and corporates.

## copy the linklink copied! Financial vulnerabilities in emerging-market economies are exacerbated by external spillovers

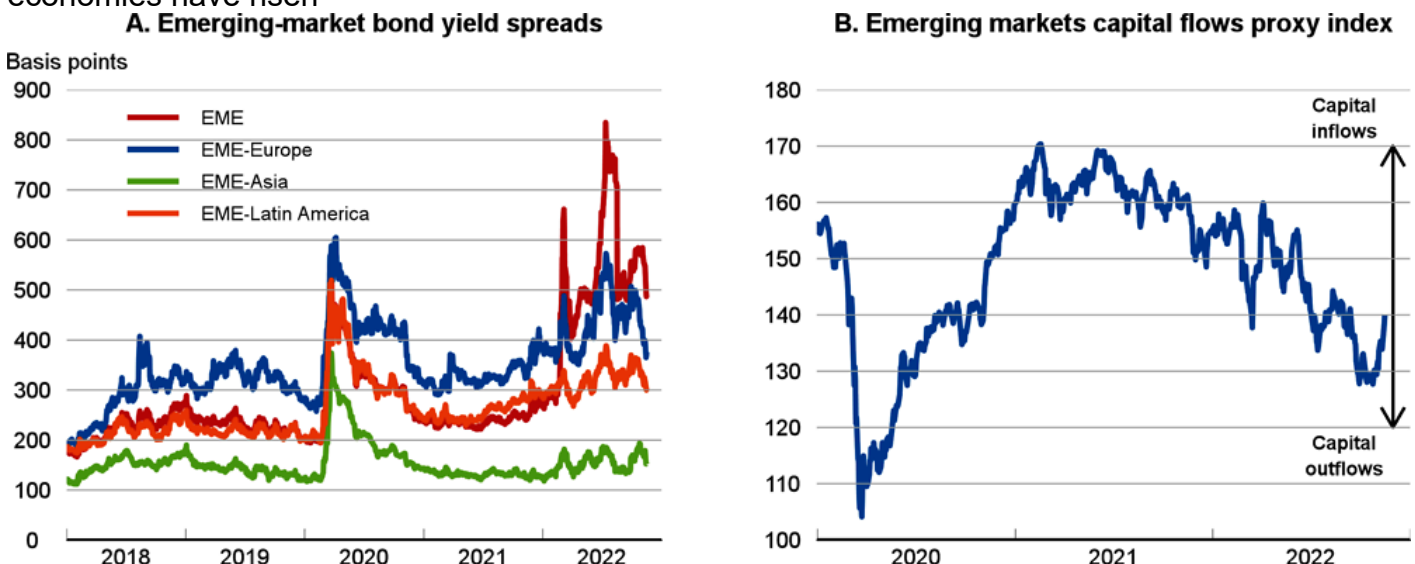
Tighter financing conditions, increased debt, the strong appreciation of the US dollar and the slowdown of export market growth exacerbate vulnerabilities in emerging-market economies. Risk premia have increased, capital outflows have accelerated, and international reserves have declined in many countries. In China, the resurgence of COVID-19 outbreaks or the contagion of financial fragilities in the highly indebted property sector to the rest of the economy could result in a sharper-than-expected slowdown in growth. Several emerging-market and developing economies also face food security risks from high food, energy and fertiliser prices, and supply shortages.

Adverse global economic conditions and elevated uncertainty continue to hamper investor confidence and heighten financial market volatility. Foreign-currency sovereign bond spreads have risen this year, especially in Eastern Europe and Latin America (Figure 1.24, Panel A), and capital outflows have intensified until recently (Figure 1.24, Panel B). Local-currency government bond and equity prices have also declined in Eastern European countries, reflecting geopolitical concerns. Cumulative portfolio outflows since February have been large in China, reflecting large debt outflows and price falls in equity markets. Portfolio outflows have also been sizeable in India, Indonesia and Türkiye, leading to a decline in international reserves in these countries. OECD estimates suggest that a 100 basis points rise in emerging-market economy investment risk premia could reduce output in these economies by around 0.5% in the following year (OECD, 2018).

Total indebtedness has remained higher than its pre-pandemic level in many emerging-market economies (Figure 1.25). Large currency depreciations against the US dollar in commodity-importing countries can add to the increases in debt-servicing burdens from higher global interest rates, especially where there are mismatches between the currency composition of liabilities and external revenues. Currency depreciations are also often associated with rises in foreign- and local-currency government bond spreads, especially in episodes of stress. In addition, depreciations can weigh on domestic demand if they prompt higher domestic interest rates or generate adverse balance sheet effects for foreign currency borrowers. This would offset the benefits of a lower effective exchange rate for trade, and might result in greater stress on the balance sheets of banks.<sup>7</sup>

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Figure 1.24. Amidst high and volatile sovereign credit risk, capital outflows from emerging-market economies have risen



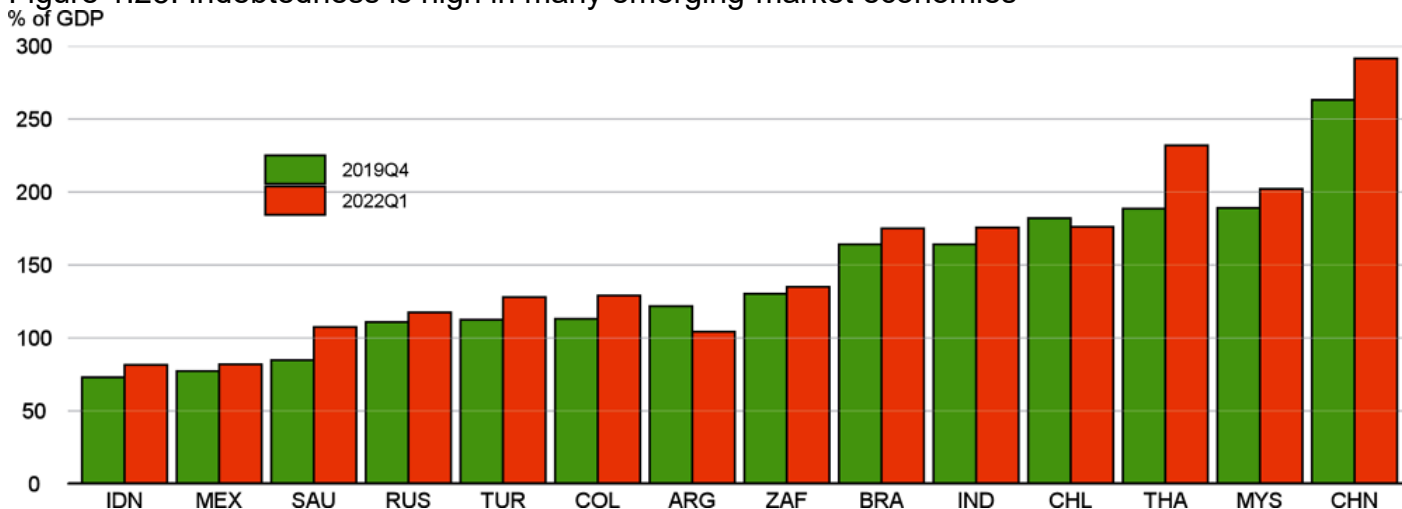
Note: Panel A shows the JP Morgan EMBI global bond spread, a measure of the sovereign risk spread of USD-denominated emerging-market economy government bonds over US government bonds. 'EME – Europe' covers Bulgaria, Romania and Türkiye. 'EME Asia' covers China, Indonesia, India, Malaysia, the Philippines, Thailand and Vietnam. 'EME - Latin America' covers Brazil, Chile, Colombia and Mexico. The 'EME' aggregate covers all mentioned countries plus South Africa and Ukraine. Panel B shows a daily composite index reflecting the performance of commodity, equity, foreign-currency-denominated government bond and currency asset classes. Increasing values of the index indicate capital flows into emerging-market economies, whilst decreasing values indicate capital outflows. At its source, the construction of the index sets the weight of the commodity asset class to 10% and those of the remaining asset classes to 30% each.

Source: Factset; Bloomberg; and OECD calculations.

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Figure 1.25. Indebtedness is high in many emerging-market economies



Note: Total debt refers to the sum of private non-financial sector debt (based on market values) and general government debt (based on nominal values).

Source: Bank for International Settlements; and OECD calculations.

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The recent appreciation of the US dollar has contributed to downgrades in the sovereign debt ratings of many emerging-market economies. Further dollar strength could add to financial vulnerabilities in these countries.<sup>8</sup> In Chile, Mexico and Türkiye, US dollar-denominated credit extended to non-bank borrowers is relatively high, potentially making domestic demand more vulnerable to currency depreciation (Figure 1.26, Panel A).<sup>9</sup> The import coverage of foreign currency reserves has also declined in many emerging-market economies, potentially reducing the resilience to external shocks (Figure 1.26, Panel B). There are also risks that larger external deficits and lower international reserves could pose challenges to macroeconomic and financial stability in countries like Chile, Colombia and Türkiye (Figure 1.26, Panel C). In contrast, current account balances have improved further or moved from deficit to surplus in some energy-exporting countries such as Saudi Arabia and Indonesia, which continue to benefit from a positive terms of trade shock.

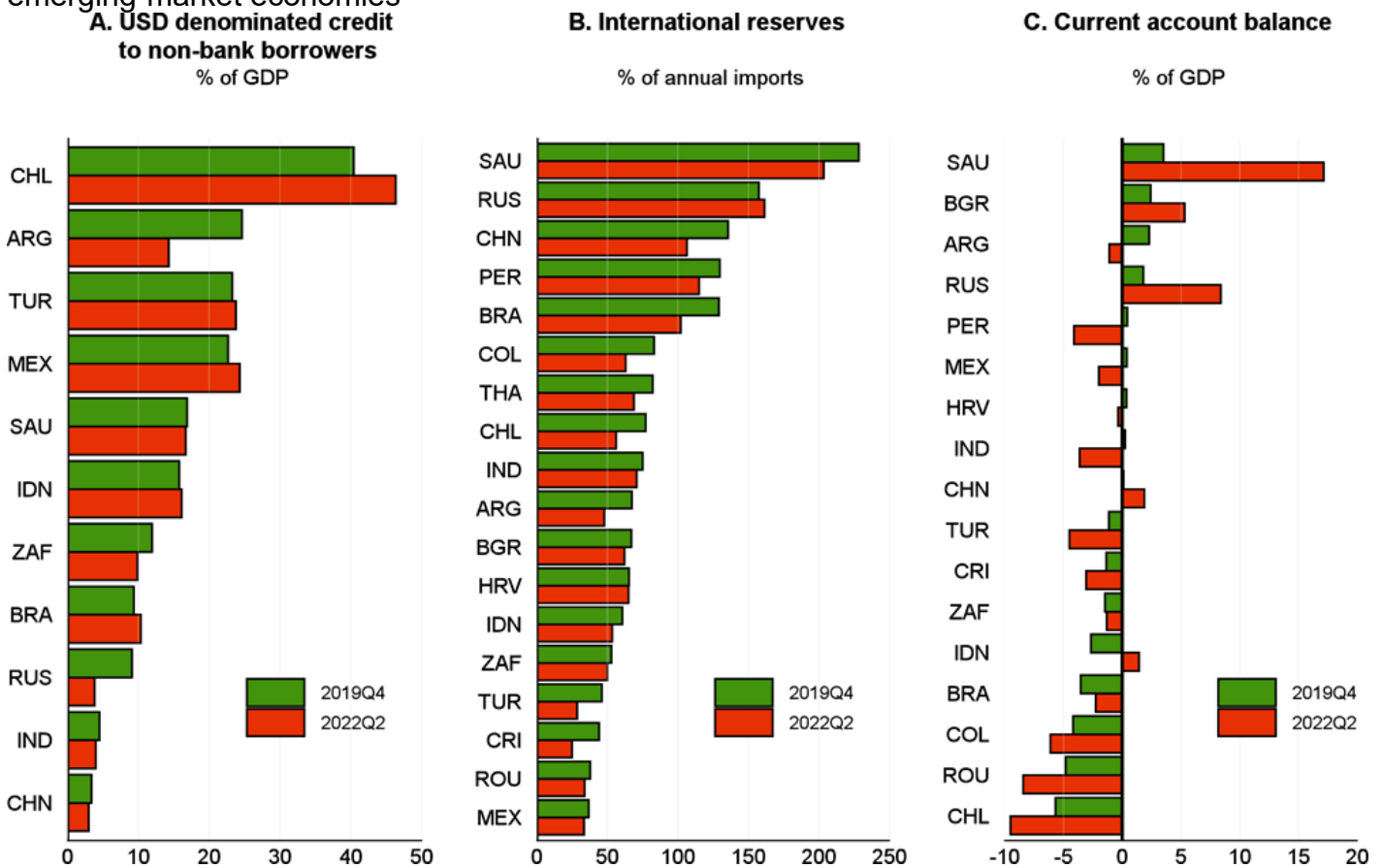
Low-income developing countries also face rising food security and financial risks. High food and fertiliser prices and shortfalls in the supply of cereals from Russia and Ukraine significantly increase risks of hunger in many developing countries. The transmission of these shocks depends on the penetration of food imports in local supply chains, the pattern of fertiliser use in domestic agricultural production and the extent to which alternative food supplies are available (IFPRI, 2022). For instance, Russia and Ukraine account for about three-quarters of total wheat and wheat flour imports of many countries in the Middle East and North Africa (see Box 1.1 in OECD, 2022a; Rauschendorfer and Krivonos, 2022). Illustrative simulations indicate that the rise in the number of

the undernourished could double to more than 200 000 in Egypt by 2023, across scenarios of moderate and severe declines in exports from Russia and Ukraine (Rauschendorfer and Krivonos, 2022).

Financial conditions are also deteriorating in many developing economies. IMF debt sustainability analyses for 69 low-income countries suggest that, as of end-September and based on the most recently published data, 9 countries were in debt distress, 28 countries had a high risk of distress and a further 25 countries had a moderate risk of distress.<sup>10</sup> In addition, foreign-currency bond spreads in October exceeded 10 percentage points in 14 frontier developing economies, putting them in the distressed sovereign borrower category with a high risk of default (IMF, 2022a).

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Figure 1.26. The appreciation of the US dollar could exacerbate financial vulnerabilities in emerging-market economies



Note: Panel A refers to cross-border and local claims denominated in US dollars. In Panels A and B, GDP and annual imports take the sum of the four quarters finishing in the quarter indicated. In Panel C, orange bars refer to data as of 2021Q4 for Russia.

Source: OECD Economic Outlook 112 database; Bank for International Settlements Global Liquidity Indicators database; IMF International Reserves and Foreign Currency Liquidity database; and OECD calculations.

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## copy the linklink copied!Calibrating monetary policy responses will be challenging

The calibration of monetary policy tightening is particularly challenging at present given uncertainty about the outlook, the balance of the different channels through which higher interest rates impact the economy, and the potential spillovers from tightening in other countries. This raises the risk that policy rates could be tightened more than strictly necessary, or for longer than necessary to bring down inflation, particularly given the exceptional synchronisation of monetary policy changes across economies at present. Concurrent tightening across countries can magnify the effects of domestic policy action, both by reducing foreign demand and by tightening domestic financial

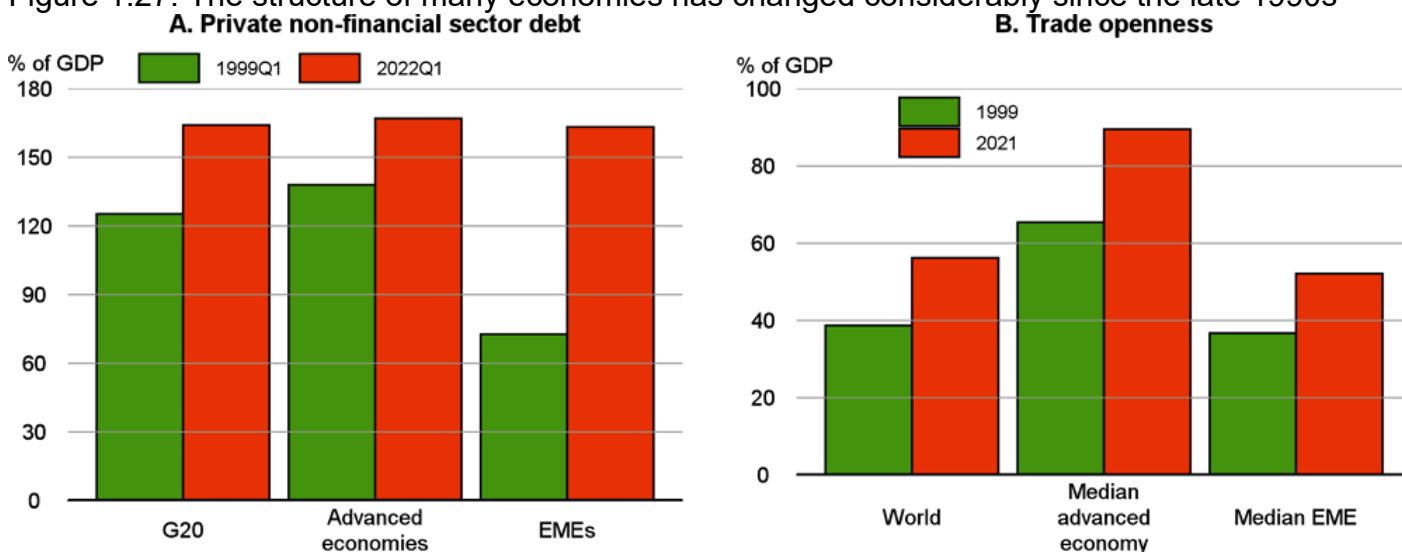
conditions, but also potentially change some channels of transmission, such as the exchange rate channel. Some studies for advanced economies suggest that the spillovers of monetary policy actions can be significant, potentially up to about half the size of the own-country effect (Curcucu *et al.* 2018). A failure to take these spillovers into account could lead to excessively tight monetary policy (Obstfeld, 2022).

Moreover, in many countries, especially advanced economies, it is two decades or more since a sustained tightening of monetary policy last occurred, raising the risk that the effects of higher interest rates could differ from those seen previously. Higher debt levels (Figure 1.27, Panel A), elevated asset prices, changes in the flexibility of product and labour markets, financial innovation and the increased importance of non-bank credit provision (FSB, 2021), and greater trade and financial openness (Figure 1.27, Panel B) may all increase the pace at which policy rate changes feed through. At the same time, higher interest rates also increase interest payments to savers, and some forms of debt, such as mortgages, are now more likely to be at fixed interest rates in some countries.

An illustrative scenario using the NiGEM macroeconomic model highlights some of the differences that might arise for individual countries when domestic monetary policy tightening is accompanied by similar moves to tighten policy in other economies.<sup>11</sup> The scenario considers the impact of a credible monetary policy commitment to lower price inflation sufficiently that the level of nominal GDP is eventually reduced by 5% relative to baseline. The impact from each advanced economy undertaking this policy independently, with policy responses in other countries limited to whatever is necessary given policy objectives and spillovers, is compared to the impact of all advanced economies implementing this policy change simultaneously.

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Figure 1.27. The structure of many economies has changed considerably since the late 1990s



Note: Debt is given by total credit to the private non-financial sector from all sectors at market value. Trade openness is given by the ratio of imports plus exports of goods and services to GDP, measured in volumes, in US dollars at market exchange rates.

Source: Bank for International Settlements; OECD Economic Outlook 112 database; and OECD calculations.

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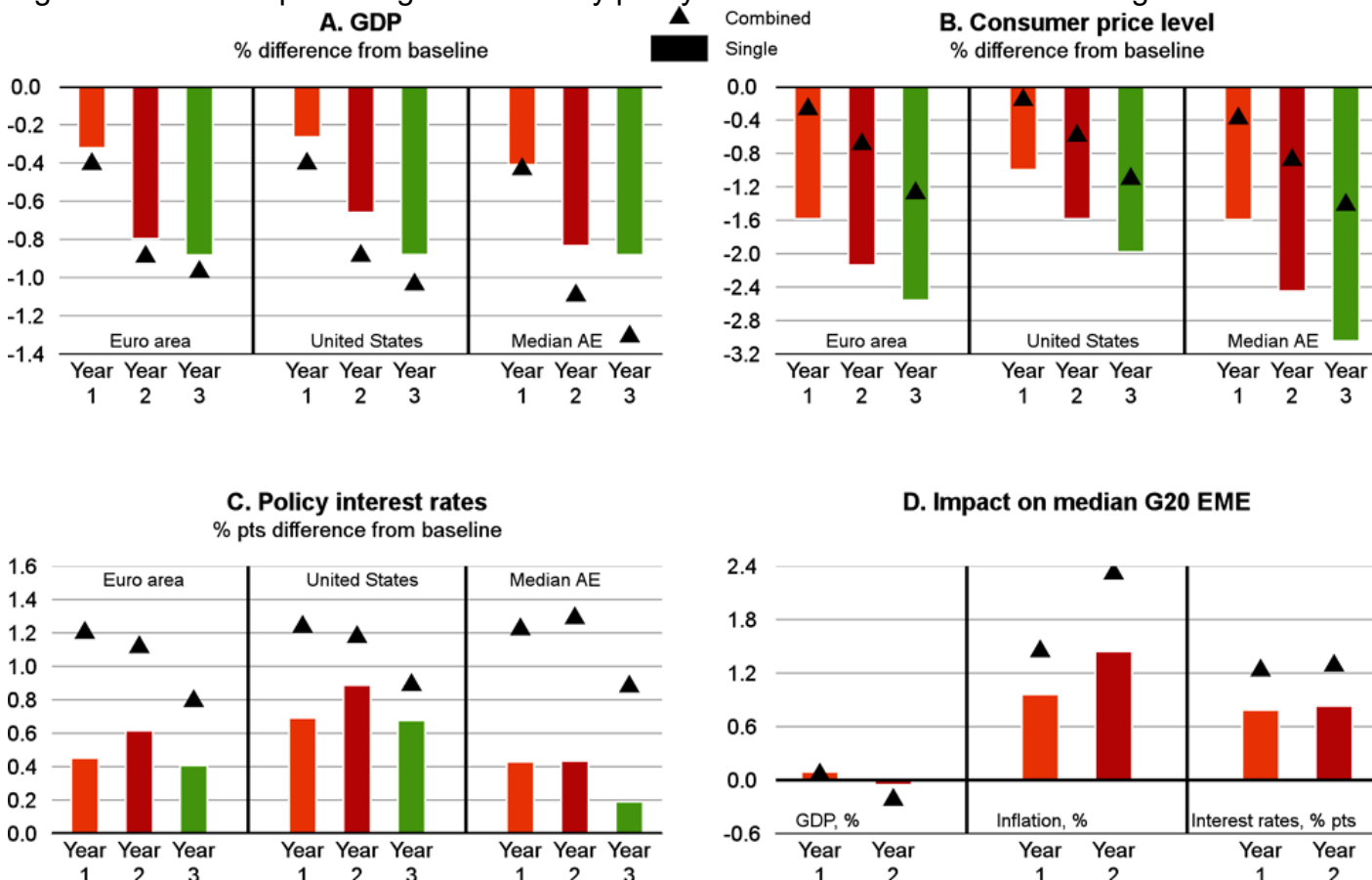
The results illustrate that the impact on output and inflation in each country from simultaneous moves to tighten policy by many countries may differ from the impact of actions in that country alone.

- Simultaneous action changes the trade-off between the growth and inflation impact of monetary policy tightening. By the second and third year of the shock, the negative impact on output is raised by around one-quarter in the median advanced economy when policy rates are raised in all advanced economies, pointing to the potential adverse impact on growth of widespread tightening in many economies (Figure 1.28, Panel A). In contrast, the impact on

prices is reduced by around one-half (Figure 1.28, Panel B). The key reason for this is that the action by one country alone typically results in a sizeable exchange rate appreciation, helping to reduce price pressures. When all the major advanced countries act together, this channel is muted, although there is still some currency appreciation relative to emerging-market economies. As a result, stronger domestic policy interest rate rises in all countries are needed to bring down inflation (Figure 1.28, Panel C), as the main channels for monetary policy are domestic. In either case, the eventual longer-run impact of the policy adjustment is to lower the price level sufficiently to attain the lower nominal GDP target while leaving output close to baseline.<sup>12</sup>

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Figure 1.28. The impact of tighter monetary policy varies when all countries act together



Note: Based on forward-looking simulations in which advanced economies set monetary policy so as to durably lower nominal GDP by 5% relative to baseline. “Single” denotes the impact when one central bank acts alone, “Combined” denotes the impact when all advanced economy central banks implement the shock at the same time. Year 1, Year 2 and Year 3 denote the first, second and third year impact of the policy change. Median AE denotes the median advanced economy.

Source: OECD calculations using the NiGEM macroeconomic model.

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- In the combined shock, the additional rise in interest rates is greater in smaller, more open economies, where changes in exchange rates typically have the strongest impact on trade volumes and prices. As a result, the interest rate increases in each individual economy are similar to those in the United States, which is the country in which the exchange rate channel has the smallest direct impact.
- There are adverse spillovers to emerging-market economies from policy tightening in the advanced economies, with stronger policy interest rate increases required in the typical economy to help ensure inflation returns to target in the combined shock. The emerging-market economies benefit from an initial exchange rate depreciation relative to the currencies of the advanced economies, but this pushes up inflation pressures and necessitates a domestic tightening of monetary policy. These factors are magnified when all the advanced economies tighten monetary policy simultaneously (Figure 1.28, Panel D).

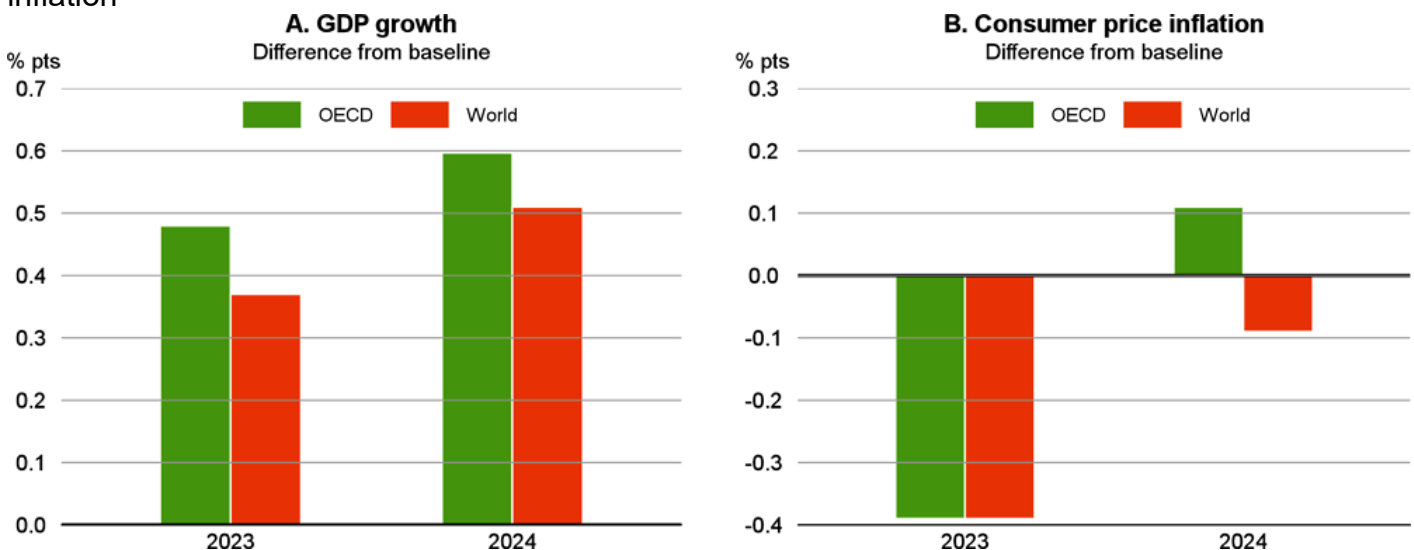
## copy the linklink copied! Reduced uncertainty and lower commodity prices are upside risks

The baseline projections reflect the current high level of uncertainty about economic prospects, which is contributing to the tightening of global financial conditions and the weak outlook for business investment. Technical assumptions that commodity prices remain unchanged over the next two years also affect judgements about growth and inflation prospects. An easing of financial conditions due to reduced uncertainty and lower risk premia, or weaker commodity prices due to better-than-expected supply are amongst the possible near-term upside risks around the projections. Upside risks could also arise from an improvement in consumer confidence, with accumulated savings used to finance expenditure to a greater extent than projected, or if inflation responds more quickly to tighter monetary policy than expected. An early resolution of the war in Ukraine would increase the likelihood that these upside risks materialise.

An illustrative scenario, using the NiGEM global macroeconomic model, highlights the potential effects on growth and inflation of some of these factors. The scenario considers the impact of a reduction of 100 basis points in investment risk premia, which lowers the cost of capital, alongside a 10% fall in oil prices, which brings their level closer to that implied by futures markets in 2023-24, and a 5% reduction in global food prices. The latter would be helped by stronger and more stable supply in cereals markets, including the smooth operation of the Black Sea grain initiative. All shocks are assumed to last for two years before fading gradually. Taken together, they could boost global and OECD output growth relative to baseline by around 0.5 percentage points per annum on average in 2023 and 2024 (Figure 1.29, Panel A), helped by stronger investment. Inflation could initially decline by around 0.4 percentage points in 2023 (the first year of the shock) due to lower food and oil prices and remain close to baseline in 2024 (Figure 1.29, Panel B).

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Figure 1.29. Reduced uncertainty and lower commodity prices would strengthen growth and ease inflation



Note: Illustrative scenario with a 100 basis points reduction in global investment risk premia, a 10% decline in global oil prices and a 5% decline in global food prices.

Source: OECD calculations using the NiGEM macroeconomic model.

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Slowing growth, persisting inflationary pressures and significant downside risks create difficult policy challenges. Continued efforts to lower inflation durably will require additional monetary policy tightening in most countries. Changes in interest rates will need to be carefully calibrated and data



dependent, given uncertainty about the outlook and the impact of policy changes, and take account of potential spillovers from concurrent restrictive policy in other countries. Temporary fiscal measures are appropriately being used to cushion the immediate impact of higher food and energy costs for consumers and businesses, but these should be balanced against the need to lower energy consumption, limit further demand stimulus at a time of high inflation and ensure debt sustainability. Policy choices should also ensure that efforts to strengthen energy security do not hamper the need to hasten the green transition.

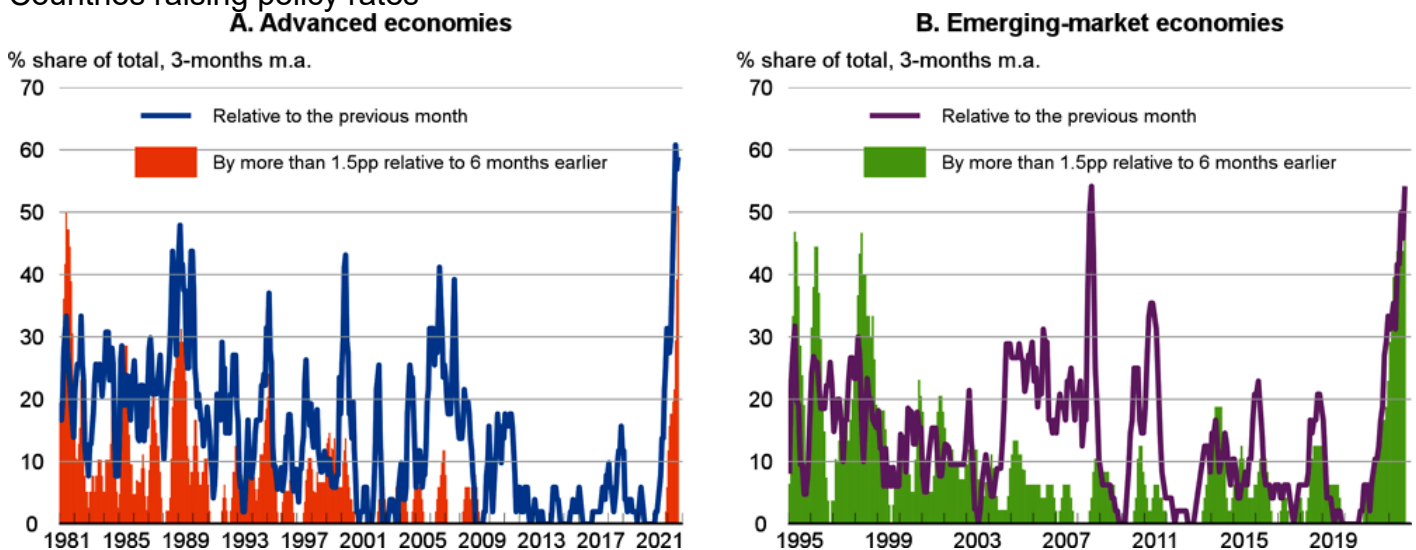
## copy the linklink copied!Further monetary policy tightening is necessary in most countries

In recent months, central banks in many economies have continued to tighten monetary policy in the face of fast rising and broadening price pressures. The pace of policy rate increases has been unusually widespread in both advanced and emerging-market economies (Figure 1.30). Policy rates have been raised by more than 1.5 percentage points in more than half of the advanced economies and more than 40% of emerging-market economies in the past 6 months. Even so, real short-term policy interest rates remain negative, or just above zero, in several jurisdictions. Broadening price pressures throughout the economy have led to more forceful policy rate rises than suggested by earlier forward guidance to minimise the risks of high inflation becoming entrenched in inflation expectations and feeding through into cost pressures in tight labour markets. Delaying action would have heightened the risk of even more forceful measures eventually being required to bring down inflation.

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Figure 1.30. Monetary policy tightening has been fast and highly synchronised

Countries raising policy rates



Note: The sample consists of 35 advanced economies and 16 emerging-market economies. All members of the OECD except Costa Rica are included in the sample. The sample composition changes over time according to data availability. Euro area countries are counted separately before 1999 and as one from 1999 onward.

Source: Bank for International Settlements; and OECD calculations.

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Financial conditions are also being tightened in a number of countries due to ongoing reductions in central bank balance sheets, either by not (or not fully) reinvesting the proceeds of maturing bonds (passive quantitative tightening, QT) or by selling securities (active QT). In contrast to policy rate decisions, the pace of balance sheet reduction is varying substantially across countries, but following a pre-announced path (Box 1.3).

- In the United States, four consecutive policy rate increases of 75 basis points since June have pushed the target range for the federal funds rate to its highest level since 2008. The monthly pace of balance sheet reduction has also accelerated since September.<sup>13</sup>

- The ECB ended net asset purchases at the start of July and began increasing policy rates later that month, with the interest rate on main refinancing operations reaching 2% from in November. In July, the ECB also introduced a new tool, the Transmission Protection Instrument (TPI), aimed at preventing financial fragmentation in the euro area unwarranted by fundamentals. Activation of the TPI will enable the ECB to purchase sovereign bonds of countries with fiscal and macroeconomic policies deemed sound and sustainable.
- The Bank of England, the Bank of Canada and the Reserve Bank of Australia have all delivered significant further policy rate increases since June 2022. The latter two central banks have continued to pursue passive QT. After engaging in temporary and targeted bond purchases to calm financial market turbulence in early October, the Bank of England started active QT in November 2022, with the aim of reducing government bond holdings by £80 billion by September 2023.
- All other OECD advanced economies have also increased policy rates since early June 2022. Policy rates remain very high in the Czech Republic, Hungary and Poland, which continue to face very strong inflation pressures. In contrast, Korea and Norway, which also started to tighten policy at an early stage, have raised policy rates in a more gradual way amidst milder inflation. In addition to rate increases, central banks have stepped up passive QT in Sweden and started government bond sales in New Zealand.

Faced with high uncertainty about the path of the economy and the persistence of inflation, central banks have generally shifted to a more data-dependent stance. Calibrating the scale and timing of the monetary policy changes required to steer inflation back to target remains challenging given difficulties in assessing the rate above which monetary policy becomes restrictive, the concurrent policy actions being undertaken in other countries and the speed at which tightening should occur. Clear communication about the policy stance, the key factors behind policy decisions and the expected pace of balance sheet reductions is crucial to minimise financial market disruptions.

To bring inflation back to target in a lasting manner, policy interest rates will need to rise above neutral levels for a period. However, neutral rates – a real interest rate at which the policy stance is neither accommodative or restrictive – are a long-run concept, unobserved, difficult to estimate, and may vary over time due to changes in the underlying factors driving saving and investment decisions. This uncertainty suggests that estimates of neutral rates may offer limited guidance for current policy decisions and would prove difficult to explain in central bank communications. Nonetheless, they remain an important benchmark for the appropriate level of policy rates in the medium term.

In the near term, several quarters of positive real interest rates and below-trend growth will likely be needed to lower resource pressures durably and achieve sustained disinflation, particularly where demand pressures are an important source of inflation (Box 1.1). With 2-3 year ahead household inflation expectations in many major advanced economies currently at 3% or more (Figure 1.7), policy interest rates may need to be raised quickly above this level where this has not already been done.<sup>14</sup> The differential between domestic and US policy rates is also becoming a consideration in some economies in which price pressures are being pushed up in part due to recent sizeable bilateral currency depreciations against the US dollar.

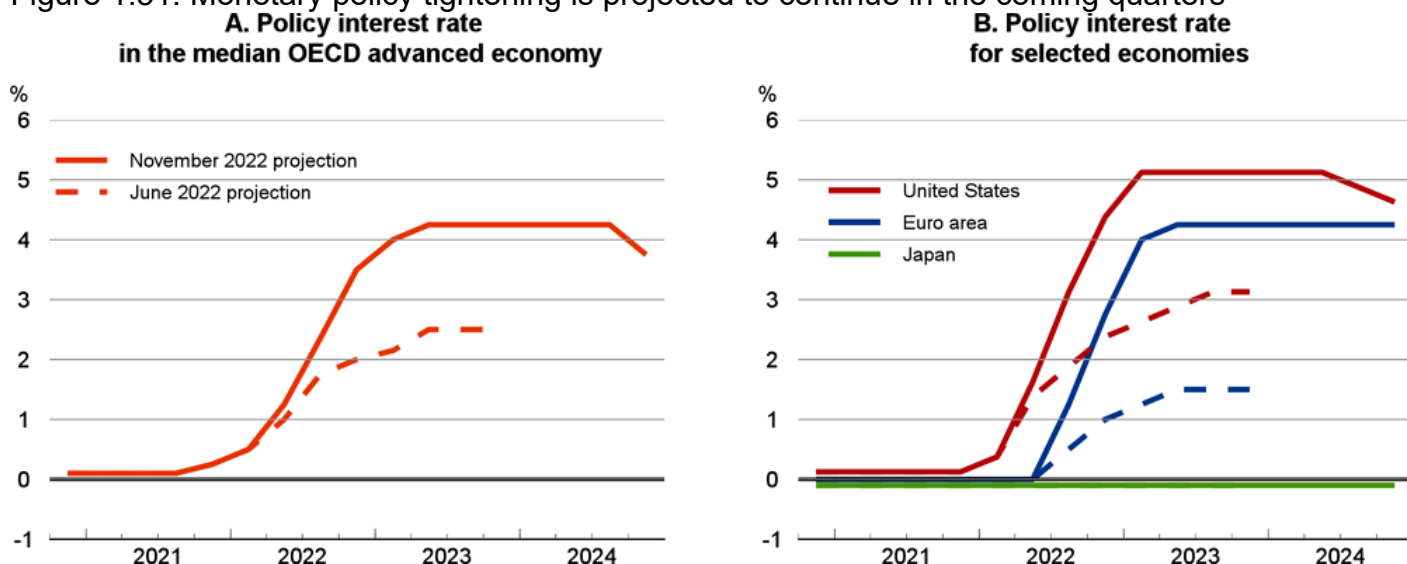
Interest rates are projected to increase further in the near future and then remain unchanged for several quarters in most countries (Figure 1.31). Further tightening is particularly likely in economies where there are signs that medium-term inflation expectations are still higher than before inflation started to rise and market-based real long-term interest rates are still close to zero (Figure 1.14). Once inflation eases and converges towards central bank targets, policy rates may start to decrease in 2024 in some jurisdictions.

- In the United States, where considerable policy tightening has already occurred, the federal funds rate is projected to peak at 5-5¼ per cent from early 2023. Two modest rate reductions are projected in 2024, as core inflation declines towards 2%. Steady quantitative tightening is expected to continue, with long-term interest rates on government bonds projected to average around 5% in 2023-24.

- In the euro area, significant further tightening is expected, with the main refinancing rate reaching 4¼ per cent by the second quarter of 2023 and remaining at that level until end-2024. Maturing securities are expected to be fully reinvested over the projection horizon, with use being made of all margins of flexibility when reinvesting the proceeds of maturing bonds on the ECB balance sheet to limit financial fragmentation in the euro area.
- The Bank of Japan is projected to maintain an accommodative stance, with no policy rate increases until end-2024. However, with quarterly core inflation expected to reach 2% by the second half of 2024, the projections assume that the yield curve control framework will start to be eased slightly at that stage by allowing a steeper yield curve.
- The Bank of England is projected to increase its policy rate to 4½ per cent by mid-2023 and to keep it at that level throughout the rest of the projection period, with quantitative tightening taking place from November 2022. The Bank of Canada is projected to raise its policy rate to 4¼ per cent by the end of 2022, with some gradual easing expected in 2024 as inflation declines to within the target band.
- Further policy rate increases, sometimes sizeable, are projected in all remaining OECD advanced economies. In central European countries, large subsequent rate decreases are expected once very high inflation subsides. In economies where policy rates are projected to peak at much lower levels, such as Sweden and Switzerland, no rate changes are expected before the end of 2024.

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Figure 1.31. Monetary policy tightening is projected to continue in the coming quarters



Note: Solid lines refer to the OECD November 2022 projections and dashed lines refer to the OECD June 2022 projections. In Panel A, advanced economies include Australia, Canada, the Czech Republic, Denmark, the euro area, Hungary, Iceland, Israel, Japan, Korea, New Zealand, Norway, Poland, Sweden, Switzerland, the United Kingdom, and the United States.

Source: OECD Economic Outlook 112 database; OECD Economic Outlook 111 database; and OECD calculations.

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### Box 1.3. Projections of the pace of quantitative tightening

Some central banks have reduced the amount of bond holdings on their balance sheets by either not (or not fully) reinvesting the proceeds of maturing bonds (passive quantitative tightening, QT) or by selling securities (active QT). The projected adjustment in balance sheets over the next two years differs across jurisdictions, based on announced policy decisions and the maturity structure of bond holdings, but will generally leave holdings of securities at a higher level than before the pandemic (Figure 1.32).

- In the United States, it is assumed that the monthly caps for balance sheet reduction announced by the Federal Reserve (\$60 billion for Treasury securities and \$35 billion for agency debt and mortgage-backed securities), implemented through passive QT with partial reinvestment, are strictly observed.
- In the United Kingdom, the Bank of England is assumed to pursue both passive QT with zero reinvestment and active QT from 1 November, leading to a reduction in government bond holdings of £80 billion over the twelve months from September 2022, as announced. In the remainder of projection period, passive QT with zero reinvestment is assumed.
- In Canada and in Australia, central banks are assumed to pursue passive QT with zero reinvestment until end-2024. Information on maturing holdings is used in the projections.
- The Reserve Bank of New Zealand is assumed to pursue passive QT with zero reinvestment in tandem, as announced, with sales of government bonds and inflation-indexed government bonds at a rate of \$5 billion per fiscal year beginning from July 2022.
- In Sweden, as announced by the Sveriges Riksbank in September 2022, passive QT with partial reinvestment of SEK 18.5 billion is assumed during the second half of 2022, and asset purchases are expected to cease at end-2022, implying passive QT with zero reinvestment in 2023-24.

Japan and the euro area have not yet announced plans for balance sheet reduction.

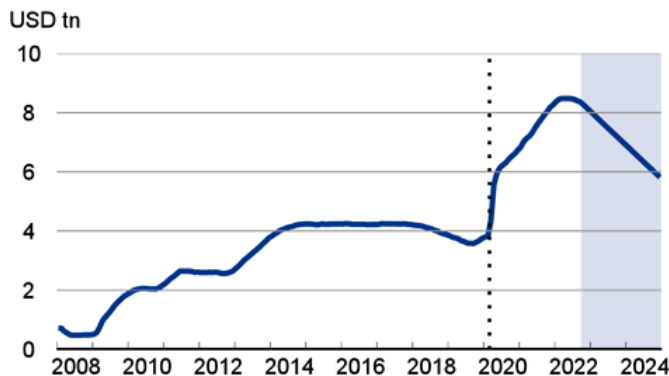
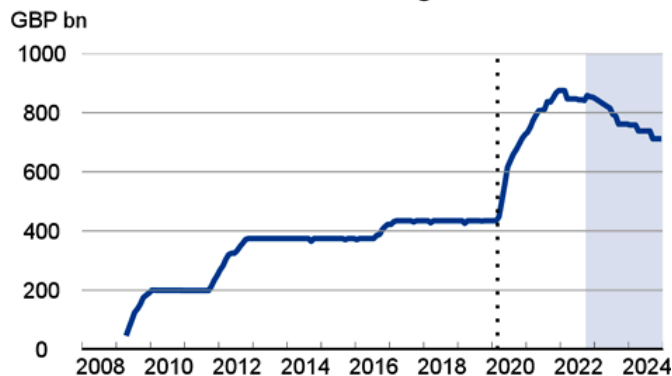
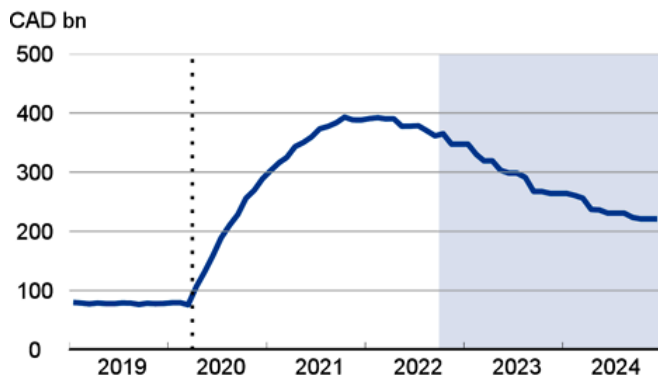
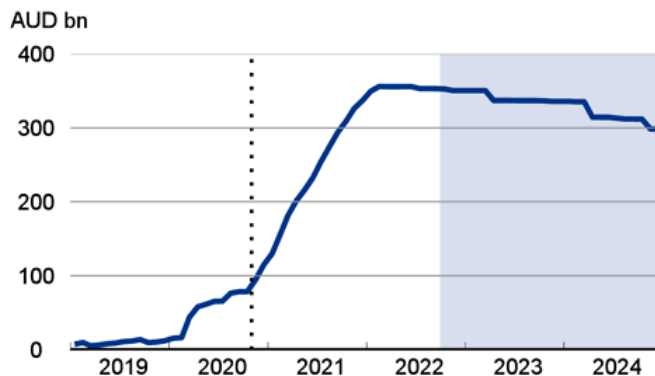
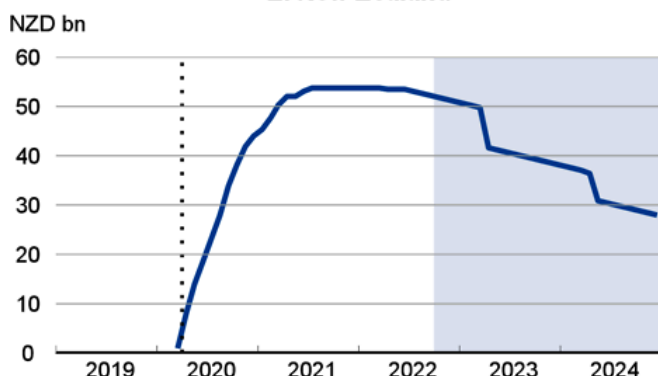
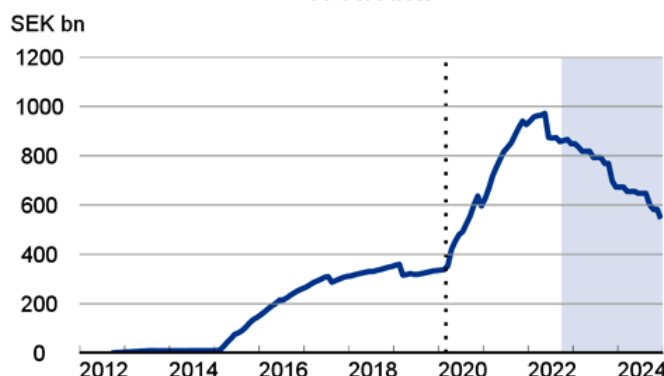
As quantitative easing (QE) has contributed to lower long-term interest rates, QT is likely to increase them. But estimating the possible impact is difficult, given the different circumstances in which the policies are being implemented and the various channels through which the policies operate. Like QE, QT will operate through different channels, whose absolute and relative importance depends on specific circumstances (Bank of England, 2022b). Changes in asset holdings may affect expectations about the path of future policy rates (signalling effects). For instance, QE episodes have likely reduced rate expectations by signalling a commitment to low policy rates for a longer period. Asset purchases or sales may also affect different components of the risk premium on long-term yields, such as by changing the average maturity and the duration risk of private portfolios (portfolio balance effects), impacting liquidity conditions, or mitigating market stress.

The evidence base for QT is even narrower than for QE, and (with the exception of the ongoing QT episodes documented above) essentially limited to the US experience in 2017-19. Over the length of this episode, the average impact of QT on the 10-year Treasury yield has been estimated at about 8 basis points (Smith and Valcarel, 2020).

The estimated effects on long-term yields of QE programmes could also help gauge the likely order of magnitude of QT impacts. As a rule of thumb, bond purchases of 1% of GDP have been found to reduce long-term yields by about 5 to 10 basis points on average (Gagnon, 2016; Finlay *et al.*, 2021; Bank of England, 2022b; Crawley *et al.*, 2022), with impacts tending to be stronger at times of market stress. Applying this simple rule to the amounts of QT projected in Figure 1.32 (from the start of bond holdings reduction in each country to end-2024) would tentatively suggest impacts on long-term interest rates ranging from 15-30 basis points in Australia to a potential range of between ½ and 1 percentage point in the United States.

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Figure 1.32. Projections of central bank balance sheet reduction

**A. United States****B. United Kingdom****C. Canada****D. Australia****E. New Zealand****F. Sweden**

Note: The charts show: the sum of securities (at face value) held outright in the System Open Market Account (SOMA) of US Treasury debt, federal agency debt, and mortgage-backed securities for the United States; the total gilt purchase proceeds by the Asset Purchase Facility for the United Kingdom; the government of Canada securities holdings (at par value) not on repo for Canada; the sum (at face value) of Australian government securities and semis holdings for Australia; the sum (nominal amount) of New Zealand Government Bond (NZGB) and Local Government Funding Agency (LGFA) holdings under the Large Scale Asset Purchase Programme for New Zealand; the sum (nominal amount) of government securities, covered bonds, municipal bonds, corporate bonds, and commercial paper for Sweden. Other aspects of central bank balance sheets are not included. A vertical dotted line indicates when the central bank started quantitative easing programmes in response to the COVID-19 shock. Sweden, the United Kingdom and the United States had earlier QE episodes. For the United Kingdom, it is assumed that active QT falls on bonds maturing beyond 2024. For Australia, it is assumed that the proceeds of maturing bonds purchased before the start of the QE programme (Bond Purchase Programme) in November 2020 are not reinvested. For New Zealand, it is assumed that the sale of \$5 billion of bonds per fiscal year takes place at a constant monthly pace and consists of securities maturing beyond 2024. For Sweden, bonds purchased in the second half of 2022 are assumed to mature beyond 2024.

Source: Board of Governors of the Federal Reserve System; Office for National Statistics; Bank of Canada; Reserve Bank of Australia; Reserve Bank of New Zealand; Sveriges Riksbank; and OECD calculations.

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However, the impacts of QT and QE on longer-term interest rates could turn out to be asymmetric. With policy rates clearly above zero and balance sheet size being reduced gradually and predictably, signalling effects could be (much) smaller in QT than for QE, which was implemented when policy rates were close to their effective lower bound (Bullard, 2019; Lane, 2022). On the other hand, liquidity effects from QT could prove stronger, leading to a substantial increase in liquidity premia. For instance, possible asymmetries between the impact of QE and QT on liquidity claims on banks could make the latter more sensitive to liquidity shocks when QT is underway (Acharya *et al.*, 2022).

## copy the linklink copied! Targeted fiscal policy support is needed

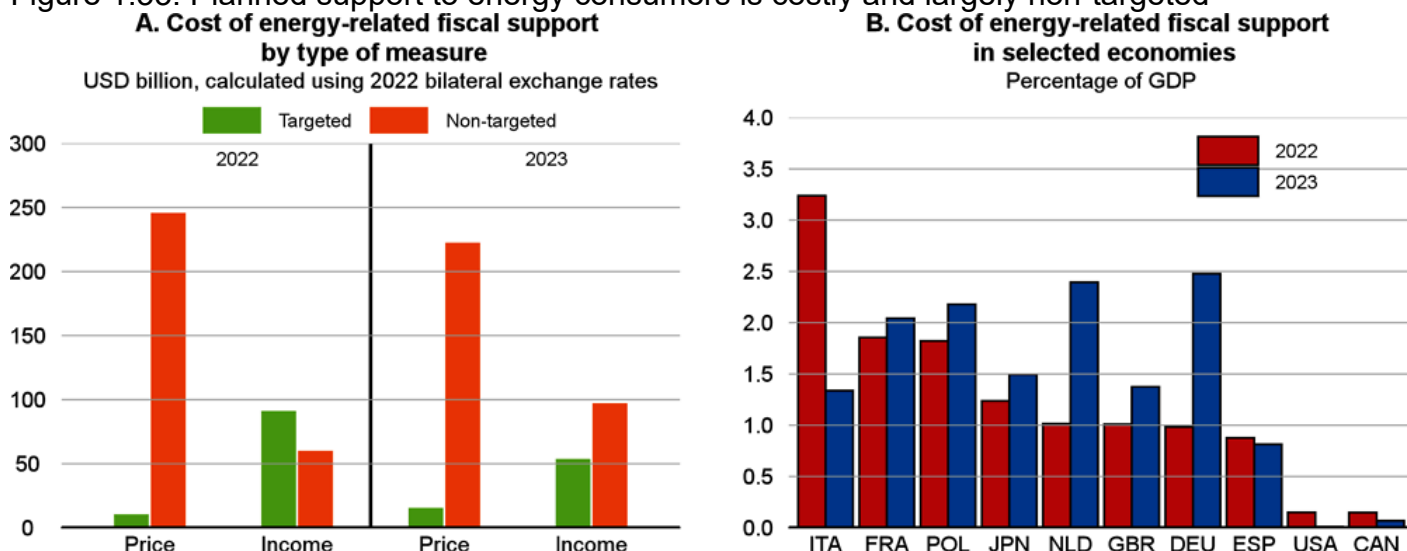
The second half of 2022 has witnessed a further increase in fiscal support measures in many advanced economies to shield households and companies from the impact of elevated energy prices. Especially in Europe, where energy prices have risen the most, many governments have announced new policy packages or extended existing ones, with budget costs approaching or exceeding 2% of GDP in some large economies (Figure 1.33). The overall euro area fiscal stance in 2022 has nonetheless become somewhat less supportive, with the underlying primary balance increasing by an estimated 0.4% of potential GDP (Figure 1.34). This reflects the offsetting impacts of the withdrawal of pandemic-related support and higher-than-expected tax revenues due to higher inflation. In contrast, the United States, Canada and Australia, where energy-related support measures have been much smaller, appear likely to have seen much stronger fiscal consolidation this year.

Fiscal projections for 2023-24 are conditional on announced government measures and OECD assessments of current plans (Annex 1.A.). With energy prices projected to remain high, energy support measures are assumed to continue into 2023 in many countries, and sometimes 2024, in the projections. However, in most cases this involves some changes in design, with some support measures either being phased out completely or becoming less extensive. In the median OECD economy, moderate fiscal consolidation is projected for both years, with the underlying primary balance improving by 0.4% of potential GDP in 2023 and by 0.6% in 2024 (Figure 1.34). Relative to expectations in mid-2022 (OECD, 2022c), the pace of consolidation in OECD economies in 2023 is expected to become both smaller in overall terms and more variable across countries:

- In the United States, the underlying primary balance is projected to improve by more than 2% of potential GDP in 2023-24. This will largely stem from pandemic-related expenditures fully expiring and the withdrawal of energy-related fiscal support at the state level.
- In the euro area, the fiscal stance is projected to remain mildly restrictive. In 2023, the fiscal savings from the full termination of pandemic-related support, which was still in force in several countries in early 2022, more than outweigh in aggregate terms the further expansion of measures to offset energy costs. In some countries, sizeable fiscal stimulus is also projected to stem from increased expenditure on defence and an acceleration, after some initial delays, in the implementation of Next Generation EU plans. In 2024, the main driver of the moderate projected consolidation is the gradual phasing-out of energy support.
- In Japan, the fiscal projections reflect the temporary measures to support vulnerable households and businesses announced in late September and the new economic policy package to support longer-term growth announced in late October. The fiscal stance is expected to be neutral in 2023, when the new support measures and the expiration of the previous COVID-19-related stimulus roughly cancel out. Consolidation of over 1% of potential GDP is projected in 2024, as measures for moderating energy and food prices gradually decline.

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Figure 1.33. Planned support to energy consumers is costly and largely non-targeted



Note: Based on data collected up to November 17. Support measures are taken in gross terms, i.e., not accounting for the effect of possible accompanying energy-related revenue-increasing measures, such as windfall profit taxes on energy companies. Where government plans have been announced but not legislated, they are incorporated if it is deemed clear that they will be implemented in a shape close to that announced. Loans, guarantees, and capital transfers that do not immediately change general government net lending have been excluded. When a given measure spans more than one year, its total fiscal costs are assumed to be uniformly spread across months. Measures with no defined end-date are assumed to stay in place until at least December 2023, unless an earlier withdrawal is assumed in the macroeconomic projections of this *Economic Outlook* for the respective country. Panel A covers 40 economies, of which 34 are OECD economies (all members except Iceland, Lithuania, Switzerland and Türkiye) and 6 non-OECD economies (Brazil, Bulgaria, Croatia, India, Romania and South Africa). Measures classified as income support are those that provide lump-sum transfers to energy consumers to help alleviate energy cost increases. Price support includes all measures that reduce the post-tax energy price. Support classified as targeted is provided to specific groups, such as vulnerable households or businesses. Non-targeted support applies to all consumers with no eligibility conditions. For Canada, Germany, Italy, Japan, the Netherlands, Poland and Spain, it has been assumed that some existing measures will be extended into 2023 even though that extension has not been announced yet.

Source: OECD calculations based on the OECD Energy Support Measures Tracker and the OECD Economic Outlook 112 database.

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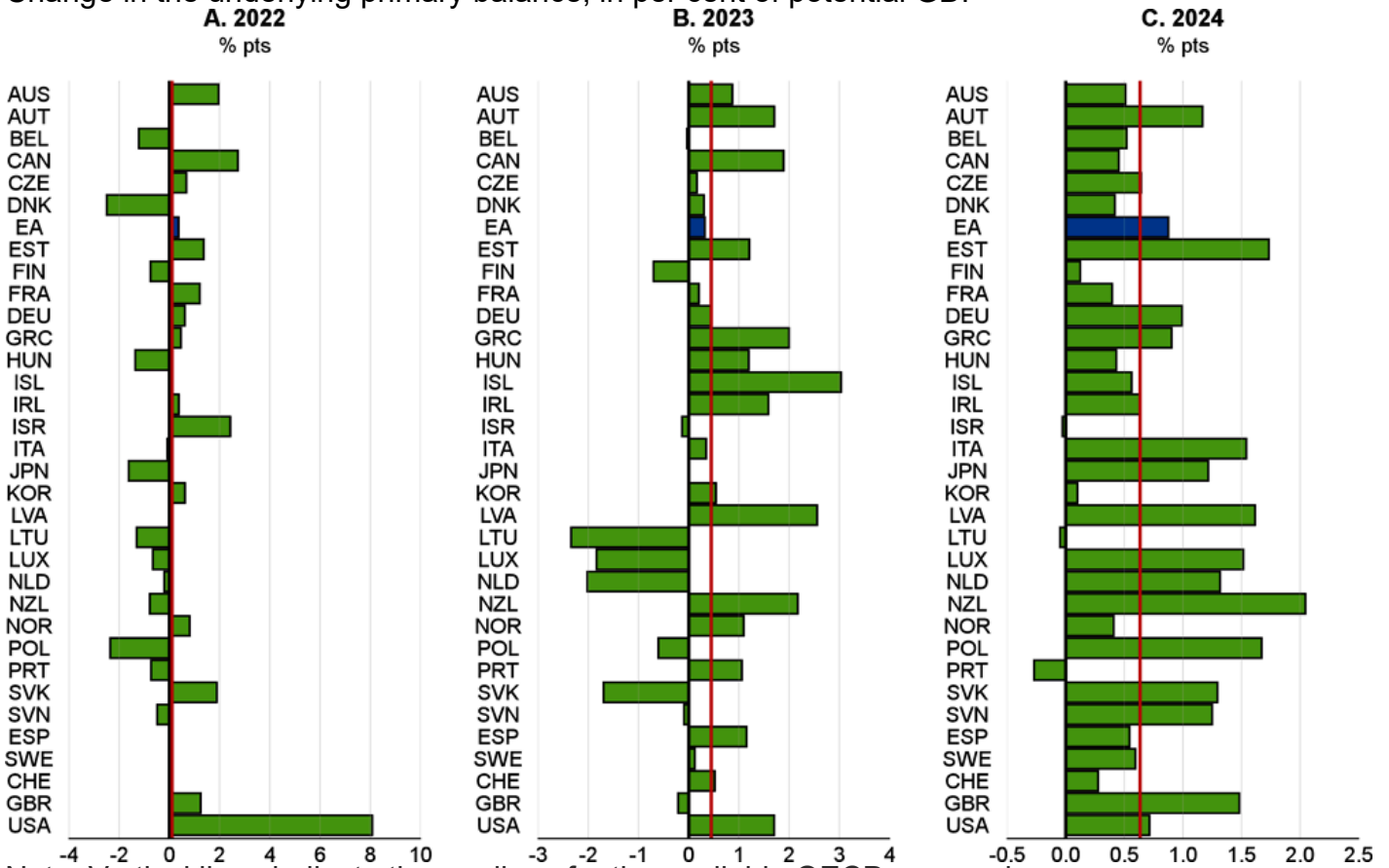
- In most remaining advanced economies, including Australia, Canada, Korea and the United Kingdom, the underlying primary balance is projected to increase over 2023-24. Among smaller countries, Latvia and New Zealand stand out for their strongly-restrictive stance, called for by the need to curb very high inflation in the former and required by the objective to reach a small surplus by 2025 in the latter. In contrast, after strong budget consolidation in 2021-22, no fiscal tightening is projected in Israel over 2023-24.

Energy support measures need to be well-targeted, preserve incentives for energy savings and not outlast the period of exceptional price pressures. Price caps and reduced energy taxes on energy, though simpler and faster to implement and thus often an understandable first line of defence, entail high budget costs and a number of other drawbacks, especially in the likely scenario of energy remaining expensive for an extended period. Careful design is needed to ensure price support does not weaken incentives to reduce energy consumption or hamper reallocation by preserving energy-intensive activities that are not sustainable in the medium term. Setting a consumption threshold beyond which market prices apply could preserve incentives to save energy, provided the threshold is not set at an excessively high level (for instance, it should in general be smaller than average consumption). In addition, whilst reducing inflationary pressures in the short run, price support measures may rekindle those pressures further ahead if the measures

are eventually phased out and market prices remain high. Untargeted support to cushion living standards should also not involve a persistent stimulus to demand at a time of high inflation, requiring monetary policy to be tighter for longer than otherwise.

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Figure 1.34. Fiscal consolidation is projected to be moderate and uneven across countries  
Change in the underlying primary balance, in per cent of potential GDP



Note: Vertical lines indicate the medians for the available OECD economies.

Source: OECD Economic Outlook 112 database; and OECD calculations.

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Effective targeting is important both when providing support to households and to firms. Even in countries where social benefit systems are well developed, protecting vulnerable households while high energy prices persist may require moving beyond standard means-testing and resorting, data availability and timeliness permitting, to other targeting criteria such as housing location and quality, household composition and access to public transport (OECD, 2022e). Support to firms should focus on companies that were solvent before the energy price shock and be time-limited, to sharpen firms' incentives to adapt to a possible context of persistently more expensive energy. The usual considerations of transparency, proportionality and non-discrimination in state aid also apply (OECD, 2020).

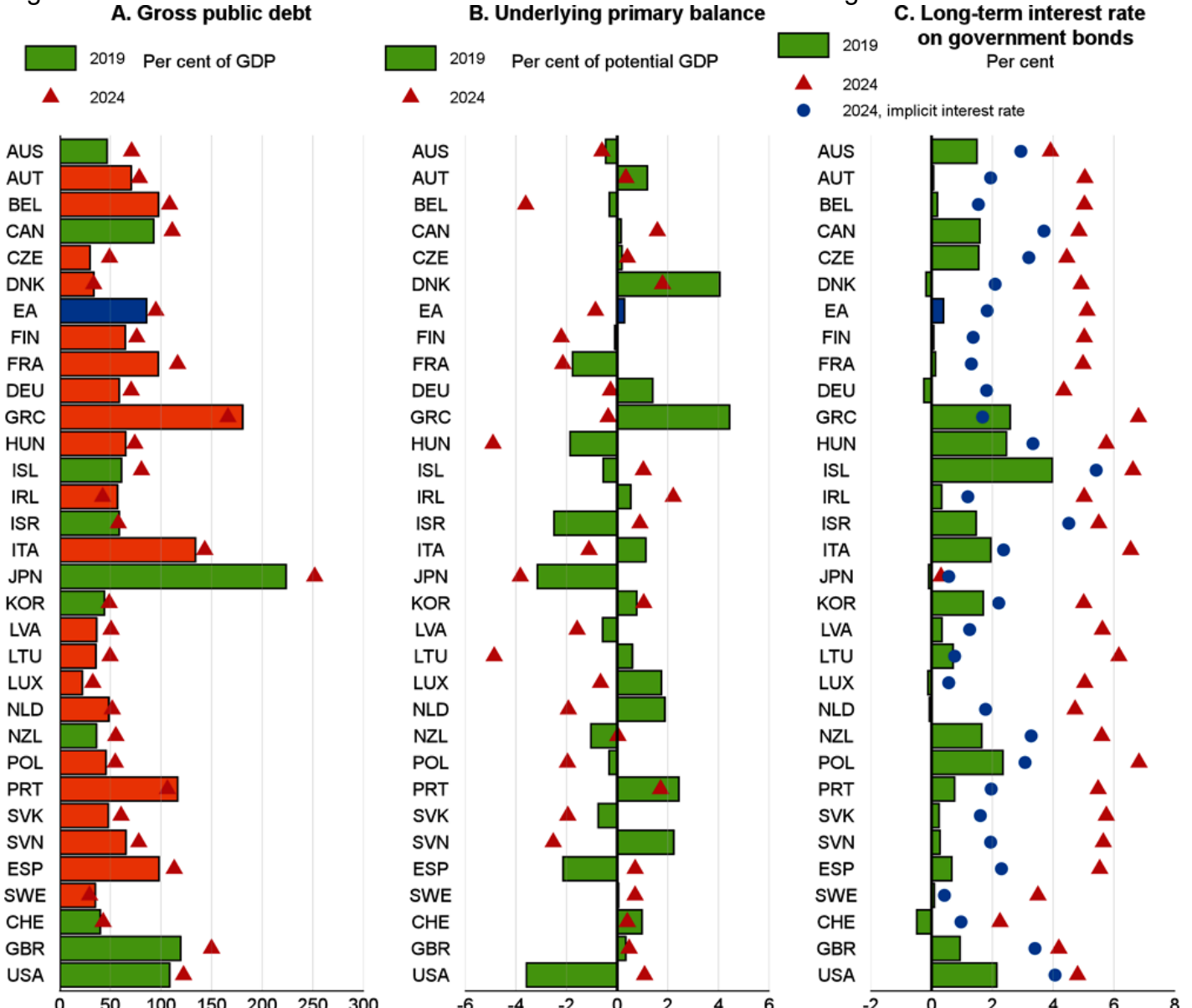
Ensuring the sustainability of the public finances has become more challenging due to the multiple impacts of the pandemic, the war and energy shocks. Even though inflation will make nominal GDP grow faster, debt-to-GDP ratios in 2023 and 2024 are generally projected to be considerably higher than in 2019, and sometimes still on an upward trend (Figure 1.35). In most OECD economies, and particularly in Europe, underlying primary balances in 2024 are estimated to be more expansionary than before the pandemic, often by a sizeable margin. To a large extent, this is due to the prevalence of costly non-targeted energy price support, such as price caps or lower indirect tax rates. And the outlook for debt service costs has deteriorated substantially, with long-term interest rates generally projected to rise far above the implicit interest rate on public debt – interest paid as a percentage of the nominal debt stock – placing upward pressure on the latter. In



the median OECD advanced economy, the implicit interest rate on public debt in 2024 is projected to still remain largely unchanged relative to 2019 levels (at 1.9%), but 10-year yields are estimated to rise seven-fold (from 0.7 to 5.0%), pointing to more costly debt finance in the future.

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Figure 1.35. Public debt has increased and the cost of new debt is rising



Note: Orange bars correspond to EU countries for which Maastricht debt is used. The implicit interest rate is defined as general government interest payments divided by general government gross financial liabilities at the end of the preceding year.

Source: OECD Economic Outlook 112 database; and OECD calculations.

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Achieving sustained fiscal consolidation while responding to new budget priorities, such as larger investments in defence or in carbon neutrality, will require either further increases in tax burdens or reprioritising public expenditure and making it more efficient. On both reprioritisation and efficiency grounds, fostering credible medium-term fiscal frameworks, where an expenditure rule targeting a wide spending aggregate is a likely key element, will be of value. Such frameworks would also help to provide clear guidance about the medium-term trajectory of the public finances and mitigate concerns about debt sustainability (Rawdanowicz *et al.*, 2021).

In addition, the operation of fiscal frameworks and their democratic accountability greatly benefit from a transparent and non-fragmented recording of public spending and revenue. Some governments have recently been resorting to off-budget vehicles to fund expenditure increases in areas like defence or energy support. When such spending is carried out by entities statistically

classified within general government, it will be reflected in national accounts budget balances (though perhaps not in public accounts ones). When those entities are outside general government, their spending will still weigh on the deficit or debt of the general government if financial support from the latter is eventually needed, such as calls on a debt guarantee granted by the state. In either case, off-budget vehicles detract from transparency, and their use should in general be reduced.

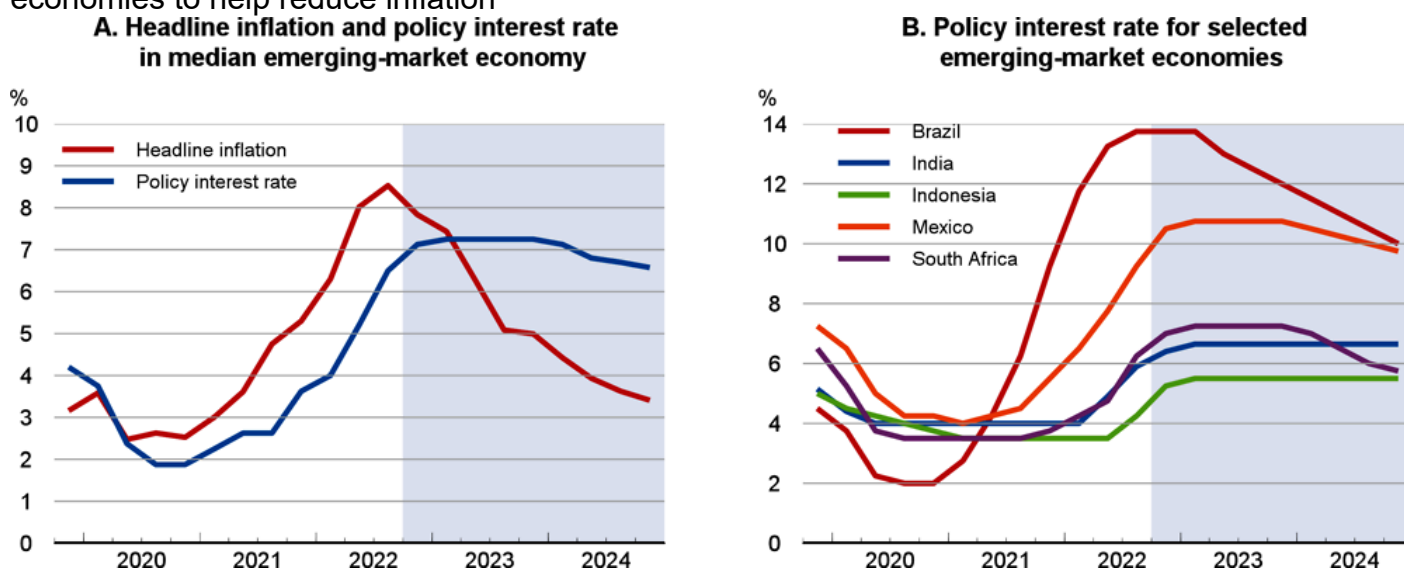
## copy the linklink copied! Inflationary pressures and stretched budgets limit the scope for policy support in emerging-market economies

Tighter global financial conditions, persisting inflation pressures and rising debt levels limit the room for policy manoeuvre in the emerging-market economies, especially ones with high levels of foreign-currency-denominated debt or fiscal deficits considerably above pre-pandemic levels. Central banks in the major emerging-market economies have continued to tighten policy in the second half of 2022 in response to surging headline inflation. Policy interest rates are generally projected to become higher than headline inflation rates in 2023 (Figure 1.36, Panel A), with headline inflation staying above the inflation target range of central banks. In 2024, greater scope is likely to exist to lower policy rates, particularly in economies where the disinflationary effects of monetary policy tightening are projected to become increasingly apparent (Figure 1.36, Panel B). However, the differential between domestic and US policy rates may remain an important policy consideration, limiting the pace of monetary policy easing in the emerging-market economies.

A tight policy stance is needed to prevent a de-anchoring of inflation expectations amidst heightened energy and food prices. Currency depreciation has often made disinflation harder, prompting monetary authorities to raise policy rates further and also, in some cases, intervene in the foreign exchange market to prop up the value of the currency. Monetary policy should remain cautious, especially where sizeable currency depreciation led by capital outflows could harm domestic borrowers that hold unhedged foreign-currency debt (Mimir and Sunel, 2019), and policy rate reductions before inflation durably converges towards the central bank target should be avoided.

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Figure 1.36. Policy interest rates are expected to remain high in the near term in emerging-market economies to help reduce inflation



Note: In Panel A, the sample covers Brazil, Chile, China, Colombia, Costa Rica, India, Indonesia, Mexico, Peru, Romania, Saudi Arabia and South Africa.

Source: OECD Economic Outlook 112 database; and OECD calculations.

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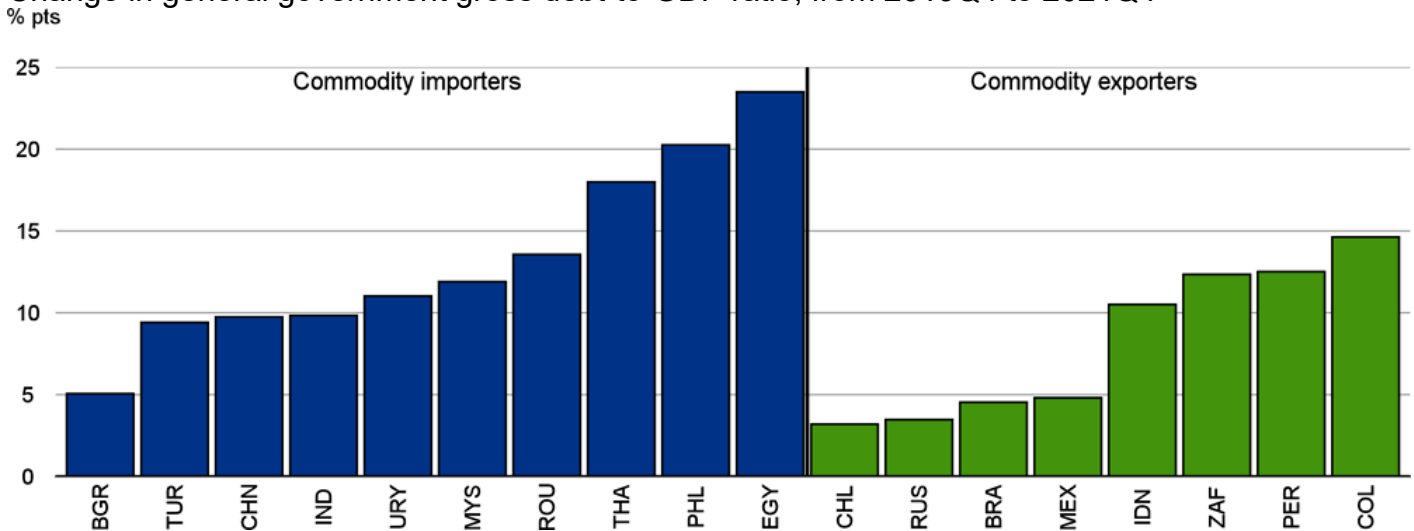
The evolution of policy rates is expected to vary across major emerging-market economies. In Latin America, policy rates are projected to gradually decline over 2023-24 in Brazil, where frontloaded monetary policy tightening is expected to substantially slow down inflation. In contrast,

policy rates in Mexico are not projected to start declining before 2024. In China, following a series of interest rate and reserve requirement reductions, no further policy rate adjustment is projected in 2023-24, though further measures to stabilise the currency could be deployed. Inflation pressures also remain relatively subdued in India and Indonesia, allowing policy rates to increase moderately in these economies until early next year and then stabilise. In South Africa, policy rates are projected to increase until early 2023 and start declining in 2024, as inflation converges to the mid-point of the central bank's inflation target range.

The economic recovery from the pandemic and high inflation rates have lifted fiscal revenues in many emerging-market economies. Nonetheless, public debt is typically above pre-pandemic levels, though often with smaller increases in commodity exporters, which have generally benefitted from improved terms of trade, better fiscal outcomes and stronger growth (Figure 1.37). The expiry of pandemic-related support is easing spending pressures in many countries, but additional expenditure to protect vulnerable citizens from high energy prices and address food security risks has limited fiscal consolidation. Sustainable public finances remain essential to maintain investor confidence and limit increases in sovereign spreads.

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Figure 1.37. Public debt has risen less in commodity-exporting emerging-market economies  
Change in general government gross debt-to-GDP ratio, from 2019Q4 to 2021Q4



Note: General government gross debt, excluding intergovernmental holdings.

Source: IMF Sovereign Debt Investor Base for Emerging Markets database.

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Credible fiscal frameworks are needed to provide clarity about the medium-term path towards public debt sustainability. For example, adhering to government debt targets in Colombia and Chile will help ensure that current measures to shield consumers from high food and energy prices remain temporary and do not endanger sound public finances (OECD 2022f; OECD 2022g). In Indonesia, reducing large energy subsidies and ending monetary financing of deficits would help to reinstate the deficit ceiling as a fiscal anchor. In Brazil, where petrol price caps and increases in social transfers have raised budget deficits, improving the fiscal framework, especially by limiting the growth of mandatory spending, would create space to address budgetary pressures associated with, for instance, population ageing, and help to restore the credibility of public finances. The gradual scaling back of energy subsidies and the expiry of COVID-19-related support will reduce spending pressures in Argentina, but shoring up investor confidence hinges on implementing plans to phase out the monetisation of fiscal deficits. In Türkiye, non-targeted price support measures for energy consumers are expected to continue in the near term, weighing on the public finances. The build-up of foreign-currency-denominated contingent liabilities could also put fiscal sustainability under additional pressure in the medium term. In South Africa, windfall revenues from high commodity prices have financed fuel levy reductions and the continuation of social programmes, but the public sector wage bill needs to be contained to achieve fiscal consolidation.

copy the linklink copied! Structural policy efforts need to be enhanced

The pandemic, the war, the growing fragmentation of the global economy and the proliferation of climate-change-related extreme weather events suggest that interacting adverse supply shocks may be more frequent in the future. Other things equal, this would mean weaker potential growth and more upward pressure on prices than otherwise and would pose further threats to the resilience of economies while further straining social cohesion.

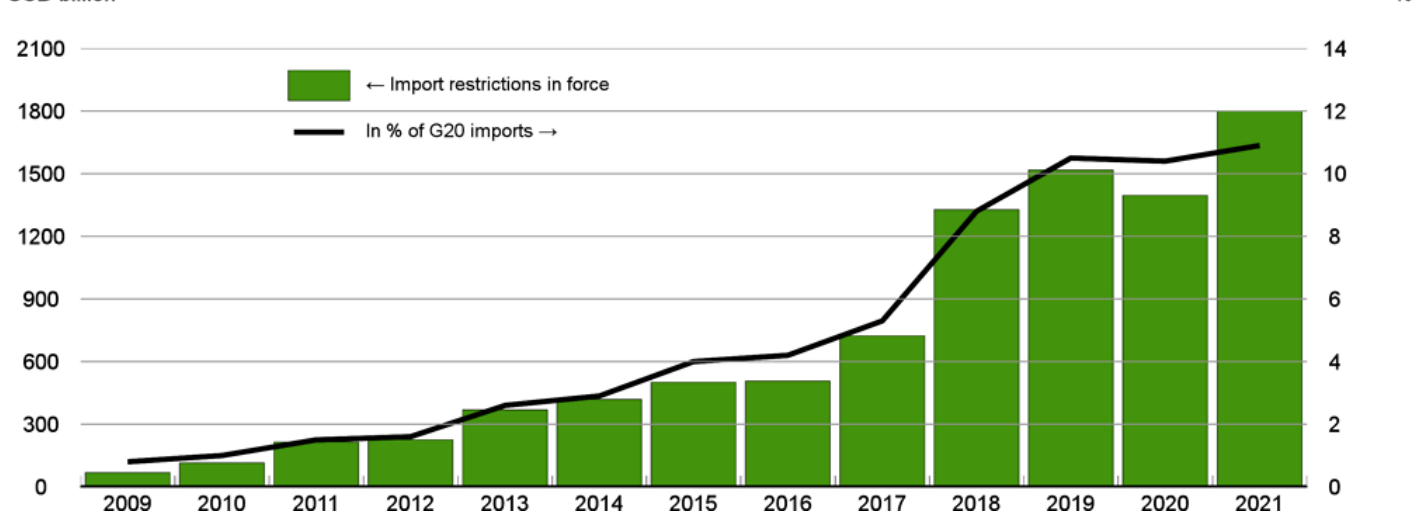
In this context, the need for effective and well-targeted structural policy reforms is greater than ever. A number of broad reform priorities suggest themselves, although a major challenge for each country is tailoring and sequencing policy measures to suit its current economic circumstances. Fostering resilient growth requires competitive and transparent markets, sound governance and institutional conditions, and effective risk management strategies able to promote swift and sustained economic recoveries. Enhancing market competition and removing barriers to reallocation helps create the conditions for economies to bounce back from downturns and enables new opportunities revealed by a crisis to be more fully exploited (OECD 2021). This necessitates removing policy barriers that prevent firms from becoming more dynamic, greener and more innovative, and adapting skills policies and competition policies for the digital age. The imperative of investing more in skills has been underlined by the pandemic, which, on average across the OECD, resulted in full (nation-wide) or partial school closures totalling nearly 40 weeks, with the most affected countries seeing nearly twice that level.

The pandemic and the war have highlighted the need for stronger international co-operation as well. Areas requiring both decisive domestic and international policy action include health care (including the manufacturing and distribution of vaccines and health care equipment), climate change, and international trade. Keeping international borders open to trade, removing obstacles to stronger cross-border economic migration, and fostering the integration of migrants (including refugees) into the labour market would help all countries alleviate near-term supply-side pressures on inflation as well as strengthen future growth prospects. OECD countries received 4.8 million new permanent-type immigrants in 2021, a 22% increase relative to 2020, but this was still more than half a million fewer than in 2019 (OECD 2022a).

There has been some improvement in the balance of policy measures affecting trade taken by G20 economies, with more trade-facilitating than trade-restricting measures in the latest review period (mid-October 2021 to mid-May 2022; OECD/WTO/UNCTAD 2022). Even so, the cumulative total of G20 import restrictions in force has grown steadily since 2009 – both in value terms and as a percentage of world imports. By mid-May 2022, 10.9% of G20 imports were affected by the import restrictions implemented by G20 economies since 2009 that were still in force (Figure 1.38). Greater progress in international trade agreements, including efforts to lower tariffs in agriculture, could support greater access to food at reasonable prices. Ongoing efforts to support port capacity and reduce congestion in logistics are welcome, and should be sustained.

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Figure 1.38. The stock of trade-restricting measures has continued to grow  
Cumulative trade coverage of G20 import-restrictive measures on goods in force since 2009



Note: Cumulative trade coverage based on information available on import measures recorded since 2009 and considered to have a trade-restrictive effect. The estimates include import measures for which HS codes were available. The figures do not include trade remedy measures. The import values were sourced from the UN Comtrade database.

Source: WTO Secretariat.

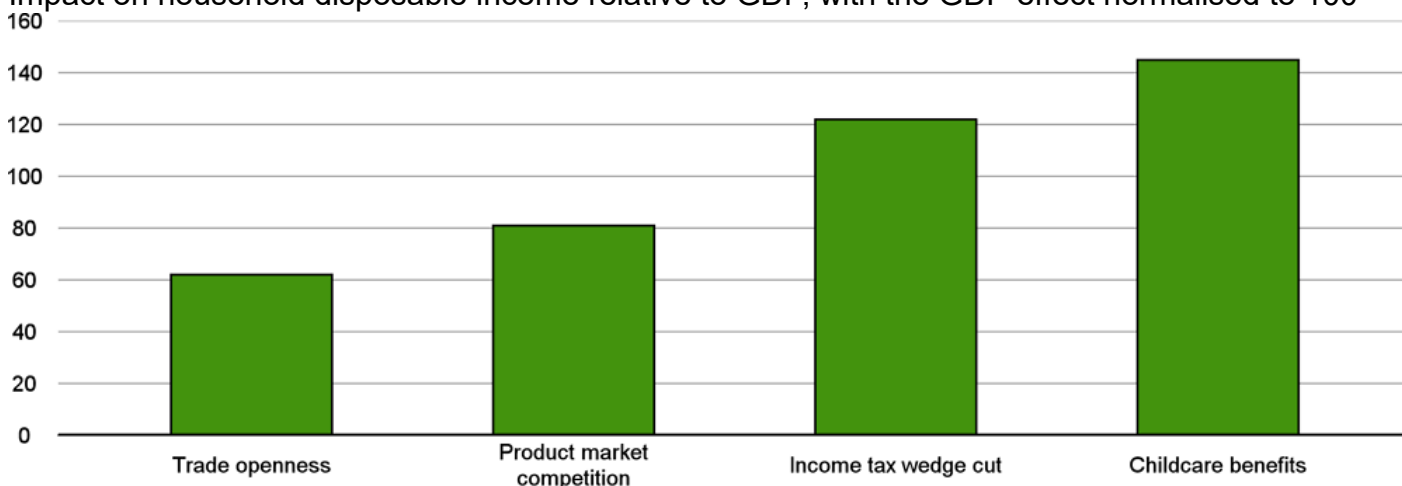
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Given the cost-of-living crisis afflicting many countries, with real household incomes falling sharply in some, there is a good case for prioritising structural reforms that have a particularly large and/or direct effect on household disposable income. Recent OECD work (Botev *et al.* 2022) finds that the relative longer-run effects of structural policy measures on GDP and household disposable income vary substantially across different types of reform. Policies such as in-kind family benefits, family cash benefits and cuts in the income tax wedge have a magnified effect on disposable income (Figure 1.39). This suggests that, alongside the structural reform priorities identified in the regular OECD *Going for Growth* reports (OECD, 2021), increased spending on childcare and early childhood education could be useful parts of policy packages to address the cost-of-living crisis currently being faced by many OECD households.

Such reforms would also help to reduce longstanding gender gaps in labour market participation and employment (OECD, 2022h). In many countries, employment rates for women remain far below those for men (Figure 1.40). This aggravates labour shortages and supply-side bottlenecks, pointing to the need for policies that facilitate female labour force participation, such as measures to improve access to childcare (Thévenon, 2013). Many OECD countries would also benefit from measures to raise employment for other demographic groups, including older people, characterised by low labour force participation rates (OECD, 2021). In many countries, the effects of the pandemic aggravated the tendency for older workers to withdraw from the labour force, contributing to the tightening of labour market conditions. Improving employment incentives for older workers would help ease supply constraints and facilitate disinflation.

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Figure 1.39. Some structural policies have larger effects on disposable incomes than GDP Impact on household disposable income relative to GDP, with the GDP effect normalised to 100



Note: The chart shows the relative effect on household disposable compared to GDP for each policy, computed as the long-run percentage change in adjusted household disposable income divided by the long-run percentage change in GDP, with the numbers presented as an index with the long-run change in GDP equal to 100. Thus, if a policy has the same long-run percentage effect on household disposable income as GDP the height of the bar would be 100. Each bar is based on the average of two estimations detailed in Botev *et al.* (2022).

Source: OECD calculations based on Botev *et al.* (2022).

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Figure 1.40. Many countries have considerable scope to improve employment rates for women

## Difference between female and male employment rates, 2022Q3 or latest available



Note: Figure shows the difference between seasonally adjusted employment rates of females and males aged 15 and over.

Source: OECD Short-term Labour Statistics; and OECD calculations.

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The Russian invasion of Ukraine has highlighted the link between energy policy and security, since, at the outset of the conflict, many OECD countries were still heavily reliant on fossil fuel imports from Russia. This is especially true of Europe, where the gas price is a key determinant of electricity prices. Given that European gas and electricity markets are relatively integrated, such that shifts in consumption and supply in each country can strongly affect prices elsewhere, better outcomes can be achieved if the European economies respond collectively to the challenge of reducing reliance on fossil fuel imports from Russia (Darvas *et al.* 2022). European Union members have already agreed measures on gas storage and reducing demand, and the European Commission has proposed further demand reduction measures and measures to redistribute excess profits earned by energy companies to final customers (European Commission, 2022). The IEA has called for additional actions, including better coordination among electricity operators across Europe and setting standards to encourage behavioural changes among consumers (IEA, 2022c). An effective collective response also includes maintaining and even increasing cross-border flows of energy within Europe, including by improving gas and electricity interconnections. The European Union could also negotiate contracts for importing liquefied natural gas as a bloc, rather than having individual EU countries competing for shipments.

While short-run tensions between energy independence and the green transition have emerged – for example, some countries in Europe are burning more coal in order to make up for reduced imports of oil and gas from Russia and some countries in Asia are using more coal as a result of LNG supplies being diverted to Europe – the best response to the crisis is to speed up the transition to net zero carbon emissions rather than to durably increase oil and gas imports from elsewhere or to boost domestic production of fossil fuels. Such an acceleration is likely to reduce the long-run costs of the transition (IMF, 2022b) while also improving both energy security and the prospects of meeting climate objectives, as energy represents between half and two-thirds of total greenhouse gas emissions.

Achieving these objectives will require a variety of different policy instruments – price-based, non-price regulation and public investment – the relative importance of which will differ across countries depending on their initial circumstances. Given that global investment in clean power generation and energy infrastructure will need to more than triple by 2030 in order to ensure the world is on a credible path to zero net emissions by 2050 (IEA, 2021), “green” public investment and subsidies are one priority. At the same time, there is a need for a clear commitment to pricing emissions and regulatory standards that can render such investments more viable (OECD, 2020a). A policy framework combining regulatory and fiscal tools, as well as price signals, is therefore necessary, especially given evidence that environmental policy uncertainty has a negative impact on

investment (Dechezleprêtre *et al.*, 2022). Currently the framework is incomplete, with most emissions being under-priced and many policy signals remaining unclear (D’Arcangelo *et al.*, 2022).

One specific area where the objectives of energy security and emissions reduction coincide is the waste of natural gas via flaring, venting and leakages. In 2021, 143 billion cubic metres of natural gas was flared globally – close to the volume of gas imported from Russia to the European Union in the same year. This resulted in the release of greenhouse gases equivalent to over 500 Mt of CO<sub>2</sub> – similar to the combined fossil fuel emissions of France and Spain. Gas flaring, along with the direct venting of gas into the atmosphere and leakages in the transportation and storage of gas, thus not only represents a waste of resources but also exacerbates the tightness in global gas markets and has a sizeable negative impact on climate change. The IEA’s Net Zero Emissions by 2050 Scenario sees a reduction in flared volumes of around 90% by 2030 (IEA, 2022d). Countries should develop national gas flaring reduction roadmaps, and regulators should ensure that existing and new projects capture, compress or otherwise use gas that is currently flared, especially given that gas producers’ financial capacity to invest in flaring reduction is at an all-time high. Assistance from richer countries to poorer ones to reduce gas flaring is one component in the broader need for enhanced efforts on climate financing.

While progress in individual countries to cut greenhouse gas emissions is essential, a cost-efficient approach to climate change requires closer global co-operation in a number of areas, including on instruments used to mitigate greenhouse gas emissions, reporting standards and improving access to climate finance for emerging-market and developing economies. A recent OECD initiative to help countries progress faster towards international and national objectives to mitigate climate change is the Inclusive Forum on Carbon Mitigation Approaches (IFCMA), which was established by the OECD Council in June 2022. The initiative aims to help the signatories of the Paris Agreement meet that agreement’s goals by facilitating the emergence of a comprehensive set of well-designed and globally better coordinated climate policies, policies which are complementary while allowing jurisdictions to act independently. To support multilateral exchange, the IFCMA seeks to provide comprehensive analysis on policies to address climate change, their comparative effectiveness and costs.

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copy the linklink copied!Annex 1.A. Policy and other assumptions underlying the projections  
Fiscal policy settings for 2023-24 are based as closely as possible on legislated tax and spending provisions and are consistent with the growth, inflation and wage projections. Where government plans have been announced but not legislated, they are incorporated if it is deemed clear that they will be implemented in a shape close to that announced. Existing energy-related support measures have been assumed to be extended into part or the whole of the projection period when that extension is deemed likely, even if it has not yet been announced. When a given energy-related measure spans more than one year, its total fiscal costs are assumed to be uniformly spread across months.

Projections for the EU countries account for spending financed by the Next Generation EU (NGEU) grants and loans, based on expert judgments about the distribution across years and different expenditure categories and informed by officially announced plans where available. NGEU grants are assumed to be budget neutral, i.e. they increase both capital tax and transfers receipts and government expenditure. In addition, positive net one-offs are added in order to reflect the discretionary stimulus associated with those grants, as measured by changes in underlying primary balances.

For monetary policy, the assumed path of policy interest rates and unconventional measures represents the most likely outcome, conditional upon the OECD projections of activity and inflation. This may differ from the stated path of the monetary authorities. In the euro area, 10-year sovereign spreads relative to Germany are assumed to remain constant over the projection period at levels close to those observed in October and November 2022.

The projections assume unchanged exchange rates from those prevailing on 3 November 2022: one US dollar equals JPY 147.30, EUR 1.02 (or equivalently one euro equals USD 0.98) and 7.30 renminbi.

The price of a barrel of Brent crude oil is assumed to remain constant at USD 95 until the end of 2024. The TTF natural gas price is assumed to average €150 MW/h in 2023 and 2024. Other commodity prices are assumed to be constant over the projection period at their average levels from October 2022.

The cut-off date for information used in the projections is 17 November 2022.

OECD quarterly projections are on a seasonal and working-day-adjusted basis for selected key variables. This implies that differences between adjusted and unadjusted annual data may occur, though these in general are quite small. In some countries, official forecasts of annual figures do not include working-day adjustments. Even when official forecasts do adjust for working days, the size of the adjustment may in some cases differ from that used by the OECD.

# Notes

← 1. The United States and Canada are two countries where services price inflation is rising and goods price inflation is moderating. For example, in the United States goods price inflation (based on the PCE price index) peaked at 10.6% in March, but has declined to 8.1% in the latest month (September), while services inflation has increased steadily since early 2021, picking up from 2.7% in March 2021 to 5.3% in September 2022.

← 2. Based on the framework set out in Guilloux-Nefussi and Rusticelli (2021).

← 3. It is less clear whether countries that have experienced a fall in labour force participation for reasons linked to the pandemic have an untapped reserve of workers that could be easily brought into the workforce, or whether these workers' attachment to the labour market has been durably weakened.

← 4. Over the two-year period 2020-21, permanent-type immigration to the United States, the largest receiving country, was lower than the pre-pandemic average by nearly 1 million people. The US labour force shrank by 2.3 million in this period, suggesting that the lower level of immigration is likely to have contributed to the tightening of labour market conditions and the emergence of labour shortages in some sectors.

← 5. In the United Kingdom, the announcement in September of debt-financed expansionary fiscal plans contributed to an unanticipated surge in long-term gilt yields. Efforts by leveraged UK-based institutional investors, primarily pension funds, to boost liquidity through asset sales then contributed to further rises in bond yields, creating an adverse feedback loop (Breedon, 2022). Intervention by the Bank of England, with a time-limited long-term bond purchase programme in the first half of October, and subsequent changes in fiscal plans, reversed the initial rise in yields by mid-November.

← 6. A related supply risk is that the impact of EU sanctions against Russian oil exports, which is incorporated in the baseline projections, could also prove more disruptive than anticipated, affecting global supply and pushing up oil prices further. This would add to global inflationary pressures in 2023. Particular uncertainty remains about the extent and price at which Europe will be able to obtain alternative supplies of some refined oil products currently imported from Russia, particularly diesel.

← 7. Recent IMF stress tests suggest that 29% of emerging-market economy banks could see significant capital shortfalls in the event of a severe downturn and a disorderly tightening of global financial conditions (IMF, 2022a).

← 8. Since May 2022, credit rating agencies have downgraded the sovereign debt ratings of Argentina, Chile, Ghana, Mexico, Nigeria, Pakistan and Türkiye. In August 2022, the IMF approved a Flexible Credit Line for Chile (an instrument which adds to precautionary external buffers in recipient countries with strong fundamentals and macroeconomic frameworks), reached an Extended Fund Facility agreement with Pakistan to shore up investor confidence and ease the pressure on the country's declining international reserves and reached an Extended Credit Facility agreement with Zambia to help reinvigorate domestic inclusive growth plans while maintaining debt sustainability. In October 2022, the IMF deployed a Rapid Financing Instrument for Ukraine to address acute balance of payment difficulties.

← 9. In the second quarter of 2022, the average US dollar-denominated non-bank borrower debt-to-GDP ratio in these three countries was 14 percentage points higher than during the "taper tantrum" episode of 2013.

← 10. Corresponding to a situation where a country has started, or is about to start, a debt restructuring, or is accumulating arrears.

← 11. The simulation incorporates monetary and fiscal policy reactions, based on the standard policy rules in NiGEM, unless otherwise stated. The monetary policy rule in NiGEM is a two-pillar rule, with policy interest rates responding to the deviation of inflation and nominal GDP from their

target levels. The fiscal rule is that the effective direct tax rate on households adjusts so as to bring the general government budget balance back to its target level.

← 12. There are small negative effects on output from the cumulative impact of several years of weaker investment on the capital stock and potential output.

← 13. To up to \$60 billion for Treasury securities and \$35 billion for agency debt and mortgage-backed securities.

← 14. Real long-term government bond yields have risen by 2 percentage points or more in many countries this year, suggesting that recent policy rate increases are already having some impact in financial markets, but they generally remain low and beneath the rates observed prior to the global financial crisis (Figure 1.14).