United States: Slowdown or recession?

by Christophe Blot

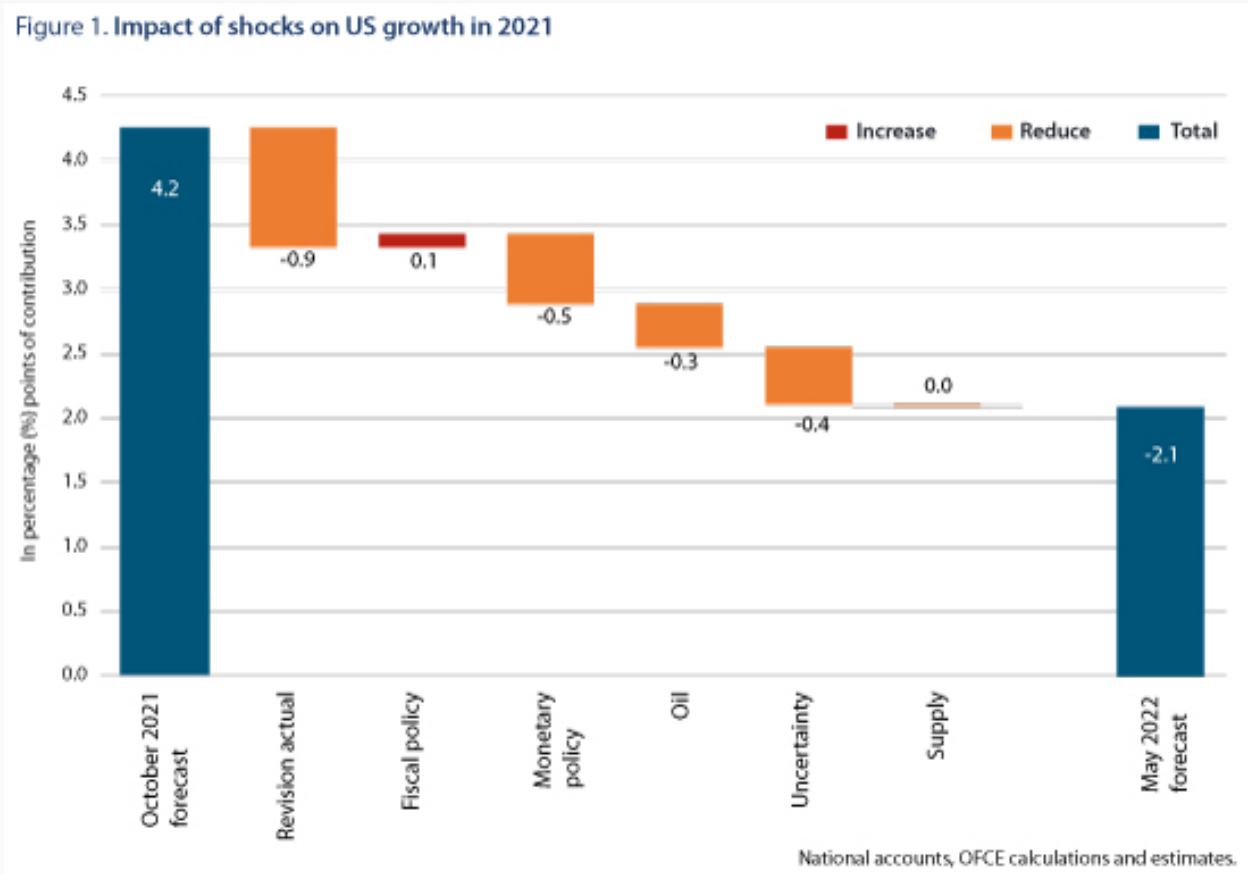
In the first quarter of 2022, US GDP fell by 0.4%, ending the recovery that had begun in the summer of 2020. The international economic environment had deteriorated significantly due to a combination of negative shocks. The global economic recovery has been accompanied by supply difficulties and a sharp upturn in energy prices, amplified since February 2022 by Russia's invasion of Ukraine. The conflict has led to heightening geopolitical tensions and fuelled greater uncertainty[1]. Finally, rising inflation has led central banks, particularly the Federal Reserve, to raise interest rates. So is the decline in US GDP at the beginning of the year a sign of a recession, or will it simply put the brakes on growth?

After the steep downturn observed in 2020, the US economy rebounded sharply, and by the second quarter of 2021 GDP exceeded the level of activity seen at the end of 2019. Growth for 2021 as a whole stood at 5.7% and was strongly driven by domestic demand, in particular household consumption, which shot up by 7.9%[2]. The support plans implemented first by the Trump administration and then by Biden more than compensated for the loss of primary household income due to the pandemic, and generally boosted consumption, particularly of durable goods[3]. The dynamism of demand in the US and globally then ran up against supply constraints as new waves of COVID transmission struck. Although the spread of the virus in most countries was not accompanied by the kind of strict prophylactic measures taken in the spring of 2020, the

situation nevertheless worsened, clogging up global supply chains and holding back labour supply[4]. This contrast between US demand, supported by highly expansionary fiscal policies, and constrained global supply has pushed prices up. In the US, the consumption deflator excluding energy and food prices rose to 3.3% in 2021, with much higher increases for some goods: 13.2% for cars, for example. Another sign of the imbalance in US growth: the sharp increase in import volumes (+14% over the year compared with a 4.5% increase in exports) has led to a deterioration in the trade balance in goods and services, with a deficit of $1,280 billion in 2021 (or 5.6% of GDP) compared with $905 billion (4.2% of GDP) two years earlier. The contraction of GDP observed in the first quarter of 2022 could be the manifestation of an overheating economy, as domestic demand has remained buoyant: +0.5 points. It is foreign trade's negative contribution (-1 point) that accounts for the 0.4% fall in GDP.

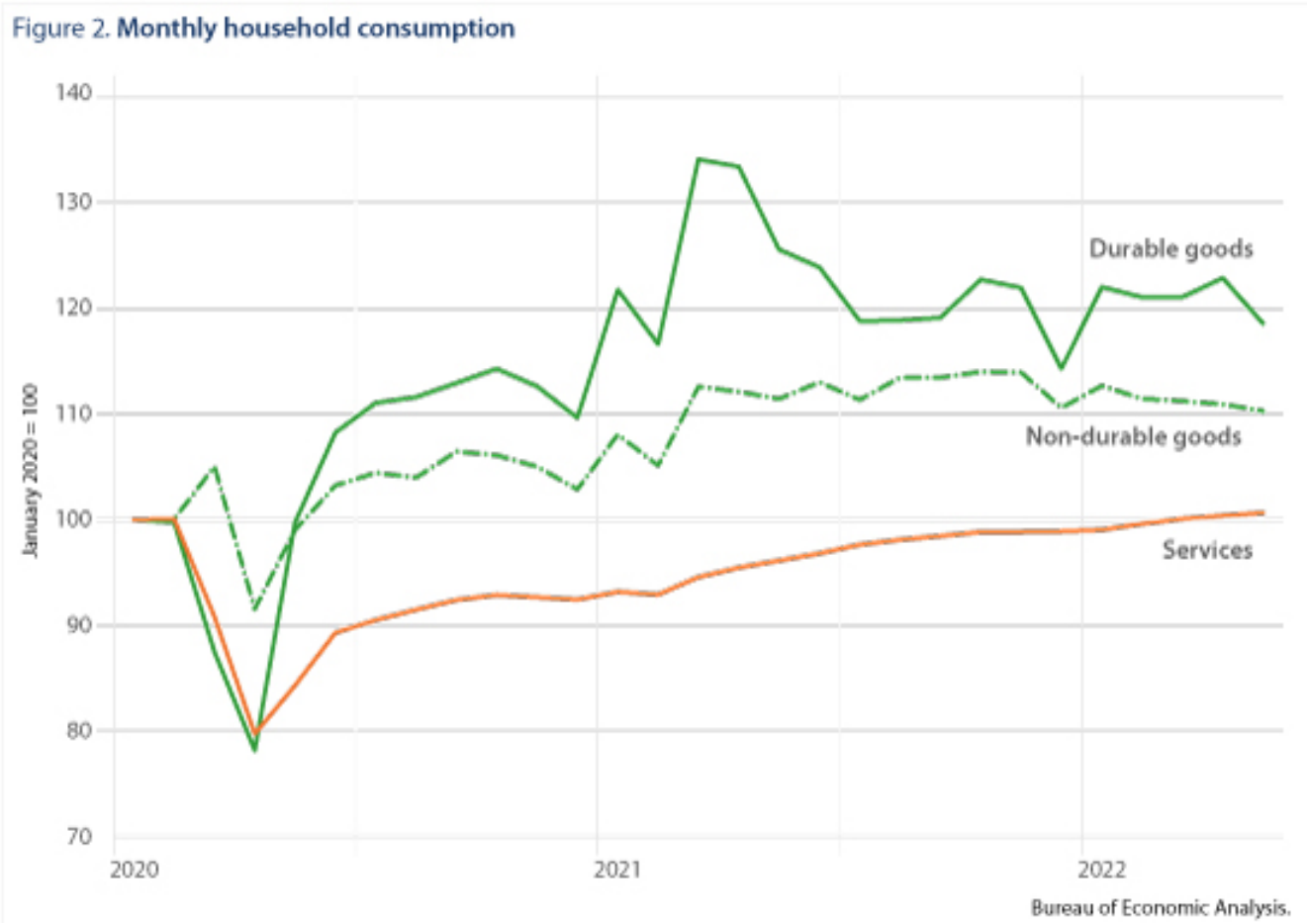
The rest of 2022 will be marked mainly by more negative shocks. While our October forecast anticipated growth of 4.2%, this figure had to be revised downwards significantly (Figure 1) to 2.1%. Although the US is an oil producer, the rise in price nevertheless is having a negative effect due to reduced household purchasing power and higher production costs for business[5]. Assuming that geopolitical tensions remain at the level observed in April until the end of the year, the uncertainty shock will cut growth by 0.4 points[6]. As for supply constraints, these should not have a major recessionary impact in the United States but will undoubtedly contribute to maintaining pressure on prices. The reduction in the growth forecast is also due in part to a stronger-than-expected tightening of monetary policy. Indeed, in the October 2021 scenario, we anticipated that inflation would gradually fall back to the Federal Reserve's target, implying a much slower normalisation of monetary policy. In the face of the larger and longer-lasting inflationary shock, the Federal Reserve has tightened monetary policy. The last three meetings of the

Federal Open Market Committee(FOMC) have resulted in consistent rate hikes, from 0.25% in January to 1.75% in June. This should continue in the second half of the year, with the rate increasing by 1.5 points on average over the year, which would have an effect on growth of up to 0.5 points from 2022. In total, these shocks should therefore cut the forecast for growth by 1.2 points. This effect is being compounded by the fact that actual growth in the third and fourth quarters of 2021 was less strong than we had anticipated: 0.6% and 1.7% respectively, compared with the October 2021 forecast of 1.4% and 2.3%. Finally, these shocks will not be offset by fiscal policy[7].



Given the figure for growth in the first quarter of 2022, quarterly growth during the following three quarters of around 0.3-0.4% should be compatible with annual growth of 2.1%[8]. The economic indicators for the months of April to June confirm a slowdown in US activity in a context of still high inflation. The monthly figures for household consumption, which rose in April (+0.3%) but fell in May (-0.4%), already

suggest further slowing. This performance once again continues to be driven by purchases of durable goods, which peaked in March 2021 and have since fallen by 5.6% (Figure 2). Business confidence surveys have confirmed the slowdown, but levels are still above long-term averages. Moreover, industrial output continued to rise in April and May. Finally, on the employment and unemployment front, the figures for June provide a good picture of the second quarter. The unemployment rate stagnated at 3.6%, after having fallen by more than 11 points between April 2020 and March 2022. Employment in turn has risen on average from the first quarter, but the level in June 2022 was lower than in March. These elements therefore point to moderate or even negative growth, particularly if the contribution of foreign trade is again negative. At worst, however, this would be a technical recession[9].



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[1] See "L'économie mondiale sous le(s) choc(s)" [The world economy in the face of shock(s)], *OFCE Review,* No. 177, for a

detailed analysis.

[2] Total GFCF increased by 7.7%.

[3] See "Europe / États-Unis, comment les politiques budgétaires ont-elles soutenu les revenus?" [Europe / United States, how have fiscal policies supported incomes?], *OFCE the Blog*, 26 October 2020.

[4] China was a notable exception because of its "zero Covid" strategy, resulting in local lockdowns.

[5] A recent review of the literature does suggest that higher oil prices reduce household consumption and investment. See A. M. Herrera, M. B. Karaki & S. K. Rangaraju, 2019, "Oil price shocks and US economic activity", *Energy policy*, No. 129, pp. 89-99.

[6] See Table 3 on page 32 of "L'économie mondiale sous le(s) choc(s)", *Op. cit*.

[7] The estimate of the impact of fiscal policy reflects the revision of the fiscal impulse compared to the scenario envisaged in October 2021. The fiscal impulse was negative due to the end of various one-off measures enacted to address the health crisis. The revision is mainly due to the analysis of the measures included in the 2022 budget by the Biden administration.

[8] The performance in Q1 may well already partly capture the impact of the various shocks.

[9] A technical recession refers to a situation when GDP declines over two consecutive quarters. However, a recession depends on a set of indicators.

Can the US Federal Reserve bring inflation back to 2%?

by Christophe Blot

At the monetary policy meeting on 16 March 2022, the Federal Reserve raised its interest rate by a quarter point to 0.5%[1]. With the strong increase in inflation observed in the United States since the spring of 2021, there is little doubt that this movement will continue. Indeed, Jerome Powel recently confirmed this and envisaged a half point increase at the meeting on 4 May. Beyond that, expectations from futures contracts on the federal funds rate suggest that the interest rate will rise to at least 3% by year's end. Will the US central bank succeed in bringing inflation back to its target? Put another way, can the nature of the imbalances that are pushing up prices be corrected by monetary policy? And how high should interest rates rise to curb the current inflationary surge?

After settling at 1.2% in 2020, inflation, measured by the consumer price deflator, reached 3.9% in 2021 on an annual average, i.e. a level well above the Federal Reserve's 2% target[2]. Furthermore, contrary to the expectations formulated by the members of the Federal Open Market Committee (FOMC) in mid-2021,[3] inflation picked up steam and by February 2022 exceeded 6%, the highest level since 1982[4]. As Jean-Luc Gaffard and Francesco Saraceno point out, inflation is necessarily the result of sectoral market imbalances, which have their source in either insufficient supply or excess demand. The appropriate policy response must therefore be based on as complete a diagnosis as possible of the causes of the inflation, which results in social costs[5]. However,

given the Fed's mandate, tightening monetary policy seems unavoidable[6]. In the case of the United States, this is a dual mandate since, according to the Federal Reserve Act, the aim of US central bank policy is to promote both price stability and maximum employment. With the unemployment rate at 3.6% in March 2022, the Fed logically considers that it is further from its price stability objective than from its full employment objective. Besides the unemployment rate, other indicators such as the resignation rate or the ratio between the number of unemployed and job openings also confirm the existence of tensions on the labour market[7].

The main question is therefore how much tightening is needed to bring inflation back to target. The answer to this question depends in particular on the transmission of monetary policy to prices. How does inflation react when the central bank decides to raise its interest rate? Remember that the central bank only sets a very particular rate, a very short-term money market rate. Changes in this rate are then transmitted to market and bank rates, and on to financial and property prices. Monetary policy therefore influences the totality of financing conditions and, through this, household consumption and household and business investment[8]. When the central bank tightens its monetary policy, demand is reduced and unemployment rises, which has an impact on prices, i.e. the prices of goods and services and wages. The impact of monetary policy on inflation can be quantified by estimating the effect of higher interest rates on unemployment and the link between inflation and unemployment.

A recent analysis by Silvia Miranda-Agrippino and Giovanni Ricco (2021) suggests that a one percentage point hike in the interest rate set by the central bank pushes up the unemployment rate by 0.3 percentage points after 12 months.[9] All else being equal, Ball and Mazumder (2011) suggest that, using a standard Phillips curve estimate, an additional 1 percentage point of unemployment would reduce inflation by 0.5

percentage points. So raising the rate from 0.25% to 3% by the end of 2022 would result in a 0.4 percentage point reduction in inflation. The tightening scenario envisaged for monetary policy therefore seems largely insufficient to bring inflation back to its 2% target. In other words, the only way the Fed could hope to reduce inflation would be by raising the interest rate even further. This is not, however, a reasonable prospect.

First, reducing inflation by 4 points – from 6% to 2% – implies such a steep rate hike that it would push the US economy into a violent recession and a brutal rise in unemployment. This was the path chosen by Paul Volcker, Fed Chairman between 1979 and 1987, who pursued a highly restrictive monetary policy at the beginning of his term in order to reduce US inflation, which exceeded 10% at the end of 1979 (Figure 1). The result was a sharp rise in the unemployment rate, to its highest level since 1951[11]. There are, however, important differences with the current inflationary situation. Inflation today is partly the result of supply factors that, according to Reifschneider and Wilcox (2022), are temporary[12]. Monetary policy would not be effective in countering a shock to energy prices or global supply constraints, since these do not really depend much on the US macroeconomic situation. The point is to focus action on the contribution to inflation arising from domestic factors, and in particular tensions on the labour market, which have been fuelled in part by the fiscal stimuli of Donald Trump in 2020 and then of Joe Biden in 2021[13]. However, it is clear that, like many other forecasters, the Fed was off in its belief that this inflationary episode would not last long and that supply factors would ease relatively quickly. Since then the war in Ukraine has put further pressure on energy prices and hence on inflation.

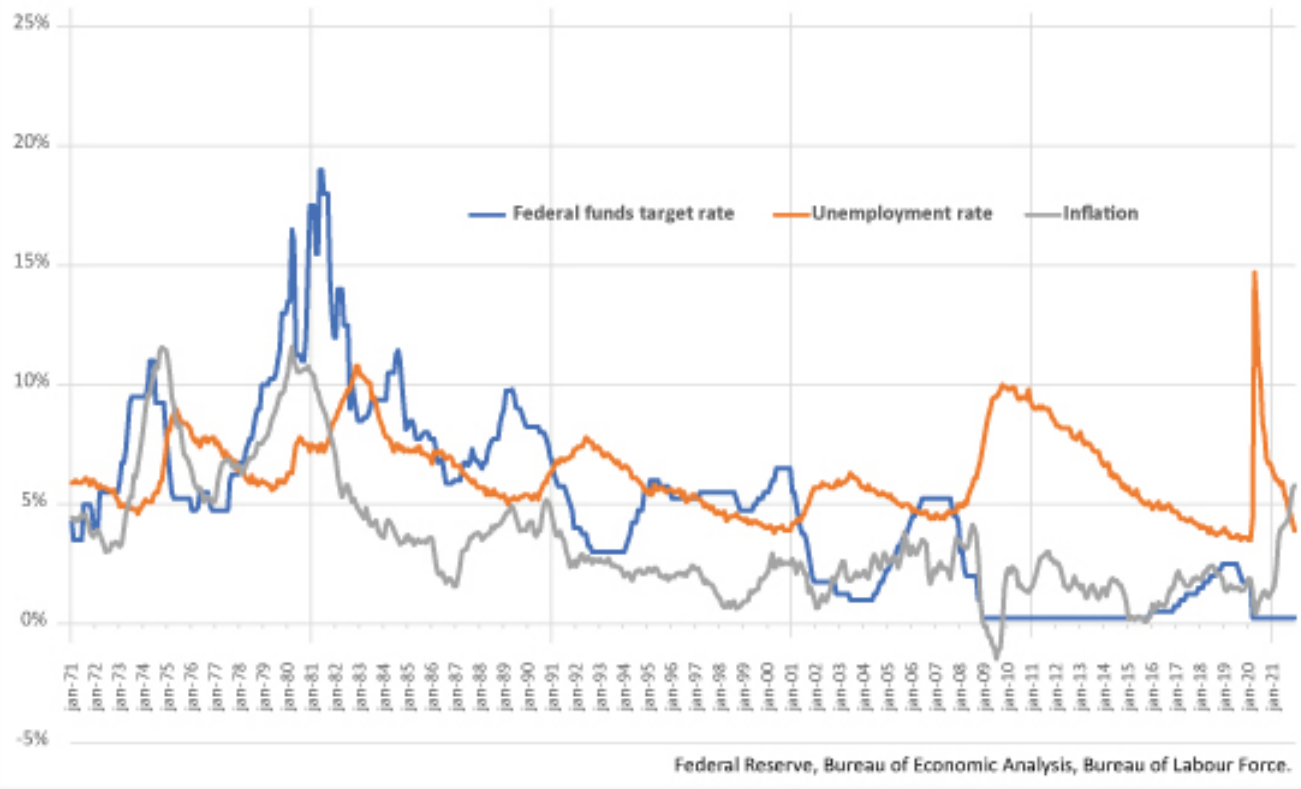
At the same time, it seems apparent that inflation expectations are probably better anchored around the Federal

Reserve's inflation target than they were in the late 1970s. According to the Michigan Household Survey, long-term inflation expectations – five years ahead – have risen but appear to have stabilised around 3% since May 2021. In particular, they are lower than they were in the late 1970s and early 1980s (Figure 2). And these inflation expectations do play a role in the dynamics of inflation. Indeed, the more households or companies anticipate a high level of inflation, the more they will ask for wage increases or set their prices at a higher level, which will result in a spiral in which inflation expectations feed inflation, which in turn pushes expectations a little higher. It is therefore also in order to avoid this type of runaway so-called second-round effects that the Fed is deciding to accelerate its monetary tightening. The aim is to maintain this anchorage. Recent work has shown that this channel for transmitting monetary policy onto expectations is significant[14].

It therefore seems that the current situation justifies monetary tightening in the US. The difficulty facing the central bank is to distinguish between supply and demand factors. The objective of the tightening initiated by the Fed must be mainly to limit the tensions observed on the labour market and to influence agents' expectations so that these expectations don't take off. It should at the same time be relatively moderate so as not only to avoid pushing the economy into recession but also to avoid a sharp rise in long-term interest rates, which would lead to destabilising pressures from the weight of the public debt. While the supply factors driving inflation are temporary, the Fed's response will allow inflation to gradually converge towards its target. In this respect, it is worth noting that the average inflation targeting strategy gives the Fed greater manoeuvring room, as it can in fact tolerate inflation above 2%. Since 2008, inflation has mostly been below 2%, so even with 5% inflation in 2022, the path of the price index would still be lower than the shadow path that would have been observed if inflation had

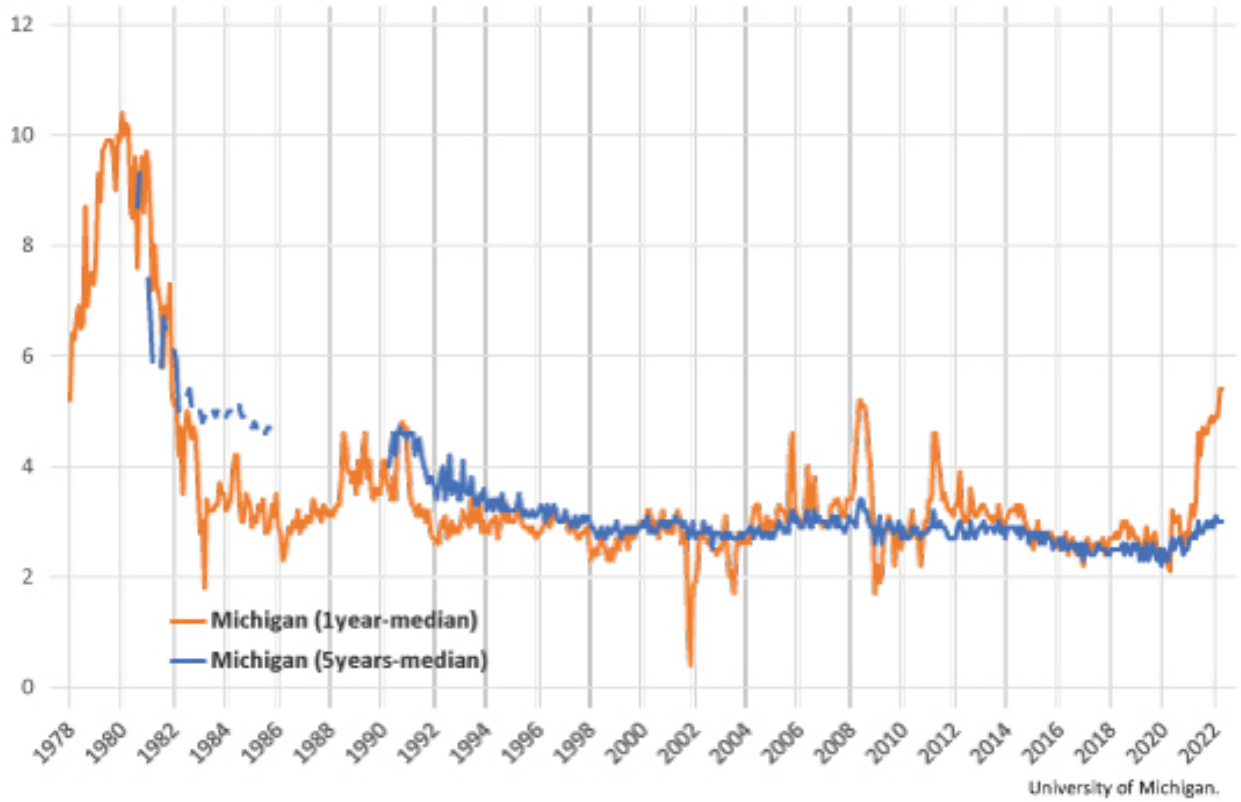
risen by 2% per year since 2009 (Figure 3). Finally, if the supply factors prove to be long-term, the appropriate economic policy will not be to curb demand through an overly restrictive economic policy but rather to stimulate supply through an investment policy that can raise production capacity to the appropriate level.

Figure 1. **Inflation, unemployment and monetary policy**



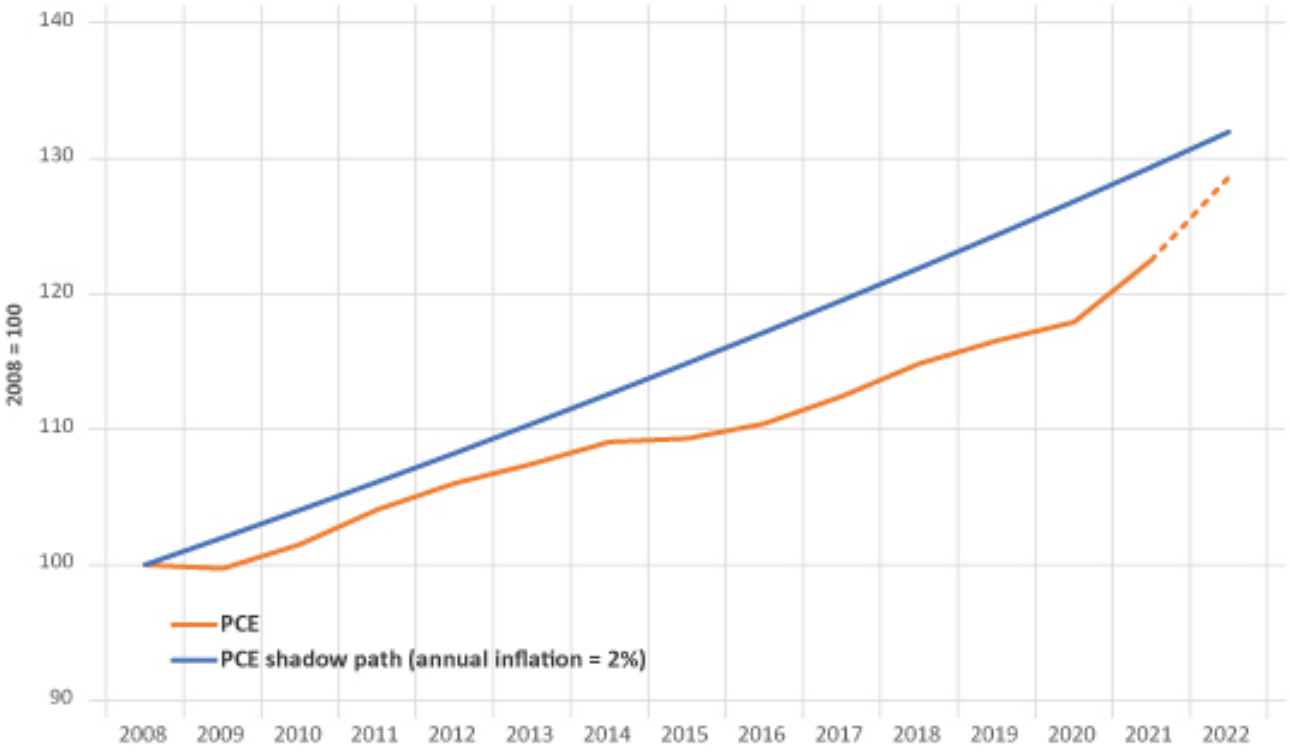
Federal Reserve, Bureau of Economic Analysis, Bureau of Labour Force.

Figure 2. **Inflation expectations of American households**



University of Michigan.

Figure 3. **Trajectory of the consumer price deflator**



The trajectory for 2022 is calculated for a forecast of an average annual inflation rate of 5%.

Bureau of Economic Analysis.

[1] In the United States, the Federal Reserve's policy rate corresponds to the target for the rate at which commercial banks exchange federal funds, which are the deposits they hold with the local Federal Reserve.

[2] See Blot, Bozou and Hubert (2021) for a discussion of central bank inflation targets and the reformulation proposed by the Fed in August 2020.

[3] Projections by FOMC members in June 2021 suggested inflation of between 1.9% and 2.3% at the end of 2022, with a median of 2.1%: see here.

[4] Inflation measured by the consumer price index even exceeded 8.5% in March 2022. Note that the inflation indicator used by the Federal Reserve is the consumer price deflator.

[5] Even if wages are growing faster in the US, they are not currently compensating for inflation, which is resulting in a loss of purchasing power for US households.

[6] Basically, the central bank's mandate does not specify that its monetary policy response should be differentiated according to the causes of inflation, which implicitly suggests that long-term inflation can only be a monetary phenomenon.

[7] See this analysis or this one.

[8] Monetary policy also influences foreign trade through its effect on the exchange rate.

[9] See Miranda-Agrippino S., & Ricco G. (2021). The transmission of monetary policy shocks. *American Economic Journal: Macroeconomics*, 13(3), 74-107. The effect on unemployment is obtained by considering a monetary policy shock such that the one-year interest rate rises by one percentage point. Although the Federal Reserve does not

directly control this rate, it is nevertheless influenced by the central bank's decisions.

[10] See Ball L. M. & Mazumder S. (2011). Inflation dynamics and the great recession. *Brookings Papers on Economic Activity*, Spring, 337-381.

[11] This record of 10.8% in November 1982 was only exceeded in April-May 2020 during the pandemic. In 2009, the peak for the unemployment rate rose to 10%.

[12] See https://www.piie.com/sites/default/files/documents/pb22-3.pdf. Their optimism is, however, debatable.

here: https://www.piie.com/blogs/realtime-economic-issues-watch/what-needed-tame-us-inflation

[13] See Aurissergues, Blot and Bozou (2021), "Les États-Unis vers la surchauffe? [Is the US overheating?] Policy Brief of the OFCE no. 97

[14] See Diegel M. & Nautz D. (2021), "Long-term inflation expectations and the transmission of monetary policy shocks: Evidence from a SVAR analysis", *Journal of Economic Dynamics and Control*, 130, 104192.

Jean-Paul Fitoussi, brilliant economist and public

intellectual, by Xavier Ragot

Born on 19 August 1942 in La Goulette (Tunisia), died on 15 April 2022 in Paris

The economist Jean-Paul Fitoussi passed away on 15 April in Paris. He began his career as a professor at the University of Strasbourg and then at the European University Institute in Florence, before joining Sciences Po and becoming President of the Observatoire Français des Conjonctures Économiques (OFCE) from 1989 to 2010. Officer of the Legion of Honour and Doctor Honoris Causa at many universities, Jean-Paul Fitoussi's work has been recognised by numerous international prizes. He has contributed to institutions throughout France and Italy, where he also taught and where he commanded widespread respect.

Jean-Paul Fitoussi was a great economist but also a public intellectual. He understood that our economies generate serious instabilities. High inflation in the 1970s, mass unemployment in the 1980s, high interest rates in the 1990s due to convergence on the euro, the financial crisis of 2008, the Covid pandemic, and then the current geopolitical and energy crisis: economic instability is the norm, hitting the most vulnerable, and public intervention must be a constant. Capitalism is not a stable system where the only things politicians change are technical parameters, such as, for example, taxes or the configuration of the pension system. It requires constant intervention through fiscal and monetary policy, adapting policy instruments again and again. His most recent reflections concerned how the rise in inflation and energy prices since the invasion of Ukraine would impact the poorest households. How can energy dependency be reduced without penalising the most vulnerable?

Jean-Paul Fitoussi was able to draw out the implications for European construction. Economic governance cannot be built by means of economic rules: the criteria of a 3% public deficit and 60% public debt, in addition to being arbitrary, distract from the imbalances that are accumulating outside the State budget. What is needed is not uniform rules but a place for debate to identify imbalances and anticipate future crises, a forum for European sovereignty. For Jean-Paul Fitoussi, the role of European sovereignty is not to fuel confrontation but to ensure coordination and management of the economic exception.

Yet the aim of this economic coordination cannot be to maximise growth without concern for inequality or sustainability, but about contributing to the common good. Here the intellectual strength of Jean-Paul Fitoussi meets the modesty of the economist. It is not for the economist to decide what an economy means for society but for democracy to show the desirable futures. Jean-Paul Fitoussi's contributions have therefore focused on the definition and measurement of well-being. As part of the Stiglitz-Sen-Fitoussi Commission, he has contributed since 2009 to broadening the measures of economic progress beyond GDP growth alone.

But Jean-Paul Fitoussi was also someone who builds, and he was concerned with participating in the life of the city. He became President of the OFCE in 1989 and directed the Institute for 20 years, establishing the OFCE as an internationally recognised centre. All those who worked with him can testify to his kindness, his attention, and his sense of humour. His concern for others was no mere intellectual attitude. For 20 years he was Secretary General of the International Economic Science Association, participating in international reflections with Arrow, Sen, Phelps, Solow, all Nobel Prize winners – and his friends.

Finally, Jean-Paul Fitoussi was a great architect of Sciences-Po and contributed to developing the institution in many ways.

He helped to open it up socially and to create the economics department. The relevance of his ideas and his sense of pedagogy have given him a special place in the public debate. Consulted by one government after another, he was never stingy with his time to explain economic policy issues, with students as well as Presidents of the Republic.

Jean-Paul Fitoussi leaves us at a time when we are most in need of his thinking. Because of his conception of the role of the economist in the city, his attention to crises and to the economic difficulties of society's most vulnerable, Jean-Paul Fitoussi can be described as Keynesian. This is both accurate but reductive. We need to broaden the focus and present him better: an honest man and a great economist.

Xavier Ragot

Our planet, our health, our priority!

By Éloi Laurent

"Are we able to reimagine a world where economies are focused on health and well-being?" With these words, the WHO issued a call to governments and citizens around the world on World Health Day, 7 April 2022, which marks the 74th anniversary of its founding and the coming into force of its Constitution.

The theme of the WHO anniversary is "our planet, our health", and it comes only a few weeks after the publication of three important articles that help to grasp the relevance and scope of this theme.

The first two articles demonstrate the progress in our knowledge about the emergence of SARS-CoV-2, the origin of the Covid-19 pandemic. The authors state that, first, it is "very likely" that the pandemic is the result of a zoonosis (i.e. transmission from animals to humans), as was the case with SARS-CoV-1 in 2002/2003, and that, second, it was at the Wuhan live animal market that this transmission first took place. This is a major breakthrough in a scientific debate that has been fiercely contested for the past two years and where all hypotheses have been seriously considered.

The third article looks at the consequences of the Covid-19 pandemic and measures the magnitude of the health shock it has caused. The authors estimate the excess mortality due to the global pandemic in 191 countries and territories from 1 January 2020 to 31 December 2021. They conclude that there is a discrepancy of one to three between their estimates and the official figures: taking into account errors and mistakes in the Covid death toll, the number of deaths worldwide over this period was not 5,940,000, but rather 18,200,000 (a global excess mortality on the order of 16%).

For some countries, such as India, the gap is truly considerable: from 489,000 official deaths to an estimated 4,070,000. For France, the gap is still significant: from 122,000 to 155,000, i.e. a difference equivalent to the number of official deaths during the first wave in spring 2020. Yet this global estimate is based on the figure of 17,900 Chinese deaths (almost four times more than officially announced), which is simply impossible to believe.

It is clear therefore that human health is "inextricably linked" to the health of ecosystems and biodiversity, which implies, as the WHO rightly points out, that the health-environment nexus must become the backbone of an economy of well-being calibrated for the 21st century.

This backbone must be based on a "One Health" approach. In

November 2020, a panel of high-level experts in this field (with Serge Morand being the only French member) was charged with consolidating and institutionalising this approach under the aegis of the World Organisation for Animal Health (OIE), the Food and Agriculture Organisation of the United Nations (FAO), the United Nations Environment Programme (UNEP) and the WHO. Human health, animal health, plant health and environmental health, these experts tell us, are complementary and interdependent.

The climate challenge similarly highlights the intersection of health and environmental issues. The second installment of the IPCC Sixth Assessment Report, which deals with the impacts, adaptations and vulnerabilities associated with climate change, runs to 3,676 pages and contains no fewer than 4,853 occurrences of the word “health”.

Given all this, the WHO might want to update its own definition of health, which dates from 1948: “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”. To update this definition, we may wish to define “full health” as “a continuous state of well-being: physical and psychological, individual and social, human and ecological”. The important thing about this definition is to emphasise the holistic nature of the approach, the continuity of health, which links mental health to physiological health, individual health to collective health and human health to planetary health. Full health is therefore health based on interfaces, synergies and solidarities.

If the WHO member states were to adopt this redefinition of health, this would, for example, encourage health issues in France to be studied systematically from an environmental perspective, which is far from being the case today, as can be seen from examining the profusion of reports and proposals on the future of the French health system, and more broadly on health insurance and its financing. The common point in all

these is to ignore the ecological issue almost completely. Yet if there is a “Great Social Security System” to be invented, it is social-ecological security.

The Covid-19 pandemic has shown how health is a collective matter that is blurred and distorted by calls for “individual responsibility”, but the collectivity that we must take note of and become partners in goes far beyond the human race alone.

Is the war in Ukraine influencing central bank monetary policy?

by Christophe Blot

The end of 2021 was marked by growing concern among central banks about inflation[1]. As pressure on prices intensified with Russia’s invasion of Ukraine, could this change the terms of the discussion and influence future monetary policy decisions? Indeed, in February, the inflation rate reached 5.9% in the euro area and 7.9% in the US[2], well above the 2% target of the ECB and Federal Reserve. The January policy meetings suggested that a rate increase was imminent in the US and likely by the end of the year in the euro area[3]. So what is the situation today? The war between Russia and Ukraine has not only shaken up the geopolitical situation but is expected to affect the global economy, accentuating inflationary pressure, reducing household purchasing power and fuelling uncertainty. Finally, the risk of a sovereign default by Russia could also rekindle financial tensions, in particular viaa risk of contagion in the emerging countries. In this new

context, one could expect greater caution and a more wait-and-see approach, as suggested in a post by Xavier Ragot. However, neither the ECB at its meeting on 10 March nor the Federal Reserve on 16 March have changed their tune. The banks remain focused on inflation.

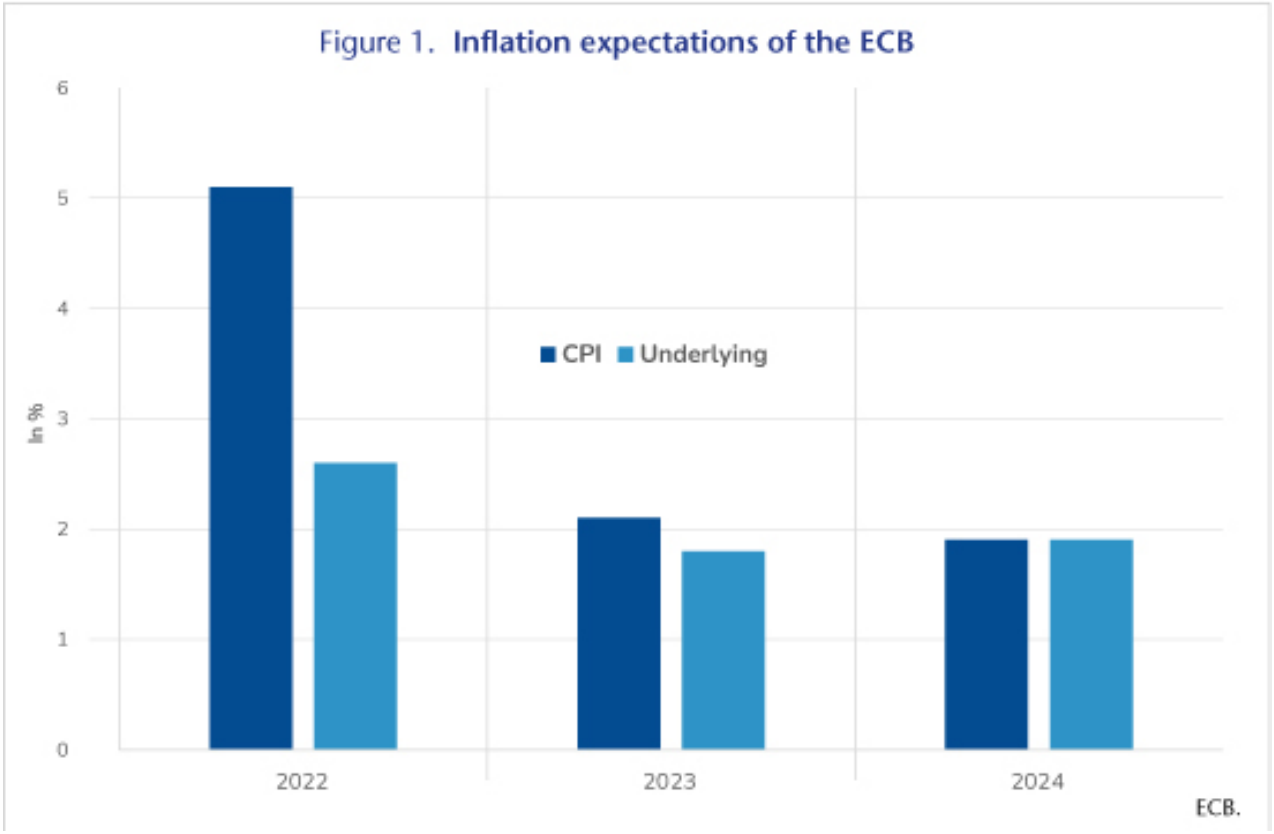
As stated in the introductory statement of the ECB press conference on March 10, Christine Lagarde acknowledged the many uncertainties linked to the conflict's economic repercussions. But she also stressed the strength of the economic recovery, with growth in the euro area expected to reach 3.7% in 2022 and 2.8% in 2023, according to the Eurosystem. These forecasts have been revised downwards since December 2021 by 0.5 and 0.1 points respectively. However, the ECB has decided to end its asset purchase programme (APP) more quickly, with it gradually decreasing in net terms to 10 billion euros in June. Beyond that, "the calibration of net purchases for the third quarter will be data-dependent and reflect our evolving assessment of the outlook". In other words, net purchases should cease unless inflation and inflation expectations fall sharply[4]. 4] Recall that in December 2021, it was envisaged that purchases under the APP would continue until the third quarter of 2022. Indeed, in the short term, the shock of Russia's invasion of Ukraine will undoubtedly translate into higher inflation, fuelled in particular by rising prices for energy and certain foodstuffs. Thus, the ECB's inflation expectations have been revised upwards: 5.1% on average over 2022 compared to a forecast of 3.2% in December 2021. Does this mean that the ECB is planning to raise rates soon? The press release issued at its previous meeting on 3 February stated: "The Governing Council expects net purchases to end shortly before it starts raising key ECB interest rates". Assuming that asset purchases are now scheduled to wind up in June, the likelihood of a rate hike

becomes greater. A qualification is needed, however, as its 10 March press release states that, “Any adjustments to the key ECB interest rates will take place some time after the end of our net purchases under the APP and will be gradual”. So the end of purchases is definitely put forward, but now the rate hike would take place not “soon after” but “some time after”. This is still widely considered possible, although it cannot be said that it is more likely today than at the end of the 3 February meeting. Moreover, to a journalist who explicitly asked whether “some time after” ruled out the possibility of a rate hike this year, Christine Lagarde replied that no action had been ruled out and that the ECB’s communication was intended to give itself as many options as possible.

However, the ECB does seem to be focusing on inflation. Beyond the short-term inflationary shock, the ECB is looking closely at inflation one or two years hence, since this is the horizon at which a monetary policy decision affects prices. So what’s most important for the rate scenario are inflation expectations for 2023 and 2024, and not for 2022. If long-term inflation converges to or exceeds the 2% target, the ECB will surely raise rates as the need for monetary support fades[6]. According to the latest forecasts, the ECB expects inflation to reach 2.1% in 2023 and 1.9% in 2024, which are close to the target (Figure 1).

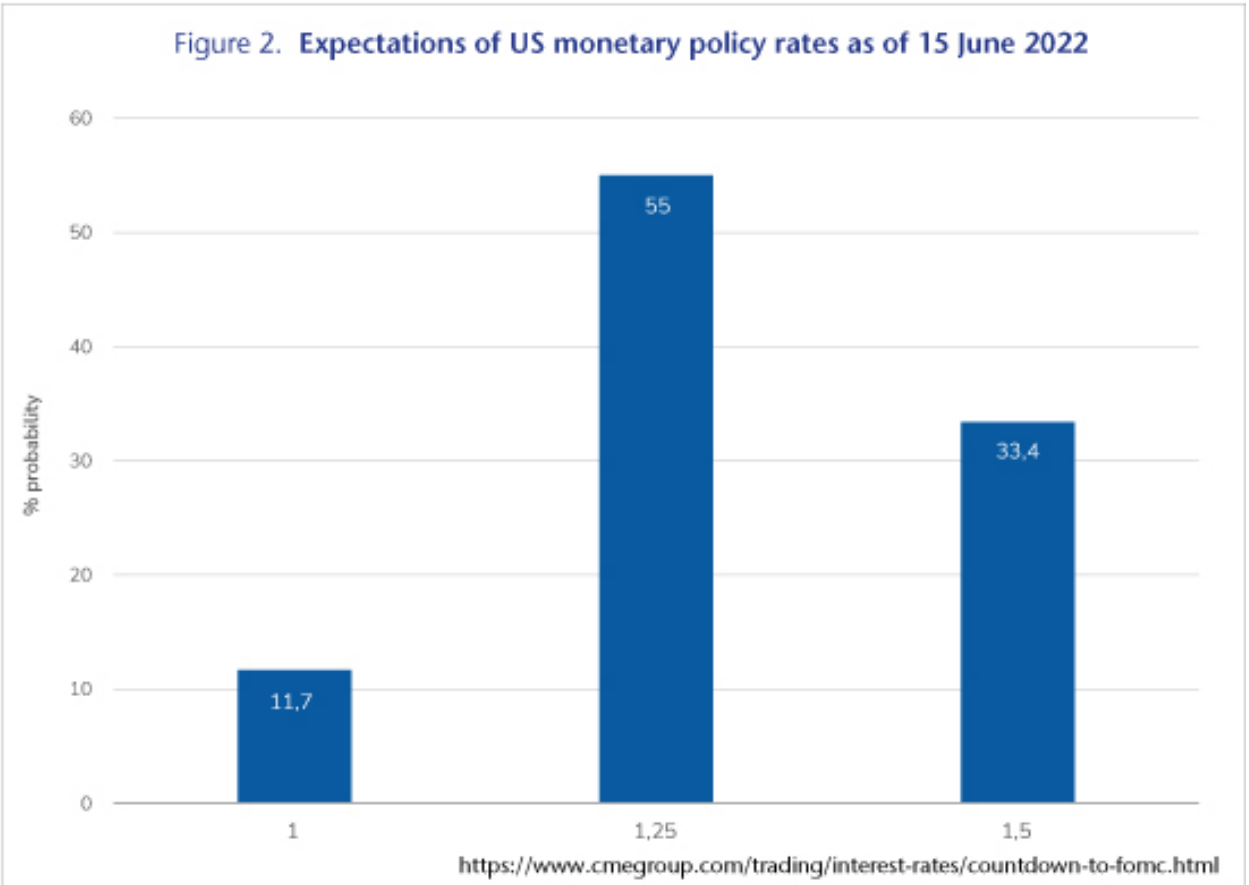
With inflation close to target, growth robust and unemployment falling, the prospect that monetary policy will be normalized may seem fitting. However, note that higher inflation is being driven largely by food and energy prices. Apart from these two components, the ECB expects inflation to be 1.8% in 2023 and 1.9% in 2024[7]. Under these conditions, the ECB is in a dilemma, with a shock that is resulting in higher inflation but also slower growth, which could delay the return of growth to its potential[8]. If inflation remains essentially driven by energy and food prices, then a rate hike would not be effective in reducing it but would accentuate the negative

shock on the economy. So while the ECB's primary objective remains inflation, tightening monetary policy is worthwhile only if it helps to achieve this objective. In the current context, the ECB will have to find the right mix between on the one hand fighting against a risk of runaway inflation that is linked to possible second-round effects and on the other risking undermining the recovery.



From this point of view, the situation of the US is different even if, as in the euro area, the FOMC members have revised the US growth forecast for 2023 downwards and the inflation forecast upwards. The US economy is probably less exposed to the shock of the war. The main difference with the euro area, however, is the level and nature of the inflation. Indeed, the change in inflation is not only a consequence of pressure on energy prices, as the year-on-year increase in the underlying consumer price index was 6.4% in February, compared to 2.7% in the euro area. Moreover, wages also seem to be taking off, reflecting tensions in the US labour market and thus a much higher risk of overheating than in the euro area, which would justify faster and probably stronger action by the Federal

Reserve[9]. It is therefore not surprising that the FOMC members were broadly in favour of a quarter-point increase in the federal funds rate at the meeting held on 16 March. This hike in the monetary policy rate had been announced implicitly at the previous meeting and was widely anticipated. This trend could even pick up pace since, at the end of the FOMC meeting scheduled for 15 June, according to the *FED watchers,* there is a 55% probability that the rate will reach 1.25% and a 33% probability that it could hit 1.5% (Figure 2)[11]. However, even if higher rates seem more justified in the United States, the Fed will also have to take into account the impact of interest rates on medium-term debt dynamics. Given the level of public debt (130% in 2021 versus 109% in 2019), close coordination of monetary and fiscal policies is likely necessary to reconcile the objectives of fighting inflation, maintaining growth and gradually reducing public debt. As Gilles Dufrénot reminds us, debt reduction after the Second World War was accompanied by a low real interest rate strategy[12].



[1] See the OFCE post of 20 January 2022.

[2] The consumption deflator, an indicator monitored by the Federal Reserve, was rising by 6.1% year-on-year in January 2022.

[3] Note that in the UK, January inflation was 5.5% and the Bank of England had already raised its key interest rate twice.

[4] The flow of asset purchases by the ECB under the APP leads to increasing the size of its balance sheet. Terminating the programme does not imply a cessation of purchases but rather the end of increases in the size of its balance sheet. Thus, the ECB will replace maturing assets with purchases that stabilize the balance sheet.

[5] In December 2021, the ECB envisaged net purchases of 30 billion euros in the third quarter of 2022.

[6] It is indeed conceivable that, given the current level of interest rates, a small hike would not contribute to slowing down activity but would reflect less support.

[7] Recall that since July 2021 the ECB has communicated a new inflation target of 2%, as opposed to its previous “close to but below 2%”. However, the measure of inflation remains the HICP, an indicator that includes energy and food prices. See Blot, Bozou and Hubert (2021) for more detail [in French].

[8] Indeed, central banks generally react to the gap between actual inflation and the target and the gap between the level of activity and potential GDP. Thus, rapid growth does not indicate that activity is exceeding its potential. Indeed, according to the OECD, this growth gap should still be negative in 2023 (-0.3%). However, this estimate does not take into account the impact of the economic shock linked to the

war in Ukraine.

[9] See Domash and Summers (2022) for a more in-depth analysis of the tensions in the US labour market. Although the unemployment rate has not yet returned to its early 2020 level, other indicators such as the employee resignation rate and the job vacancy rate point to greater pressure.

[10] All but one member voted in favour of this increase, with the dissenting voice in favour of a half-point increase.

[11] A meeting is also scheduled for 4 May, at which there is a 58% probability of a rate hike of 0.25 points and a 42% probability of 0.5 points.

[12] See Reinhart and Sbrancia (2015) for a more detailed analysis of public debt reduction after 1945 in the industrialized countries.

War in Ukraine: What short-term effects on the French economy?

by Xavier Ragot, with contributions from Céline Antonin, Elliot Aurissergues, Christophe Blot, Eric Heyer, Paul Malliet, Mathieu Plane, Raoul Sampognaro, Xavier Timbeau, Grégory Verdugo.

The purpose of this analysis is to open up discussion about how the war in Ukraine will affect the French economy. Such an assessment is of course uncertain, as it requires a forecast of diplomatic and military developments and in particular involves critical assumptions about sanctions and economic

policy responses.

If consequences that are deemed negative are identified, this should not be read as a criticism of these policy choices, but rather as a contribution to how best to limit their negative impacts.

This document is intended as a summary and refers to relevant work for further consideration. Ongoing study will clarify the analyses and the relevant calculations.

The war in Ukraine will affect the French economy through eleven different channels.

I – The economic shock: Short-term effects

1) The first effect is of course on France's energy bill

Increases in the price of gas and oil will reduce the purchasing power of French households and raise production costs for business. The gas price is the first unknown. The average daily price in 2019 was €14.6/MWh, before falling to €9.6/MWh in 2020 due to the pandemic. The price per MWh reached €210 on 10 March 2022! This high level will not last. A level of €100/MWh is a realistic assumption, which would constitute a six-fold increase in price from 2019. Second, the higher gas prices will not be passed on to households immediately, because many contracts have expired (Antonin, 2022) and the government will wind up bearing part of the energy bill through the regulation of gas prices. However, the price increase on imports will be paid by domestic agents.

France imported 632 TWh of gas in 2019 and 533 TWh in 2020, as the pandemic slowed activity. But what counts most are net imports, which are lower. The cost of net gas imports in 2019 was €8.6 billion. Imports in 2022 will be affected by a

possible economic slowdown but also by gas storehouses. For 2022, a working hypothesis could start from the level of net imports in 2019. Applying an increase of €85/MWh, this results in an additional cost of around €40 billion *if* the increase were to last one year. If the higher price were to last longer, then it would generate substitution effects in the medium term, as discussed below.

The price of oil is equally difficult to predict, as it depends on the behaviour of strategic players, such as OPEC. The price of a barrel of Brent crude fluctuated between USD 60 and USD 70 in 2019. It rose to USD 133 on 8 March, before falling back to USD 114 after OPEC announced a boost in production. The price of oil will, much like gas, depend on the sanctions on Russia; Russian crude represented around 10% of France's purchases in 2020 and in 2019 constituted about 4.8% of the world's known reserves. We could assume an average price of 110 dollars (or 100 euros, which is consistent with the EIA analysis). In 2019, France's crude oil bill was €21.8 billion, to which must be added €13.3 billion of refined products. Assuming unchanged demand and using these same amounts, we end up with a total oil bill of 58.5 billion euros, i.e. an extra cost of 24 billion euros. The euro/dollar exchange rate could also fluctuate during the crisis, with a probable depreciation of the euro that is difficult to estimate at present. As a result, a constant exchange rate of 1.1 will be kept.

This increase will necessarily generate moves towards import substitution and reduction. These effects have been studied for the German economy (with references to the measures) by Bachman *et al.* (2022), who focus only on substitution effects. Using the literature (Ladandeira *et al.*, 2017), they assume an elasticity of -0.2. In the case of a reduction in the quantity of gas and oil, how much residual capacity do firms have to produce? The answer to this question depends on assumptions about the extent energy can be substituted by other factors.

Depending on these assumptions, all of which are realistic, the estimate for Germany ranges from 0.7 GDP points to 2.5 GDP points, or even more due to supply effects alone.

For France, a concrete example of substitution would be a reduction in heating: a 1° reduction in heating leads to a 7% reduction in gas consumption, i.e. a reduction of gas consumption by 4.2 billion m3, whereas 14.7 billion m3 of Russian gas is consumed.

The following table summarises estimates of how much price increases will raise costs, using various assumptions.

Table. **Increase in the energy bill based on how long energy prices stay high, in billions of euros**

Duration of the rise	3 months	6 months	12 months
Direct impact	16	32	64
Partial substitution	13	26	51

Authors' calculations.

The table shows the uncertainty of the estimate depending on the duration of the price rise and the assumption of partial short-term substitution. The figure of 64 billion euros is close to three GDP points, which would be a significant shock to the French economy. A duration of six months with substitution behaviour would lead to a shock of one GDP point. Here we see the critical importance of political uncertainty.

2) Macroeconomic effect of rising energy costs

The primary effects of higher energy prices would be a reduction in household purchasing power, an increase in business production costs and higher costs to the state due to regulating prices. The impact on growth would proceed through complex mechanisms. As mentioned above, it occurs through substitution effects but also through the diffusion of energy prices to production prices and wages.

The OFCE has estimated the macroeconomic impact of a rise in energy prices in three different ways. First, by using two macroeconomic models, the *emod.fr* model, also used in forecasting, and the *Threeme* model, which breaks down energy consumption by sector (Antonin, Ducoudré, Péleraux, Rifflart, Saussay, 2015). Another strategy has been to use possibly non-linear econometrics (Heyer and Hubert, 2016 and Heyer and Hubert, 2020). Note that the latter work includes substitution possibilities measured by the elasticities mentioned above.

The results are as follows. In the model-based approach, a long-term oil price increase of 10 dollars leads to 0.1% to 0.15% less GDP growth and 0.6% inflation in the first year. With the econometric approach, a 10 dollar oil price increase reduces growth by 0.2% and leads to a 0.4% increase in inflation, with a relatively linear effect and a maximum impact after four quarters.

Because of the size of the shock, it is difficult to know whether to consider the high ranges because of the non-linearities or the low ranges because of a greater substitution effort and a fall in the savings rate. Furthermore, the estimate is made for oil and not for gas. For this reason, we will consider average effects, without seeking to maximise the fall in GDP. Thus, an increase of 40 dollars (compared to the situation in 2019), which is increased proportionally to take account of increases in the price of gas as well, leads to a fall in GDP of about 2.5 GDP points in the upper range and an increase in inflation of 3% to 4%. This amount corresponds to a multiplier for the negative shock on energy expenditure of -1. With unchanged business behaviour and unchanged public policy, this fall in GDP translates into a drop of the same order in market employment, so about 600,000 jobs (change compared with a non-war environment). In the low range (short duration and substitution), we obtain a fall in GDP five times smaller at 0.5 GDP points.

At this stage, this estimate does not take into account the

effect of the conflict on other commodities, cereals or precious metals, which are of secondary importance compared to energy prices and are discussed by COFACE.

3) Uncertainty channel

Modelling the effect of the war in Ukraine depends heavily on the reaction of households and businesses to the uncertainty generated by the war. In an environment like this, the savings rate is expected to rise in the medium term (after purchases of basic necessities), which would aggravate the depth of a recession. However, after the Covid-19 crisis, households in France have an excess of savings of 12% of annual income (166 billion euros, OFCE Policy Brief no. 95), which they could dip into to pay the additional energy bill without changing their consumption habits. This attitude depends crucially on the perceived duration of the shock. A shock that is expected to last very long may lead to an additional increase in savings.

Companies' wait-and-see attitude (before knowing which way markets are going) is leading to a downturn in investment. For business, the period of high uncertainty during the pandemic was marked by a good level of investment, partly due to public support (OFCE Policy Brief no. 95).

The third effect of the uncertainty channel is an increase in precautionary savings and a search for secure savings. As a result, savings are more likely to be directed towards safe assets, including public debt, and the real interest rate on France's public debt may fall. After the outbreak of the conflict, rates did indeed fall in Germany (0.20 points), the United States (0.15), France (0.20), Italy (0.35) and Spain (0.2). In the longer term, how rates change will depend on how the policy of the European Central Bank (ECB) is perceived, which is discussed below. The search for safe assets will also cause the stock markets to fall and lead to negative effects on financial wealth, which won't modify consumption in France much.

4) Redistributive effects

Higher energy prices will affect households differently and will disproportionately hit the poorest households with the lowest savings rates (Malliet, 2020).

There is considerable heterogeneity in the structure of spending on energy products. According to data from the 2017 *Budget des familles* survey conducted by INSEE, 10% of the consumption expenditure of the households in the poorest decile goes on *electricity, gas and other fuel* for the home and on *fuel* for transport. At the other end of the scale of living standards, households in the richest decile spend less than 7% on these items. On the other hand, Malliet (2020) shows that there is still considerable heterogeneity in the structure of consumption of these products even within a given decile. There is a significant proportion of the population that is highly exposed to certain energy prices, which requires that targeted measures be adopted that take into account this extraordinary exposure to certain goods for which – unless the household makes a major investment – there are few readily available substitutes.

The anti-redistributive aspect of a rise in energy prices therefore leads to a marked drop in the consumption of households with the lowest savings rate. This effect, in addition to the uncertainty channel, leads to a drop in aggregate demand and activity. Compensation for the loss of purchasing power induced by the rise in the price of oil and gas of 30% thus comes to 20 billion euros in the high range.

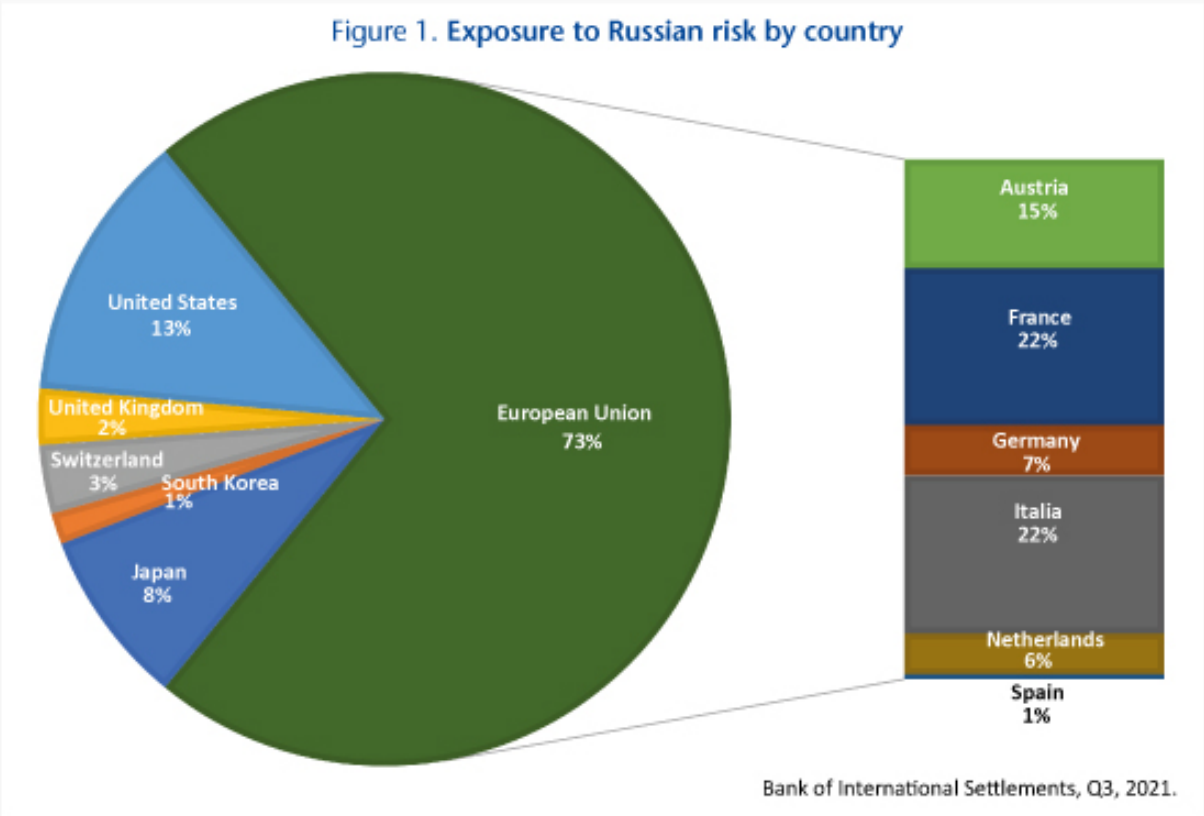
5) Destabilising financial effects

In addition to the average effect on interest rates, the sanctions that entail the exclusion of certain Russian banks from the Swift system is leading the banks to default on payments. Freezing the Russian central bank’s assets will generate difficulties that will probably lead to an explicit

default on Russia's public debt (a first since 1998) if the conflict continues for a few more weeks. According to the rating agencies, the risk of a sovereign default is imminent. A decree already allows for the repayment of the public debt to certain countries in roubles. The risk of a default on Russia's debt is approaching one (measured by the CDS), and evaluations of the impact of sanctions on Russia's debt point to a fall in GDP of between 7.5% and 10% in 2022 (Coface). The risk on Turkish and South African debt is also mounting.

The exposure of French and European banks and investment funds to Russian risk (public and private) is difficult to estimate because of possible contagion effects. The amount of external public debt is, however, low, estimated at USD 60 billion. The ECB can be trusted to intervene in the event of heightened financial instability, but the risk of a tightening of credit is likely.

The following graph shows the exposure to Russian risk by country, measured by residents' consolidated position in Russian assets (Bank for International Settlements data).



We see that France's exposure is high, at 22%, as is Italy's. However, this exposure doesn't include the possible contagion effects of financial crises.

II – Fiscal policy response

How the economy fares after such a shock will depend on the fiscal and monetary response.

6) Reception of refugees

First of all, while the primary purpose of taking in refugees obviously is not economic, this will generate expenditures that will probably be financed by debt and so will have an effect on activity. The experience of the last refugee crisis in 2016 leads to a first estimate. As Jean Pisani-Ferry notes, according to UNHCR analyses, Germany's intake of 750,000 refugees in 2016 called for a budgetary effort of 9 billion euros, i.e. about 10 billion euros per million refugees. For an estimated 4 million refugees (given that currently the number is about 2.5 million), this leads to a temporary cost of 40 billion for Europe, which, on the scale of Europe, is not all that much but which for the countries hosting the most refugees, such as Poland, is huge.

The central question, however, is how to organise support for these millions of refugees. Gregory Verdugo has discussed the challenges for the European asylum system from 2019 and the integration of refugees. Note that the long-term impact of migration is positive, even if today's refugees are mainly women and children. Of course these economic considerations are not central to how to support the refugees.

7) Support for the most vulnerable households

As noted, the rise in energy and food prices is strongly anti-redistributive and disproportionately affects the poorest households. For this reason, to offset the rise in inflation at the end of 2021, the French state has introduced an

inflation allowance and exceptional support in the form of a €100 energy voucher, for a total estimated cost of €4.4 billion (€3.8 billion and €0.6 billion). The government has announced that it will spend €24 billion, or about 1 GDP point, to offset the rise in energy prices. This is the order of magnitude of the increase in the oil bill, without taking into account the increase in the price of gas. The OFCE *Policy Brief* on purchasing power, published on 17 March, deals with these issues.

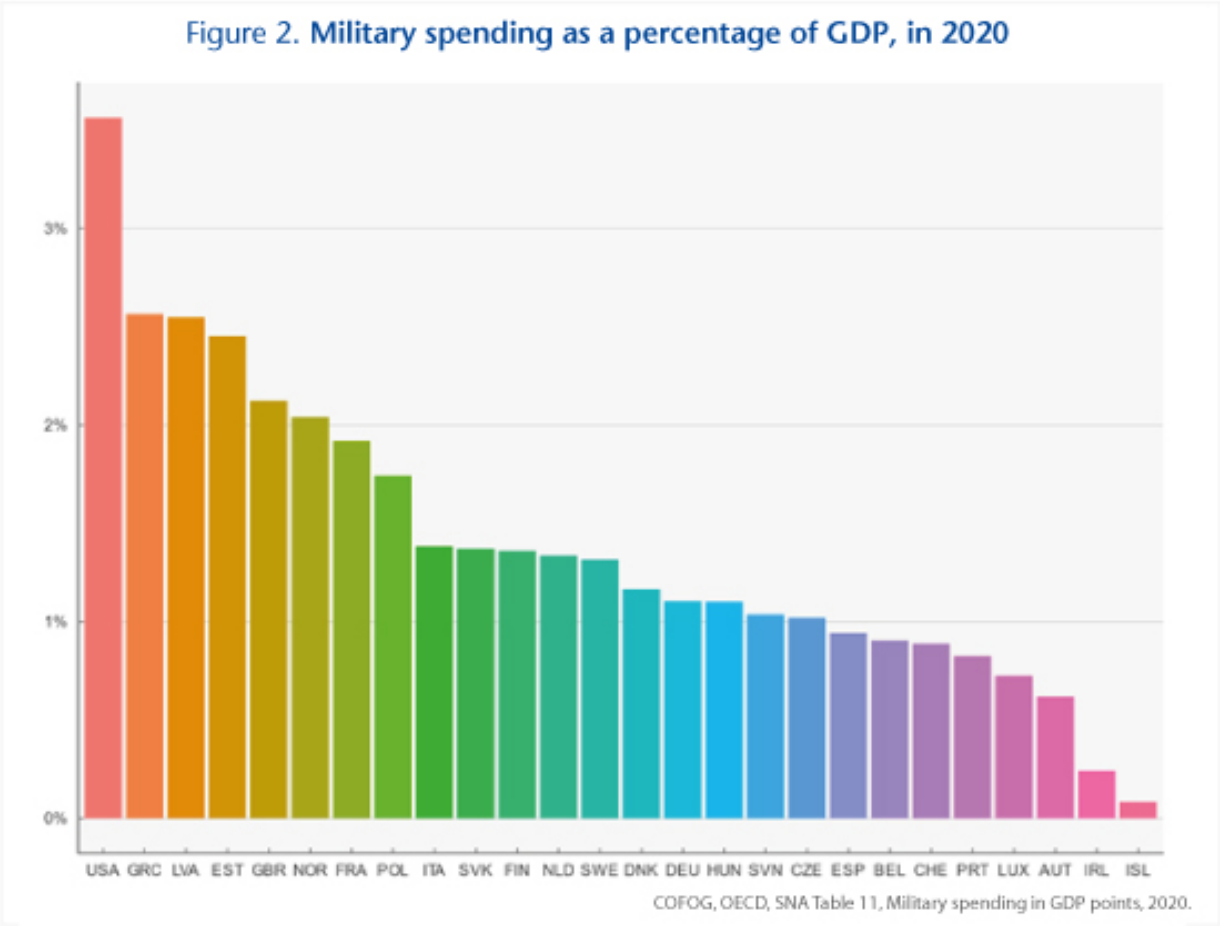
This price increase will make the country poorer (negative supply shock) due to domestic dependence on energy imports. Responding to the shock with a wage increase is not a good solution, as it leads to higher prices and induced inflation, as companies in turn would face higher production costs. Support for vulnerable households should therefore be fiscal and not wage-based. The low interest rates on France's public debt opens up some fiscal space that should be used temporarily.

8) Energy investment

Reducing dependence on Russian oil and gas (which will be compulsory if there is an embargo) will lead to additional investments. The recent IAE report on ending this dependence leads to "sobriety" measures but also to new investments, which are difficult to quantify for France at this time.

9) Military expenditure

Another consequence of the war in Ukraine will be higher military spending. This will lead to medium-term investments, the economic effect of which will depend on how it is financed (by debt or taxes). Germany has announced a package of 100 billion euros to be used in the short term. France, on the other hand, already has a higher level of military spending and at present is sticking with a policy of increasing military spending by 3 billion euros per year.



10) Europe and European fiscal rules

The war in Ukraine will most likely lead to the suspension of European fiscal rules for another year, until 2024. The establishment of a common European debt is under discussion, but the outcome remains uncertain.

III – European Central Bank and monetary policy

11) The ECB is in a difficult situation, as it faces rising energy prices, falling activity and high levels of public debt

One point needs to be clarified: the rise in energy prices will certainly push up the price index and therefore average prices, but this primarily involves domestic impoverishment. In other words, the ECB cannot fight this energy cost-driven price increase (which will also push European entities to find ways to reduce their energy dependence). This price increase will lead to inflation if wages and other prices start to rise continuously after this initial impulse. In other words, it is

against possible second-round effects, not first-round effects, that the ECB needs to fight. In contrast to the 1970s shock, it is unlikely that the rise in energy prices will lead to an inflationary spiral, due to the de-indexation of wages. However, the way in which the SMIC, the French minimum wage, is indexed should push it higher. A fiscal effort on behalf of people paid the minimum wage to compensate for higher energy costs does, however, make less relevant the increase in the SMIC induced by higher energy prices.

However, the current difficulty concerns the existence of some second-round effects upon exiting the Covid-19 crisis (irrespective of the price of the war in Ukraine), as core inflation was already at 2.7% in February, above the 2% target. It is therefore important that the absorption of the energy price shock does not lead to self-sustaining price increases.

Second, the ECB will have to deal with a new wave of financial instability, with possible contagion in the financial system and rising interest rates in some countries.

Finally, the most likely outcome is that the ECB will take steps to support public policy. The point is not so much to stimulate demand, which would be inappropriate in this kind of environment, but rather to avoid interest rate hikes in some countries, as is suggested by a reading of its statements in the 10 March ECB press conference. Indeed, the statement of Thursday 10 March and the reduction in the volume of securities repurchases go hand in hand with a vigorous affirmation of the fight against the fragmentation of the euro zone, and therefore against the rise in interest rate spreadswhich could destabilise highly indebted countries such as Italy. Our reading therefore is of an ECB policy of risk reduction without support for demand, which seems justified during the military conflict.

Conclusion

The war in Ukraine is a massive income shock that, without a public response, would lead to a fall in GDP of 2.5% and a rise in inflation of 3% to 4% in the highest estimate of a long-term rise in prices, without behavioural changes, but also without taking into account financial instability. Considering the low range of a short conflict reduces these effects by three-quarters, to a fall of less than 1 GDP point.

- Rising energy prices lead to anti-redistributive effects, which should lead in turn to budgetary efforts on behalf of poorer people.
- As a result, government support of at least 1 GDP point is likely, limiting the fall in GDP but pushing inflation into the high range.
- Financial instability is possible, which would substantially increase these effects, without taking into account of course any extension of the war into Europe outside Ukraine, which would completely change the method of estimation.

How should Ukrainian refugees be welcomed?

by Gregory Verdugo

An unprecedented crisis

Since the war in Ukraine started, unprecedented numbers of refugees have poured across the country's borders. As of 15 March, the UN High Commissioner for Refugees counted more than three million refugees who have crossed the border since the Russian offensive began on 24 February. In just three weeks, the number of refugees has surpassed the year-long peaks

reached during the 2015 and 2016 migration crisis. The number already exceeds the total number of refugees that followed the Bosnia and Herzegovina war in the years 1993-1995.

A specific status

In order to avoid having asylum applications filed in more than one European country, the Dublin III Regulation (2013) requires refugees to apply for asylum only in the first country through which they entered the EU. This regulation aims to encourage border states to better monitor their borders but also both to clarify which country is responsible for examining the asylum application and to prevent attempts at "asylum shopping". During the 2015 migration crisis, this system disproportionately placed the burden of receiving refugees on countries with a Mediterranean border that were directly on the route of Syrian and Afghan refugees. Countries such as Greece and Malta were soon overwhelmed by asylum applications, which far exceeded their processing capacities.

Faced with the massive and rapid flow of Ukrainian refugees, the European Union, aware of the inadequacy of the Dublin Regulation, took unprecedented steps. The Temporary Protection Directive, drawn up in 2001, was activated for the first time on 4 March 2022, following its unanimous adoption by the EU Council of Interior Ministers on a proposal from the EU Commission.

Temporary protection offers Ukrainian refugees a right of residence for one year, which can be extended up to three years. Beyond the right of residence, temporary protection also provides access to education, which is crucial given the number of displaced families, and it guarantees access to social and medical assistance and the right to family reunification.

Temporary protection simplifies the reception of Ukrainian refugees by preventing the clogging of asylum systems. In some countries, processing asylum applications can take several years before a final decision is reached. Even if a fast-track procedure had been introduced, it would have been difficult to avoid overloading the asylum system and lengthening the processing time for the large number of Ukrainian refugees. Such long delays penalise the refugees. Uncertainty about the possibility of staying in the host country reduces in particular the incentive to establish links with the country and to learn the language (Hainmueller *et al.*, 2016).

Another advantage of temporary protection is that it allows Ukrainian refugees immediate access to the EU labour market. Only four countries in the EU have previously allowed asylum seekers immediate access to the labour market. All the rest restrict access to employment for periods of between two and 12 months, and sometimes indefinitely. Recent studies have shown that work bans are particularly costly, not only because people do not contribute immediately to the economy, but also because the bans have a persistent negative effect on asylum seekers' subsequent employment after they have finally been granted refugee status (Fasani *et al.*, 2021).

The challenge of economic integration

The scale of future arrivals and the length of stay of refugees will depend both on what happens with the conflict and on Ukraine's post-conflict economic prospects. While not all refugees will want to stay in the EU, the large-scale destruction already witnessed suggests that the country's post-conflict economic difficulties may prompt many refugees to prolong their stay or even to settle down. The return of refugees could also be jeopardised by the lack of security in certain areas or in the country as a whole. It is therefore likely that a proportion of refugees will stay in the EU for a long time, if not permanently, as happened with Yugoslav refugees long after the conflict ended (Bahar *et al.*, 2022).

The economic integration of refugees poses specific challenges (Verdugo, 2019). Most studies suggest that, at least initially, refugees encounter more difficulties than economic immigrants in finding employment and integrating into the host country's labour market (Dustmann *et al.*, 2017). This is because economic migrants prepare for migration, so those who migrate are positively selected, i.e. it is those who are best prepared and most capable of succeeding within their home population who try their luck abroad. Economic migrants are also more likely than refugees to master the language of the host country and to benefit from solidarity networks that help them to integrate economically (Borjas, 1987). In contrast, the migration of refugees is not economically motivated. They are forced to migrate in order to escape physical insecurity, and they do so in an emergency. Refugees are more often workers whose knowledge is less valuable in their host country (Chiswick, Lee and Miller, 2005).

On the other hand, refugees, unlike economic migrants, face uncertainty about the possibility of returning to their country of origin. Their migration is more likely to take place over a longer time horizon than that of economic migrants, which may encourage them to build long-term relationships with the host country. Cortes (2004) finds that, in the United States, while refugees initially face greater economic hardships, they tend to catch up with economic migrants in the longer term.

How to allocate refugees

The burden of hosting refugees has always been unevenly distributed (Huertas Moraga and Hagen, 2021). The Ukrainian crisis is no exception. Most Ukrainian refugees are currently in the countries bordering Ukraine and, as of 15 March, over 60% were in Poland. As in the 2015 migration crisis, EU countries face the challenge of spreading their reception over a number of countries so that the cost doesn't fall on a small number of countries and exhaust their good will.

Despite the adoption in 2015 of a European Agenda for Migration, which highlights the benefits of cooperation, progress in this respect has been limited. The Pact on Migration and Asylum proposed by the European Commission in September 2020 has yet to be discussed by the EU Parliament and Council. In this draft, the European Commission proposes to introduce mandatory quotas based on GDP and population size, with some flexibility. A new proposal is that each country can choose either to take in refugees or to contribute to the cost of returning migrants whose asylum applications have been rejected.

Other innovative proposals are also circulating. In an influential article, Fernández-Huertas Moraga and Rapoport (2014) propose the introduction of quotas that are then tradable on a quota market between EU countries. So if a country wants to reduce its quota and take in fewer asylum seekers, it can pay another country to receive more. Fernández-Huertas Moraga and Rapoport (2014) also propose the introduction of a system that could match asylum seekers' preferences with each state's preferences. Asylum seekers would thus declare which countries they prefer, and the countries would identify their preferences for different categories of asylum seekers. A centralised allocation algorithm would allocate asylum seekers based on the two groups' respective preferences. While governments have always been reluctant to offer asylum seekers greater choice, the EU Commission is nevertheless proposing to take into account their preferences and try to receive them in countries where they have "meaningful links".

Whatever system is put in place to distribute the Ukrainian refugees, they are currently free under temporary protection to move between European countries and thus to choose their preferred destination. If reception quotas are introduced, it is not clear how effective they will be unless refugees' mobility is restricted. However, it seems difficult to move

refugees in an authoritarian manner to countries that they have not chosen and where they have no ties and may have difficulty integrating. In the short term, the most credible solution seems to be to combine compensation for the countries that receive the most refugees with incentives to settle in countries that do not receive so many.

What direction for monetary policy in 2022?

By Christophe Blot

With the return of inflation in 2021, the focus is now on the central banks and their mandate for price stability. Between 15 and 17 December 2021, the Federal Reserve, the Bank of England (BoE), the European Central Bank (ECB) and the Bank of Japan (BoJ) all held their final monetary policy meetings of 2021. What do these meetings tell us about their approaches to asset purchases and monetary policy in 2022? Is a rapid rise in interest rates on the cards? Despite remaining uncertainty about the future course of the pandemic and its consequences for activity in the first half of 2022, the central banks have gradually revised their assessment of the situation with regard to rising inflation. They now think that the inflationary shock will continue into 2022. Based on this, the British were the first to act as the

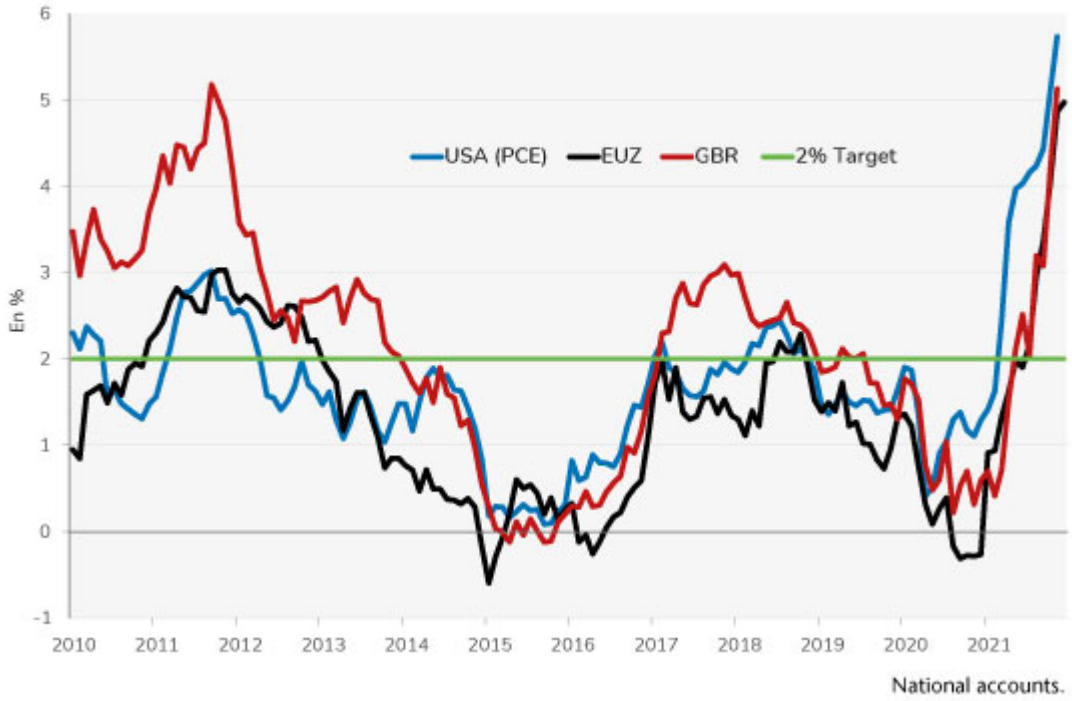
BoE announced an increase in its key rate. The Federal Reserve is likely to follow in 2022, presaging future normalization. As for the ECB, despite winding down its asset purchase programme linked to the health crisis, it is not yet envisaging the normalization of monetary policy. In any event, its latest meeting did not suggest a rate hike in 2022 in the euro zone.

Central banks raise inflation expectations

The recent surge in prices in all the industrialized and emerging countries is largely due to the rebound in energy and many other commodity prices in connection with the effects of the health crisis on the global economic situation in 2020 and 2021.[1] This follows a long period of low inflation, which led central banks to set their interest rates at a very low level and to implement unconventional monetary policies such as asset purchase programmes. These policies, which resulted in sharp increases in their balance sheets, were aimed at holding down long-term rates.[2] Yet price stability is a key element of the central banks' mandate. It is therefore natural that the recent inflationary pressures raise the question of how they will react and whether they might tighten their monetary policy stance, since inflation is well above the 2% target generally used by central banks to judge price stability.[3]

Indeed, in December 2021, the year-on-year change in the consumer price index rose to 5% in the euro zone and, in November, 5.1% in the UK (Figure 1). In the United States, the consumer price deflator – an indicator monitored by the Federal Reserve – rose by 5.7%, the highest level since the early 1980s.[4] Beyond the impact on energy prices, the underlying indices also rose. In the euro zone, the year-on-year change climbed from 0.4% in December 2020 to 2.7% a year later, while in the US the underlying consumption deflator reached 4.7% in November.[5]

Figure 1. **Dynamics of inflation**



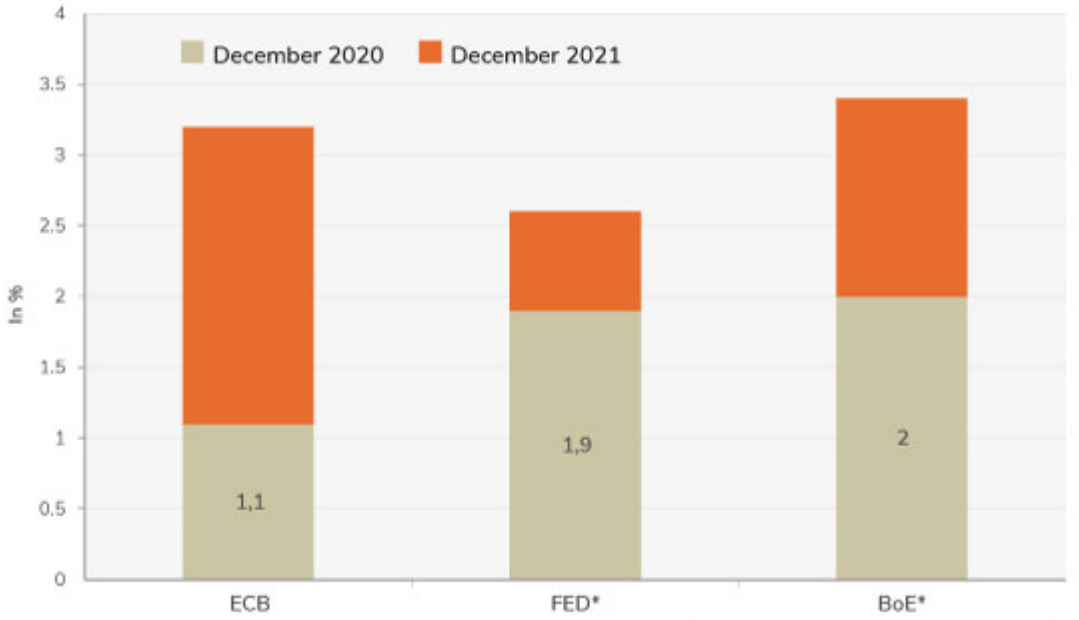
While initially the central banks were not all that concerned about the phenomenon, considering it temporary, it is clear that they have gradually revised their view, resulting in upward revisions of their inflation expectations for 2022 (Figure 2). Thus, the inflation projection

that was communicated by the Federal Open Market Committee (FOMC) in December 2020 for the end of 2022 was 1.9%. One year later, the inflation forecast for the fourth quarter of 2022 was 2.6%. The ECB has also issued a significant revision, with inflation expectations rising from 1.1% in December 2020 to 3.2% – for the year as a whole – according to the latest projections of December 2021.[6] Inflationary pressure is still considered temporary, as all three central banks foresee inflation in 2023 closer to the target.[7] Nevertheless, in the context of a recovery but also of uncertainty about the effects of the new Omicron variant, the central banks are facing a dilemma. Should they counter these inflationary pressures by tightening monetary policy? Even if the rebound in inflation is temporary, inflation would be well above target for some months, which could lead to second-round effects. Moreover, the accumulation of household savings could boost growth in 2022 and keep inflation high.[8]

Conversely, could tightening prematurely undermine the recovery and slow the fall in the unemployment rate? In this respect, the unexpected return of inflation could also provide an opportunity to see how the ECB and the Federal Reserve might adjust their monetary policy after the announcement of their inflation target revisions. Indeed, in July 2020, the US central bank announced that it wished to wait for an inflation

target of 2% on average, indicating that after being under target, as was the case in recent years, it would tolerate inflation above 2%. The rebound in inflation might have suggested that the Federal Reserve would be less reactive to rising inflation. However, the acceleration of prices has been significant in the US, and the recent change in tone suggests that even if the Fed tolerates inflation above 2%, the current level is probably too high.[9] Paradoxically, the ECB has not announced average inflation targeting (AIT) but has made it clear that the target is 2% and that it should be interpreted *symmetrically*. The ECB therefore considers that inflation below or above 2% is not compatible with its objective of price stability. Nevertheless, this is a medium-term target and takes into account lags in the transmission of monetary policy. So even though the ECB has not indicated that it will tolerate inflation above 2%, it will not automatically tighten monetary policy when observed inflation exceeds the target but it will condition its action on its inflation expectations over a 12 to 24-month horizon. Its expectation for 2023 therefore indicates that current inflation is temporary and that beyond 2022 inflation should again be below 2%.

Figure 2. **Inflation expected for 2022 by the ECB, the Federal Reserve and the Bank of England**



** Inflation expected for the fourth quarter 2022.*
ECB, Federal Reserve (FOMC), BoE (Inflation report).

The Bank of England and Federal Reserve consider normalization

The communications from the central banks' monetary policy meetings held between 15 and 17 December 2021 were expected to focus on two points: the continuation of their asset purchase programmes and the level of the key interest rates.

The BoE was the quickest to react by raising its key rate by 0.15 percentage points, from 0.1% to 0.25%. As stated in its 16 December press release: "The MPC's remit is clear that the inflation target applies at all times, reflecting the primacy of price stability in the UK monetary policy framework." Furthermore, it was decided to maintain the stock of securities acquired by the BoE. A key element of this decision is the way in which the BoE has implemented its asset purchase policy.
Unlike the Federal Reserve and the ECB, which announce purchase flows on a

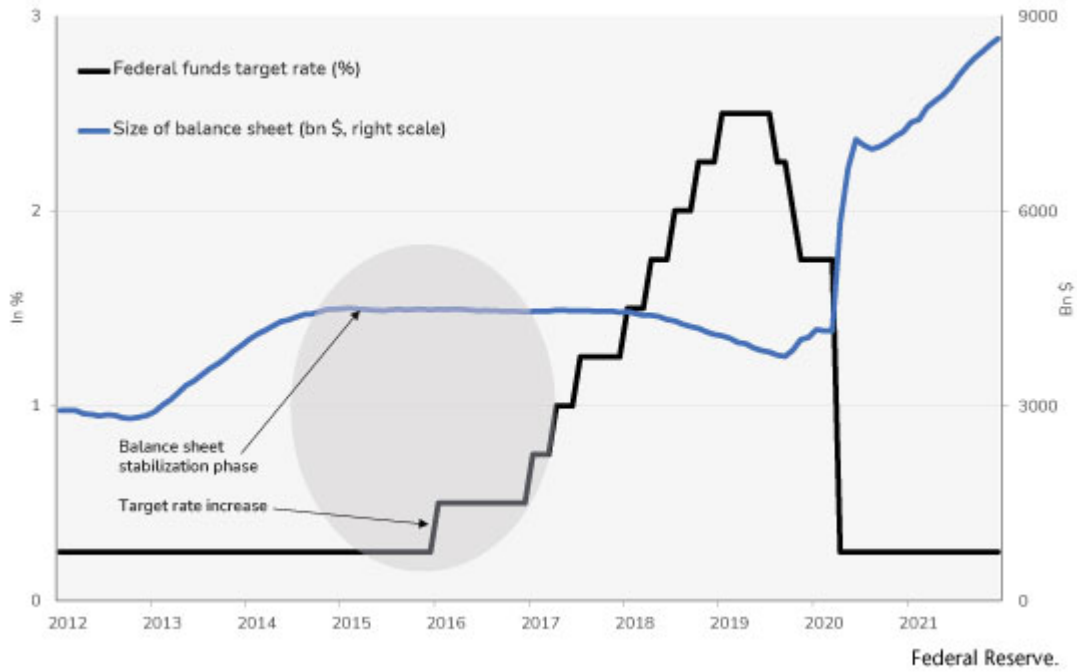
monthly basis, the BoE proceeds in stages, announcing a target for the stock of assets – revised if necessary – and making purchases quickly in order to reach the target.[10] Moreover, the BoE has not made its rate decisions conditional on its asset purchase policy, whereas ECB communiqués have always stated that it would only consider rate hikes once asset purchases have stopped.

In the United States, a rate hike is to be preceded by a so-called taperingphase during which the Federal Reserve gradually reduces monthly purchases. The strategy implemented by the US central bank therefore consists first of all of communicating this path for asset purchases. This first step was launched in November. At the meeting of 15 December 2021, the FOMC announced that the pace of tapering down was being accelerated: from January 2022, monthly purchases will be USD 60 billion (40 bn for Treasuriesand 20 bn for Mortgage-backed Securities) compared with USD 120 billion per month before November 2021. There will be further reductions in the following months. The Federal Reserve is acting in a sequenced manner, as it did during the previous phase of normalization that began in January 2014 (Figure 3). Purchases stopped at the end of 2014, and the policy rate was raised in December 2015. Finally, the reduction in the size of the balance sheet – in billions of dollars – had been announced in June 2017 and implemented from October 2017.[11] However, the

timetable is likely to be accelerated, as information from the 15 December meeting suggests that there could be three rate hikes in 2022. The time between the end of asset purchases and a rate hike would be shortened, and rates would rise more quickly than in this previous phase of normalization, when there was only one hike in 2015 and another one a year later. The FOMC members in fact anticipate a target rate for federal funds of 0.9% at the end of 2022, compared to the current range of 0-0.25%.[12]

It should also be noted that, in accordance with its mandate, the FOMC is focusing on the situation in the labour market, since the Federal Reserve must not only ensure price stability but also achieve maximum employment. In this regard, while the unemployment rate fell to 4.2% in December, employment remains 1.8% (or 2.8 million jobs) below the December 2019 level, also reflecting withdrawals from the labour force. The prospects of stabilizing the size of the balance sheet – in value terms – in early 2022 and of several rate hikes therefore indicate that the Federal Reserve sees labour market conditions as gradually converging towards the maximum level of employment.

Figure 3. **Interest rates in the United States and size of Federal Reserve balance sheet**

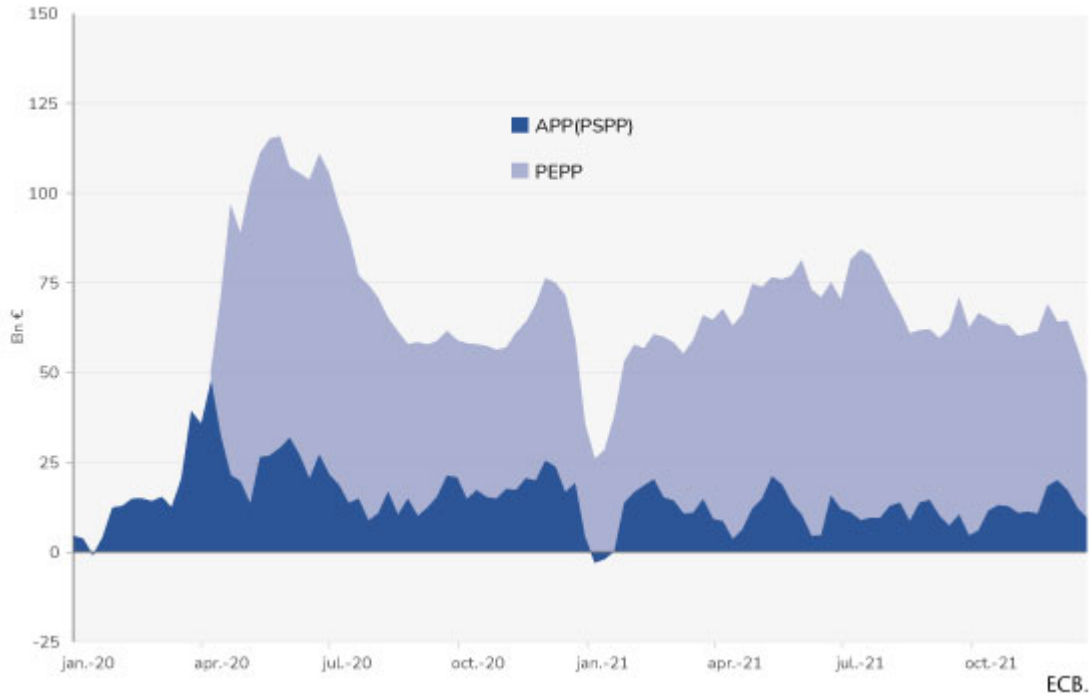


The ECB takes a more cautious approach

In the euro zone, inflationary pressures have increased even as the economic recovery remains more fragile. In the third quarter of 2021, GDP was still 0.3% below its level at the end of 2019, whereas for the United States it was 1.4% above. There is nevertheless improvement in terms of the unemployment rate, which in November 2021 stood at 7.3%, lower than the level observed prior to the outbreak of the pandemic. However, in her press release at the 16 November press conference, Christine Lagarde considered that monetary policy must remain accommodating in order to bring inflation down towards its medium-term target. Thus, beyond the current inflationary pressure, the ECB still considers that inflation will remain below target in 2023, which therefore argues for a slower normalization of monetary policy in the euro area.

Nevertheless, the Governing Council announced the end of the Pandemic Emergency Purchase Programme (PEPP) in 2022. The PEPP had been put in place in March 2020, in the context of the pandemic, to combat sovereign risk.[13] Note that purchases had already slowed in line with the announcements made since September 2021 (Figure 4). However, this reduction in purchases under the PEPP would be partly offset by an increase in purchases throughthe Public Sector Purchase Programme (PSPP). In the second quarter of 2022, purchases are to increase from 20 to 40 billion euros per month. They would then adjust to 20 billion euros in October 2022, after a plateau of 30 billion euros in the third quarter. At this stage, the ECB is not indicating a complete halt to asset purchases. The size of its balance sheet would therefore continue to grow, postponing for the time being the prospect of a rate hike, probably beyond 2022.[14]

Figure 4. **Cumulative monthly flows of ECB purchases of sovereign bonds**



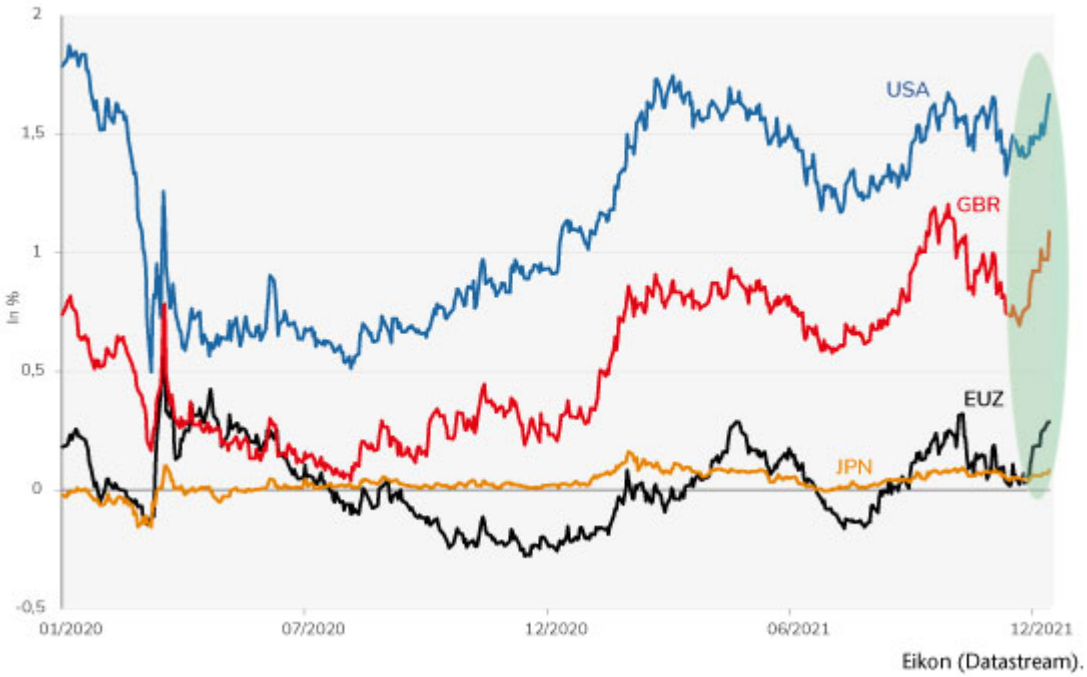
Although there has been talk of normalizing monetary policy, the central banks remain cautious about the recent inflationary surge, considering it a temporary episode. The same caution seems to prevail in most other industrialized countries. In Japan, although inflation is rising (to 0.6% in December 2021), it remains well below the BoJ's target. The BoJ has therefore not changed its communications. Quantitative easing continues, and it is sticking to the goal of keeping the short-term rate at -0.1% and the government bond rate at 0%. Earlier this month, the Bank of Canada and the Australian central bank also maintained their rate targets. The target rose, however, in Norway.

How did the markets react to these policy announcements?

Since 15 December, long-term rates have risen in the euro zone, the United States and the United Kingdom, approaching the levels seen before the outbreak of the pandemic (Figure 5). The trend in Japan is much more modest. The average rate on government bonds issued in the euro zone rose by 24 basis points, with a slightly larger increase in Italy and Spain than in Germany and France. In the United States, the increase is comparable: 24 basis points between 14 December 2021 and 4 January 2022; but the rate is still below its pre-crisis level. In the UK, it's risen over 35 basis points. The markets have therefore incorporated a moderate tightening of monetary

policy by 2022.
Should inflation remain at the level observed at the end of 2021, the central
banks could accelerate the pace of monetary policy normalization, either byraising policy rates further or by reducing the
size of their balance sheets, which would probably result in a further rise in
long-term rates.

Figure 5. **Changes in long-term rates**



Eikon (Datastream).

The year 2022 should therefore be characterized by
a rise in short-term rates and probably also in long-term rates in the UK and
the US. It is clear that the inflationary surge observed since mid-2021 will
lead the central banks, in particular the BoE and the Federal Reserve, to
accelerate the normalization process. Normalization is also important to give
central banks room to manoeuvre in case of new negative shocks. There is,
nevertheless, economic uncertainty due to the arrival of the Omicron variant.

Even if agents have partly adapted to the health restrictions, a slowdown in growth without a reduction in inflationary pressures would create a more delicate trade-off for the central banks between their price stability objective and the need to support the economy.

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[1] See the OFCE post of 17 December 2021 [in French] on this point and the more detailed analysis of Le Bayon and Péléraux (2021).

[2] The policy rate set by the central banks represents a target for very short-term market rates. Changes in this rate are then intended to influence bank rates and all market rates along the term structure.

[3] The Federal Reserve and the ECB have recently reaffirmed the symmetry of this objective by revising their inflation targets.

[4] Inflation measured by the consumer price index rose by 7.1% in December.

[5] In December 2021, the consumer price index adjusted for food and energy prices rose by 5.5%.

[6] The way that inflation expectations are determined differs between the central banks. In the case of the Federal Reserve, expectations are formulated by the members of the FOMC, while for the ECB they are formulated by its own economists.

[7] Respectively, 2.3% and 2.2% at the end of the year in the US and UK, and 1.8% for the year as a whole in the euro zone.

[8] See our October 2021 economic forecasts published in *Policy Brief* no. 94: Le prix de la reprise [The Price of the Recovery].

[9] See the OFCE post of 4 January 2022 on inflation targets and expectations [in French] and the detailed analysis of Blot, Bozou and Hubert (2021).

[10] See Gagnon and Sack (2018) for a comparison of these two strategies.

[11] Measured in GDP points, the size of the balance sheet fell slightly earlier, from 26.4% in Q1 2015 to 18.8% in Q2 2019. Prior to the implementation of unconventional measures, the Federal Reserve's balance sheet was between 6% and 7% of GDP.

[12] This is the scenario that emerges from the *Minutes*. The Federal Reserve publishes a detailed report of the FOMC meeting three weeks following the meeting.

[13] See Blot, Bozou, Creel and Hubert (2021) for a more in-depth discussion of the objectives and effects of the ECB's sovereign asset purchase programmes.

[14] The 16 December press release does indeed state that: "We expect net purchases to end shortly before we start raising the key ECB interest rates."

How will US fiscal policy affect pressure on prices?

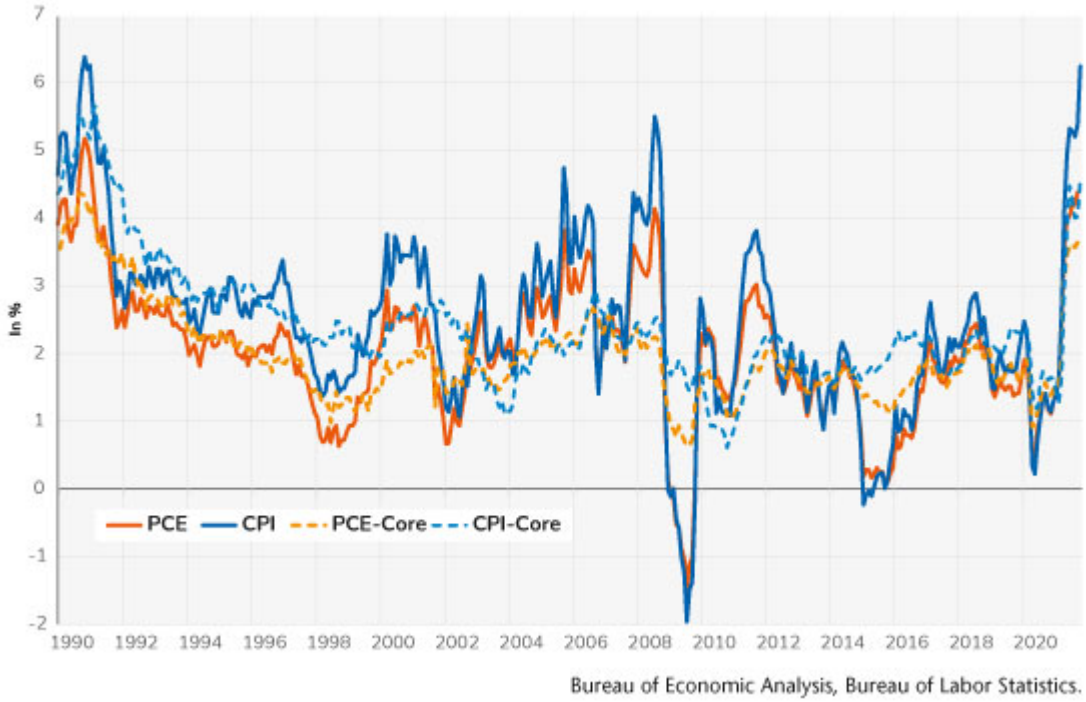
by Elliot Aurissergues, Christophe Blot and Caroline Bozou

The latest inflation figures for the United States confirm the trends seen over the last few months. In October 2021, consumer prices rose by 6.2% year-on-year. While rising prices is a global phenomenon, among the industrialized countries this has been particularly marked in the US. Inflation in the euro zone over the same period was 4.1%. This level of increase in inflation has not been seen since the late 1990s, so it is attracting considerable attention in the US policy debate, not least because it echoes a controversy that began early in Joe Biden's mandate over the fiscal stimulus passed in March 2021. Although inflation is being driven in part by rising energy prices, the fact remains that tensions have rapidly increased. Excluding energy and food components, inflation has exceeded 4% since June 2021, suggesting a risk of overheating for the US economy. While the European macroeconomic context does not allow us to identify an equivalent risk for the euro zone, the fact remains that a sustained rise in US inflation could have repercussions for the zone. Beyond the impact on competitiveness, the dynamics

of US inflation
could influence decisions on rate changes and the conduct of monetary policy by
the Federal Reserve and the European Central Bank.

Regardless of the indicator – consumer price index
or consumption deflator – prices have clearly accelerated since March 2021 (**see the figure**)[1]. The energy component is undoubtedly important,
but it does not fully explain this dynamic, since the latest figures for the
underlying indices, i.e. adjusted for energy and food prices, show a
year-on-year increase of 4.6% for the CPI and 3.6% for the consumption deflator[2]. Note too that this development reflects a
catch-up from 2020, when inflation was particularly moderate in the context of
the pandemic and the sudden halt in activity. Thus, on average over 2020 and
2021, up to October, the consumption deflator has risen by 2.1%, in line with
the target adopted by the Federal Reserve[3]. The recent tensions obviously reflect the
dynamics of the post-lockdown global economic recovery, which the United States
is clearly part of, and which has led to strong pressure on energy prices, but
also on supplies, as evidenced by the supply difficulties for certain goods and
the soaring cost of maritime freight.

Figure 1. **Inflation in the United States**



Bureau of Economic Analysis, Bureau of Labor Statistics.

Beyond these global factors, there is the question of an inflationary phenomenon that may be intrinsically linked to US economic policy. Even before the recent discussions on the 2022 budget vote, the measures taken to deal with the Covid crisis first by the Trump administration and then by the Biden administration amount to a grand total of USD 5.2 trillion, representing more than 23 points of GDP for the year 2019. This spending over 2020 and 2021 represents an unprecedented level of stimulus over the last forty years. While there was undoubtedly a consensus on the need for the measures proposed by Biden and approved by Congress in March 2021, their magnitude nevertheless caused a great deal of debate, as the recovery was already underway and the economy was already benefiting, as it still is today, from the fiscal support measures voted in 2020 and from a

highly expansionary monetary policy[4]. Could this expansionary economic policy – both fiscal and monetary – be causing the economy to overheat, fuelling the return of inflation, as economists such as Lawrence Summers and Olivier Blanchard fear, or, on the contrary, is the effect on inflation being overestimated, as other analyses suggest? We plunge into this debate in an *OFCE Policy Brief*, specifying in particular the conditions that could lead to a sustainable increase in inflation. The risk will depend on the size of the multipliers measuring the effect of the stimulus plans on activity and unemployment, the position of the US economy relative to its potential, and changes in inflation expectations, all of which are subject to some uncertainty.

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[1] The consumer price index (CPI) is calculated from a survey of the prices of a basket of average goods consumed by a representative household. The consumption deflator is derived from the national accounts and represents the price system that allows the transition from consumption in value to consumption in volume. See La désinflation importée [Imported Deflation] in *OFCE Review*, 2019, No. 162, for more details on the difference between these two measures of inflation.

[2] Unadjusted for energy and food prices, the consumption deflator rose by 4.4%. The data for the deflator

refer to the month of September, while the publication of the consumer price indices is more rapid, the latest figures published being those for October.

[3] The consumer price deflator is the indicator used by the Federal Reserve to assess price stability in the United States.

[4] Two other projects were then announced: an infrastructure investment plan (*American Jobs Plan*) and a household package (*American Families Plan*). These are not crisis-specific measures, but measures that are supposed to mark the direction of fiscal policy over the next eight years. These plans are currently being discussed in Congress as part of the 2022 budget vote.

Should the ECB be concerned about the recent rise in inflation?

by Christophe Blot, Caroline Bozou and Jérôme Creel

In August 2021, inflation in the euro area reached 3% year-on-year. This level, which has not been seen since November 2011, exceeds the European Central Bank's target of 2%. This recent momentum is being driven partly by oil prices, but there has been a simultaneous rebound in underlying inflation,

which excludes the energy and food price indices from the calculation.
Inflation in the United States is also returning to levels not seen for several years, fuelling the debate on a potential return of inflationary risks. Given the central banks' mandate to maintain price stability, it is legitimate for them to examine the sources of renewed inflation. In a recent paper in preparation for the Monetary Dialogue between the European Parliament and the ECB, we discuss the temporary rather than permanent nature of this episode of inflation.

The recent development of inflation cannot be dissociated from the overall economic situation, which today is still strongly affected by the health crisis. After a sharp fall in activity – GDP contracted by 6.5% in 2020 – the macroeconomic performance of the euro area remains erratic. The crisis has been unprecedented both in terms of its scale and in terms of its sectoral characteristics and the nature of the shocks that have hit the euro area economies. The Covid-19 crisis has in reality been characterised by a simultaneous negative shock to both supply and demand (see Dauvin and Sampognaro, 2021).

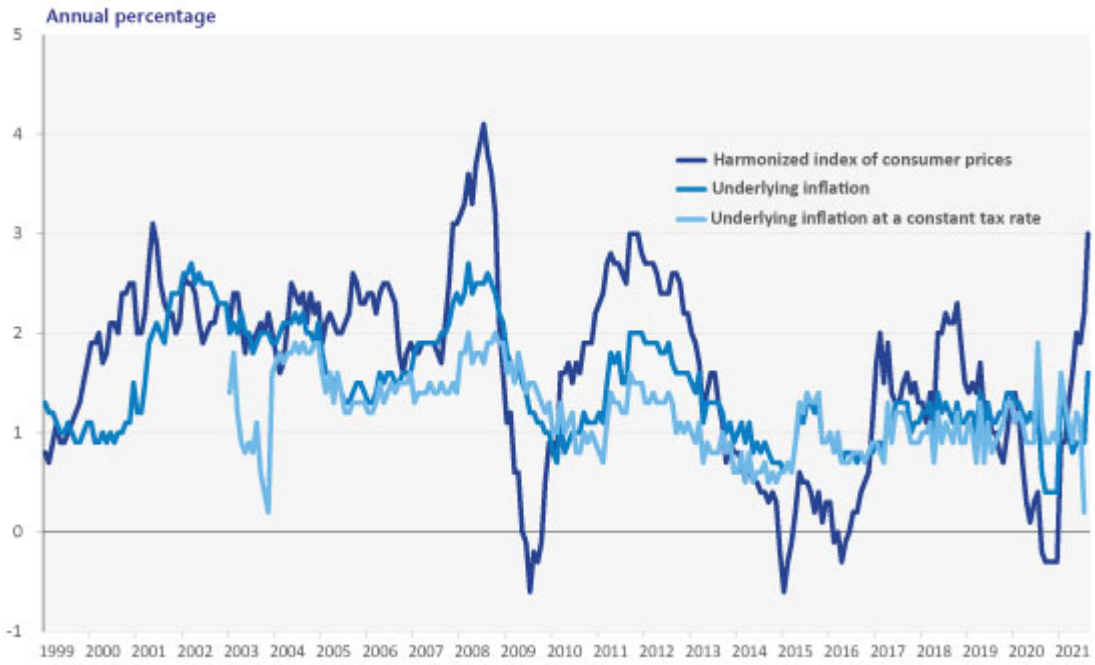
The factors driving current inflation appear to be temporary in nature. Indeed, a review of recent data suggests that the rise in

inflation is mainly due to energy prices, to changes in Value-Added Tax rates and to the recovery from the most dramatic one-year recession since World War II (Figure 1). However, at a disaggregated level, it appears that for most goods, prices are often below the December 2019 level, while prices for some services are higher (Figure 2).

Nevertheless, there are many factors that could influence inflation over the medium term, and they leave some uncertainty about future pressure. The demand shock from the European fiscal stimulus and from labour market pressures is likely to be small. The inflationary cost of a fall in euro area unemployment is now very low – there is talk of a flattening of the Phillips curve, see Bobeica, Hartwig, and Nickel, 2021) – and job vacancies, though high, are below the levels of 2018 when there were no fears of a return of inflation. However, agents' dissaving behaviour is generating inflationary pressures that could herald a more uncertain path. A surge in demand could fuel future price increases, especially if the difficulties in supply adjustment observed recently in certain sectors were to persist. As for supply difficulties and the rising cost of maritime transport, the latter's strong correlation with oil prices suggests this will fall over the next two years (see the US Energy Information Administration bulletin).

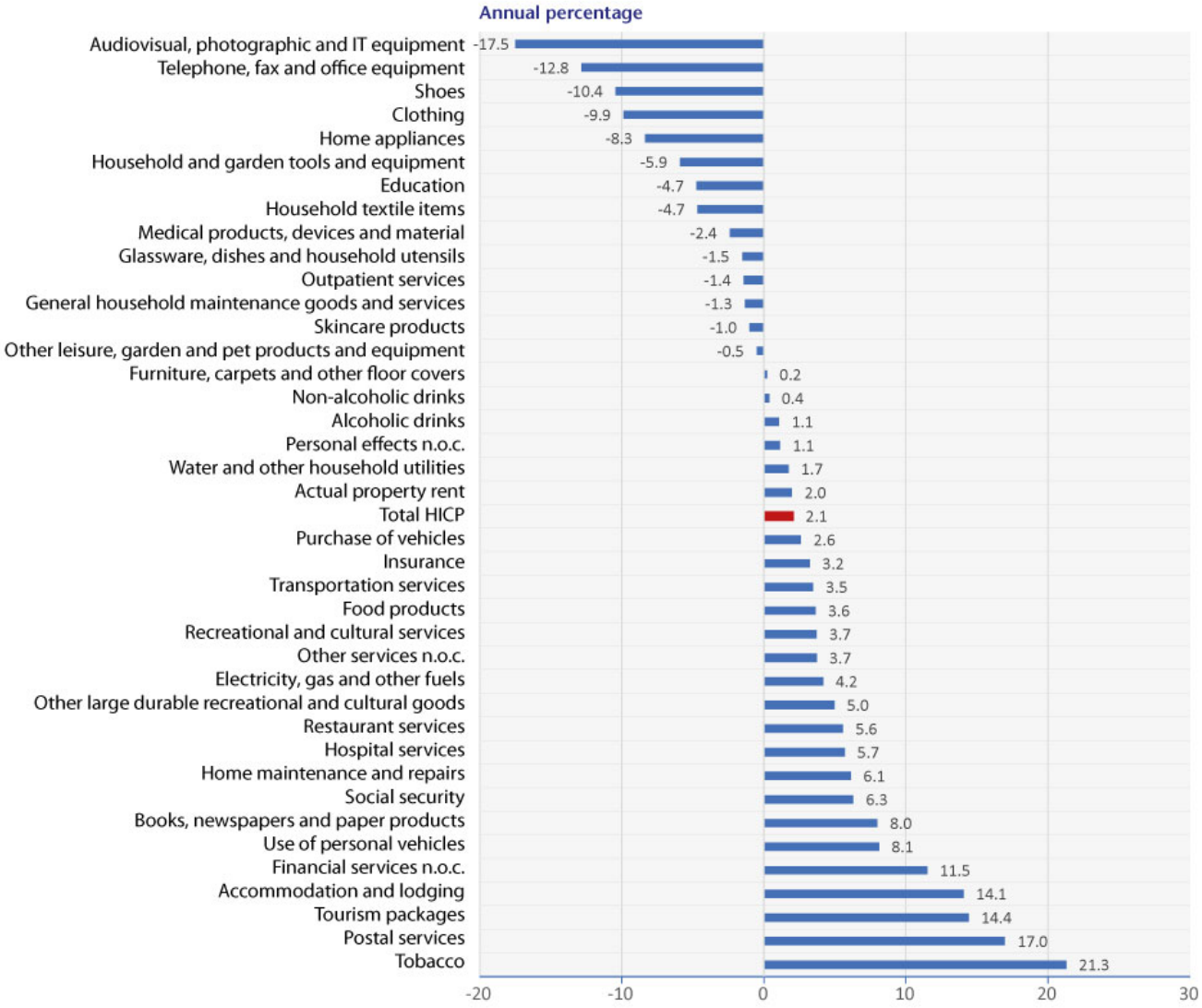
However, if we take a longer view, we can see that the upturn in inflation in no way makes up for the many years during which inflation fell below the 2% target (Figure 3). Thus, as long as the surge observed in recent months remains contained, this return of inflation could be seen as good news for the ECB, enabling it to finally reach its target and even possibly make up for past under-adjustments.

Figure 1. Inflation in the euro area



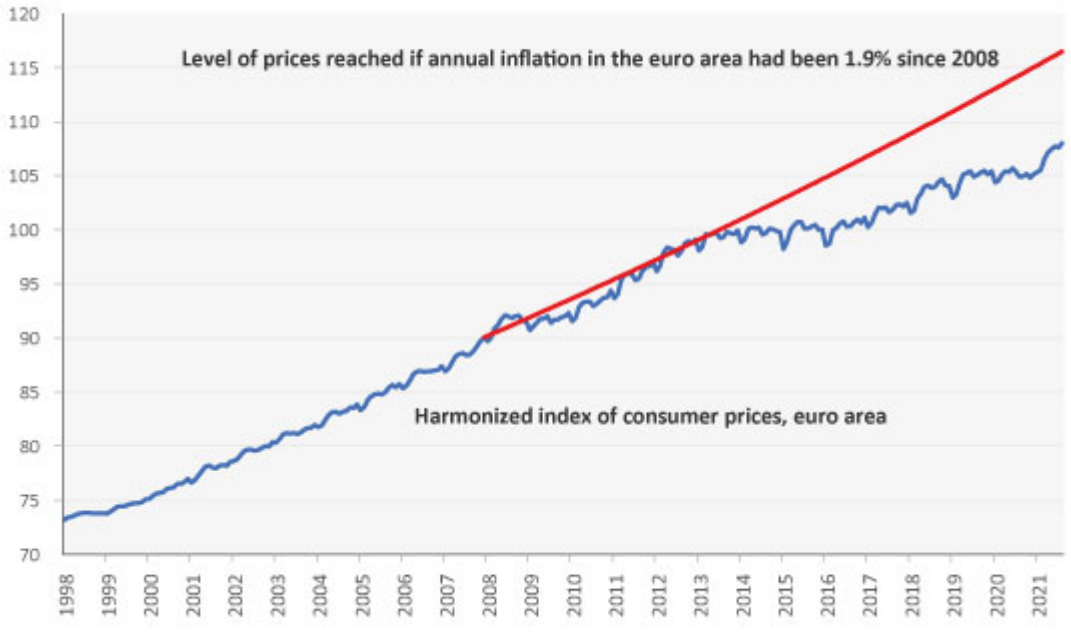
Source: Eurostat.

Figure 2. Breakdown of price rises and falls since December 2019



Source: Eurostat.

Figure 3. Actual and targeted price levels, euro area



Source: Eurostat.