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Beyond normal central banking? Monetary policy after the pandemic

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Contents

Abstract	4
1. Introduction	5
2. Revising the inflation target	7
3. Central banks and climate change	12
4. Covidflation: a return to normalcy?	16
4.1 Why rising interest rates hurt workers	17
4.2 Why rising interest rates portend fiscal austerity	19
4.3 Why raising interest rates exacerbates climate change	23
5. Conclusion	28
References	30

Abstract

In recent years the world's two largest inflation-targeting central banks – the US Federal Reserve (the Fed) and the European Central Bank (ECB) – have revised their monetary policy frameworks in a more progressive direction. Whereas the Fed decided to abandon its strategy of pre-emptive tightening whenever unemployment ran too low (implicitly acknowledging the potential benefits of 'tight labour markets' and a 'hot pressure economy' for low-income workers), the ECB became committed to better integrating climate change considerations into its monetary policy operations. In an ironic twist of fate, however, both revisions quickly became antiquated when inflation started to rise again in the wake of the pandemic. The change in macroeconomic context (from stubbornly low inflation to persistent higher inflation) led both central banks to advocate 'policy normalisation' by raising the short-term interest rates and reducing the size of the central banks' balance sheet. In this working paper we discuss the revisions of the Fed's and ECB's monetary policy frameworks and explain why a return to a pre-2008 normal central banking in response to the current inflationary crisis should not be the preferred way forward.

1. Introduction

Central banking has changed drastically over the past 15 years. In response to the global financial crisis of 2008, major central banks of advanced market economies embarked on a series of unconventional measures. They set up a variety of liquidity programmes to stabilise the shadow banking system, exposing their balance sheet to new risks and potential financial losses. When short-term interest rates reached the effective zero lower bound (ZLB), many central banks tried to stimulate growth and inflation via subsequent large-scale asset purchase programmes known as quantitative easing (QE). While QE might have been effective in avoiding outright deflation, it did not allow central banks to sufficiently boost aggregate demand and raise inflation. Persistently low real interest rates and inflation even raised the prospects of secular stagnation and revealed the need for more effective coordination between monetary policy and fiscal policy. The Covid-19 pandemic created the ideal context for such (at least implicit) coordination, as major central banks engaged implicitly – and sometimes even explicitly – in the monetary financing of soaring fiscal deficits needed to support real incomes. At the same time, the climate crisis poses new challenges for central banks. Their financial supervisory and monetary policy frameworks have to be adjusted for the necessary transition towards a low carbon economy.

In this working paper we discuss how these contemporary challenges have forced monetary policymakers to go beyond the ‘holy trinity’ of normal central banking, i.e. ‘price stability as the primary *goal* of the central bank; central bank independence as the *institutional arrangement*; and the short-term interest rate as the operational target’ (Braun and Downey 2020: 1). The persistent undershooting of their inflation targets prompted the world’s two largest central banks – the US central bank or Federal Reserve (the Fed) and the European Central Bank (ECB) – to conduct a strategic review of their monetary policy frameworks. In this working paper we compare and assess the distinctive outcomes of these two strategic reviews.

Both central banks have adopted a new definition of price stability but with clear distinctions. The Federal Reserve will aim for an *average* inflation target of 2 per cent, which effectively amounts to a flexible price-level target. Instead of treating 2 per cent inflation as a short-term target, it will tailor its monetary policy to long-term changes in the general price level. The Fed seeks to adopt a ‘wait-and-see’ approach to achieve maximum employment: its monetary policy decisions will be based on actual labour market trends rather than estimations of unobservable (conceptual) variables such as the natural

rate of unemployment. The Fed's new monetary policy framework reflects its resolution to abandon its preemptive tightening strategy, which has weakened the bargaining power of especially lower-skilled workers by preventing labour markets from running hot. It also reflects a growing recognition – at least among some members of the Fed's main decision-making body, the Federal Open Market Committee (FOMC) – that very tight labour markets can help reduce income disparities and even lift the long-term potential growth rate economy. The ECB explicitly defined its 2 per cent inflation target as symmetric, unlike the previous one that was 'below, but close to, two per cent'. This means that it will consider negative and positive deviations of inflation from the target to be equally undesirable. The first objective of this working paper is to explain why the Fed's reinterpretation of its price stability goal has potentially more radical implications for the bargaining power of low-wage workers than the ECB's.

The ECB's strategic review, by contrast, resulted in an explicit commitment 'to an ambitious climate-related action plan to further include climate change considerations in its monetary policy framework'. A central part of its action plan will be to incorporate climate change concerns in its corporate sector asset purchases and collateral framework. By making 'green' assets used to finance investments in sustainable technologies more attractive and 'dirty' assets issued to finance carbon-intensive activities less so for private investors, this can have significant effects on price setting in financial markets. Rather than actively facilitating the energy transition and promoting the decarbonisation of the economy, the key motivation of the ECB's green turn is to reduce its balance sheet against climate-related financial risks. Like other central banks in the advanced market economies, the ECB remains reluctant to take measures that directly reallocate credit and capital from dirty to green activities – such as green credit guidance – that would clash with their self-perceived neutrality and political independence.

The surge in inflation in the wake of the pandemic to levels unseen since the 1970s stagflation crisis greatly challenges the new monetary policy frameworks of the Fed and the ECB; the strategic reviews were, after all, mostly concerned with the problem of low inflation. Rising inflation forced both central banks to raise interest rates much sooner than they anticipated, which prevents the US and eurozone economies from fully reaping the potential benefits of hot labour markets that many observers expected during the post-lockdown recovery. At the same time, announcements about a speedier unwinding of its corporate bond holdings will also make the greening of the ECB's monetary policy much less pressing and conducive to decarbonisation. The end of the era of 'cheap money' risks hampering much-needed investments in sustainable technologies by both private and public sectors. Rising interest rates are already driving up government borrowing costs, resulting in rising sovereign bond spreads in the eurozone. After comparing and assessing the new monetary policy frameworks of the Fed and the ECB, we explain why a return to normal central banking is not the right answer to the current inflation crisis.

2. Revising the inflation target

After the global financial crisis (GFC) of 2008, the Fed and the ECB were confronted with the following challenges.

- Since the GFC, inflation has been behaving rather oddly and quite unlike what orthodox theories would have predicted. From the start of the financial crisis in 2008 until the second half of 2021 inflation has been persistently below target in most advanced economies. This new phenomenon of excessively low rates of inflation has been aptly labelled ‘lowflation’ by the IMF (2014). What was further perplexing was that inflation was remarkably stable during the ‘low’ of the recession, when unemployment peaked, as well as during the ‘high’ of the recovery, when unemployment dropped to historically low levels. This suggested that the negative relationship between cyclical unemployment and inflation, expressed in the Phillips curve, had become muted, rendering inflation less volatile and less responsive to changes in economic slack (IMF 2013). This enigma led to a twin puzzle known in the literature as the ‘missing (dis)inflation’ puzzle (Bobeica and Jarociński 2019; Coibion and Gorodnichenko 2015; Peersman 2022).
- In the aftermath of the crisis, short-term interest rates, the conventional instrument targeted by central banks to keep inflation at roughly 2 per cent, quickly hit the ZLB. As a result, the Fed and ECB were forced to take a series of ‘unconventional’ measures to stimulate the economy. Their main instrument became QE – large-scale asset purchase programmes whereby central banks create new money to buy large amounts of financial assets (mostly sovereign bonds) to push down long-term interest rates and push up asset prices. These new expansionary measures did not enable the Fed and the ECB to boost aggregate demand sufficiently to meet their inflation target. This failure had various causes, but the most important one is that a restrictive fiscal policy stance counteracted the stimulating effects of QE. This was especially the case in the Eurozone, where a deep institutional commitment to austerity not only eventually forced the ECB to engage in QE but also to a great degree neutralised its positive impact on aggregate demand and inflation. The fact that monetary and fiscal policy worked at cross-purposes weakened a key motivation to promote central bank independence (CBI), as Ben Bernanke acknowledged after his tenure as Fed chairman: ‘the same logic that holds that CBI is necessary to avoid excess inflation can be

turned on its head, to imply that CBI is a barrier to the fiscal-monetary coordination needed to combat deflation' (Bernanke 2017).

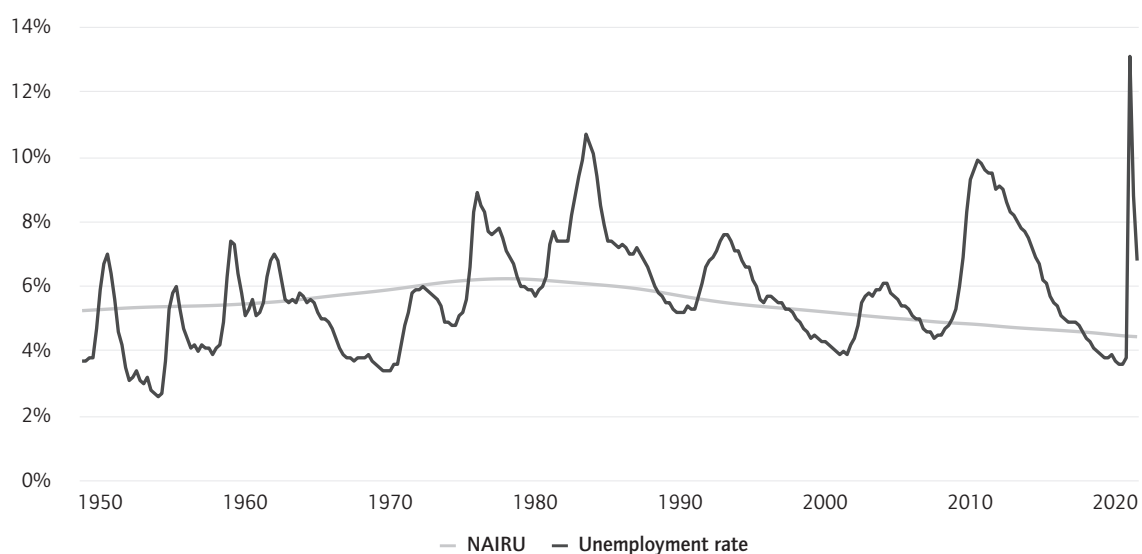
- QE had several negative side effects. By pushing up asset prices, QE inevitably worsened wealth inequality. While expansionary monetary policy could also reduce income inequality by boosting employment and pushing up wages, it is highly doubtful whether QE was a very effective instrument to do so. Monetary policy is usually more effective in *constraining* aggregate demand than in *stimulating* aggregate demand; it can more easily *pull down* the economy by raising interest rates than it can *push it up* by lowering interest rates (Van Doorslaer and Vermeiren 2021). In the US, for instance, publicly-listed firms issued corporate bonds to engage in massive share buybacks rather than corporate investment. When unemployment levels eventually dropped to historically low levels in the wake of a slow but gradual recovery of aggregate demand, (wage) inflation rates still did not rise as macroeconomic models of central banks predicted. The Phillips curve – the negative short-term correlation between unemployment and inflation as posited by the New Keynesian models adopted by central banks – appears to have flattened over the past few decades. Together with the fall in real interest rates and the problem of the ZLB, the flattening of the Phillips curve constrained the ability of central banks to reach their inflation targets.

In response to these challenges, the Fed and the ECB decided to conduct a strategic review. The main question underlying these reviews was how to recalibrate monetary policy for a low-interest-rate environment and the increased risk of a binding ZLB. In August 2020, Jerome Powell (Chair of the Fed) announced the conclusions of the strategy review and the following proposed changes. First, the FOMC adjusted the inflation target of 2 per cent to a target of inflation that averages 2 per cent over the long-term, implying that 'following periods when inflation has been running persistently below 2 per cent, appropriate monetary policy will likely aim to achieve inflation moderately above 2 per cent for some time'. Second, the FOMC's monetary policy decisions will be informed by 'assessments of the shortfalls of employment from its maximum level', highlighting that a very tight and hot labour market will not by itself be a policy concern in the absence of unwanted increases in inflation. Taken together, these revisions seem to suggest, at least tentatively, that the Fed will abandon its strategy of preemptive tightening credit conditions to prevent labour markets from 'overheating' – or to 'remove the punch bowl just when the party is really warming up', as Fed Chairman William McChesney Martin famously declared in a 1955 speech. According to this strategy, the Fed ought to apply the brakes early during an economic boom and allow short-term interest rates to rise prematurely, based on the assumption that a further tightening of the labour market would push inflation above 2 per cent.

The strategy of preemptive tightening played a central role in the Fed's pursuit of price stability over the last decades and is seen by many heterodox and political economists as a key pillar of the neoliberal macroeconomic policy

regime, which advanced the interests of capital owners by disciplining workers and weakening their bargaining power. Central banks contributed to this weakening by prematurely withdrawing stimulus measures to avoid the inflationary effects of tight labour markets. In the post-Keynesian interpretation (e.g. Galbraith 1997; Palley 2017; Seydl and Spittler 2016; Stockhammer 2008; Van Doorslaer and Vermeiren 2021), a defunct ‘non-accelerating inflation rate of unemployment’ (NAIRU) model of the economy offered the cognitive and normative underpinning of the preemptive tightening strategy. According to this model, every economy has a supply-side-determined ‘natural rate of unemployment’ that it can achieve without setting off a dangerous inflation spiral, which is hence called NAIRU. The model directs central banks to base their monetary policy decisions on estimations of the NAIRU: they should retract expansionary measures and start to tighten as soon as the actual level of unemployment moves towards or falls below their NAIRU estimate.

Figure 1 The actual unemployment rate and NAIRU estimate in the US, 1950-2021



Source: FRED database.

Figure 1 illustrates the preemptive strategy. It compares the Fed’s estimates of the NAIRU with the actual rate of unemployment. Between 1949 and 1979, actual unemployment was mostly below the estimated NAIRU. The cumulative difference between the actual unemployment rate and estimates of the NAIRU was negative 17.5 percentage points. From 1979 to 2021, by contrast, actual unemployment lay above the NAIRU estimate most of the time: the cumulative difference was positive 38.1 percentage points (see also Bivens and Zipperer 2018). Many authors see, in the excess unemployment created by a preemptive tightening strategy, the key reason why those years were characterised by a growing divergence between the growth in productivity and the hourly pay for non-supervisory workers and the associated fall in the

labour share of US national income (Hung and Thompson 2016; Palley 2017; Pollin 2007; Seyd and Spittler 2016; Van Doorslaer and Vermeiren 2021). Low-skilled workers are most dependent on very tight labour markets as they are the first to be fired during recessions and the last to be hired during recoveries. Across the industrialised world, central banks have contributed to the weakening of their bargaining power by prematurely raising interest rates during economic recoveries: ‘monetary policy has been persistently biased so as to depress aggregate demand late in the business cycle, before workers at the bottom of the distribution see a labour market that is tight enough to allow them to bargain for higher wages’ (Seyd and Spittler 2016: 404–405).

The Fed’s new monetary framework reflects a commitment to abandon the preemptive strategy by entailing a new leniency towards overshooting its inflation target of 2 per cent and undershooting its NAIRU estimates. The strength of its commitment hinges on the degree to which most FOMC members desire to reap the potential benefits of a ‘high-pressure-economy’ – i.e. an economy experiencing a persistent expansion of aggregate demand. There has been some enthusiasm for this goal within the FOMC. Over the past five years, Chair Jerome Powell and Governor Lael Brainard have been the most vocal advocates of a strategy of actively chasing hot labour markets in the context of the flattening of the Phillips curve. The Fed Chair, in his announcement, explicitly referred to ‘the importance of achieving and sustaining a strong job market, particularly for people from low- and moderate-income communities’ (Powell 2020).

Empirical research highlights various benefits of such a strategy (for an overview, see Bernstein and Kentele 2019 and Bivens 2017). First, it removes hidden slack in labour markets by enabling involuntarily part-time workers to find full-time jobs and also draws back discouraged workers who detached from the labour market during previous recessions but are still looking for jobs. Second, the resulting rise in the labour market participation rate reduces labour market disparities by improving the job opportunities of disadvantaged workers – especially women and people of colour – and by boosting the wages of low-skilled workers and allowing workers more generally to experience greater upward mobility and better job matches. Third, persistently tight labour markets induce firms to invest in labour-saving technologies, lifting the long-term growth potential of the economy by raising labour productivity. Faster productivity growth, in turn, mitigates potentially inflationary pressure stemming from faster wage growth associated with tight labour markets.

These observations are clearly at odds with a central assumption of the NAIRU model on which the strategy of preemptive tightening is based – i.e. that the NAIRU is exogenously determined by the supply-side of the economy. If the NAIRU is also endogenously shaped by aggregate demand, it becomes a policy *variable* rather than a policy *target* for a central bank. This implies that the principle of long-run money neutrality – i.e. the belief that monetary policy can only affect nominable variables like prices and wages in the long-term but has no effect on the real variables such as economic output and employment that provided a key justification of central bank independence – no longer

holds. Precisely for these far-reaching theoretical and policy implications, it is always unlikely that most FOMC members were truly committed to actively chasing hot labour markets and experimentally testing the boundaries of a high-pressure economy. A more conservative reading of the Fed's new framework is indeed that it is mostly about managing and anchoring inflation expectations in the context of the ZLB on interest rates. By persistently undershooting its inflation target after the 2008 financial crisis, the Fed risked a decade of too-low inflation becoming embedded in expectations. From this perspective, the Fed's new employment definition and the self-proclaimed abandoning of a preemptive tightening are mainly instruments to raise inflation expectations and improve its capacity for macroeconomic stabilisation in the face of the ZLB. In any case, the Fed's response to the current surge in inflation suggests that US monetary policymakers remain concerned about the inflationary effects of 'dangerously overheating' labour markets (see below).

The redefinition of the price-stability target by the ECB has less potentially radical implications. The ECB raised its target to 2 per cent – instead of 'below, but close to, two per cent' – and explicitly describes its target as symmetric: from now on, it will consider both negative and positive deviations of inflation from the target as equally undesirable. By making clear that it will fight below-2 per cent inflation just as actively as above-2 per cent inflation, the ECB aims to eliminate a potentially deflationary bias in its policy: it commits to undertake 'forceful or persistent monetary policy measures to avoid negative deviations from the inflation target becoming entrenched', even if it would lead to 'a transitory period in which inflation is moderately above target' (ECB 2021). This new approach should not be mistaken for a make-up strategy as entailed by the Fed's average inflation target, however. A key difference is that the ECB is not *deliberately* aiming for inflation overshoots. As the ECB intends to raise the policy rate more gradually than the speed at which the economy recovers from the previous downturn, inflation can transitorily overshoot its target. The inflation overshoot is merely a possibility rather than a necessity (Schmidt 2022). As such, the ECB's new monetary policy framework still embodies a soft version of the preemptive tightening strategy.

3. Central banks and climate change

While the revision of the ECB's inflation target has less potentially radical implications, the ECB pledged to start with the integration of climate change concerns in its monetary policy operations – in sharp contrast to the Fed's 'green avoidance' (Conti-Brown and Wishnick 2021). The ECB explicitly mentioned it will do everything necessary – within its mandate – to ensure that 'the Eurosystem fully takes into account, in line with the EU's climate goals and objectives, the implications of climate change and the carbon transition for monetary policy and central banking' (ECB 2021a). The ECB, moreover, considers it its task to 'assess the impact of climate change and to further incorporate climate considerations into its policy framework, since physical and transition risks related to climate change have implications for both price and financial stability, and affect the value and the risk profile of the assets held on the Eurosystem's balance sheet' (ECB 2021b). In July 2022 the ECB released an update on its climate plans. In terms of the Corporate Sector Purchase Program (CSPP), it would aim to 'tilt' its reinvestment strategy towards 'issuers with better climate performance'. In terms of its collateral framework, it would seek to 'limit the share of assets issued by entities with a high carbon footprint that can be pledged as collateral by individual counterparties when borrowing from the Eurosystem' and would make climate-related disclosure a requirement in its eligibility criteria from (approximately) 2026 onwards (ECB 2022a). Together with the Bank of England (BoE), the ECB has been quite active in setting new standards on how central banks should deal with the challenges posed by the pending climate crisis.

For the BoE and the ECB at least, the main motivation to engage with climate change is that it creates significant risks for financial stability and therefore affects their mandate for financial supervision. Three different types of climate-related financial risks (CRFRs) have been identified: I) physical risks, relating to direct and indirect damage done to properties and financial assets by climate- and weather-related events, such as floods and storms; II) liability risks, resulting from parties who have suffered loss or damage from the effects of climate change seeking compensation from those they hold responsible (mainly pertaining to the insurance sector); and III) transition risks, resulting from the process of adjustment towards a lower-carbon economy (Carney 2015; D'Orazio and Popoyan 2019). The occurrence of these risks will mostly be determined by the speed and depth of the transition. Essentially, the turnaround to a low-carbon economy could prompt a reassessment of the value of a large range of assets giving rise to

‘stranded assets’ (CTI 2011; Mercure et al. 2018): the 2°C threshold of the 2015 Paris Agreement will require large portions of known gas, coal and oil reserves to remain untouched; this will clearly affect the market valuation of the companies that own these assets, ‘negatively impacting their investors, and potentially triggering cascade effects throughout the interconnected financial system’ (Campiglio et al. 2018: 462).

Both the BoE and the ECB have already developed an extensive amount of prudential supervisory tools such as risk disclosure and stress-testing to assess and mitigate the potential impact of these risks on the financial system. Importantly, it is hoped that these tools will not only foster financial stability but also contribute to the decarbonisation of the economy. There is now a broad consensus among financial regulators and central bankers – epitomised by the first comprehensive report of their Network for the Greening of the Financial System (NGFS) – that ‘the transition to a low-carbon economy consistent with the objectives of the Paris Agreement requires a radical shift of resource allocation and, thus, a seminal response by the financial sector’ (NGFS 2019: 11).

Thus far, the dominant approach to contributing to this radical shift in resource allocation – at least among central bankers of the advanced market economies – is one that can be called ‘market fixing’: central banks hope to encourage private investors to voluntarily reduce their exposure to ‘dirty’ assets that are used to fund carbon-intensive activities by undertaking financial risk assessments – i.e. promoting climate-related risk disclosure and conducting stress tests. By sharing information about these disclosures and stress tests to investors, central banks hope to ‘fix’ financial markets’ current underpricing of these CRFRs; they expect this transparency to lead to better investment decisions and to optimise capital allocation in ways that must make the financial system more resilient. According to this approach, central banks can only indirectly reallocate capital and credit from carbon-intensive industries by instilling such market discipline (for an early and pointed critique of this approach, see Christophers 2017).

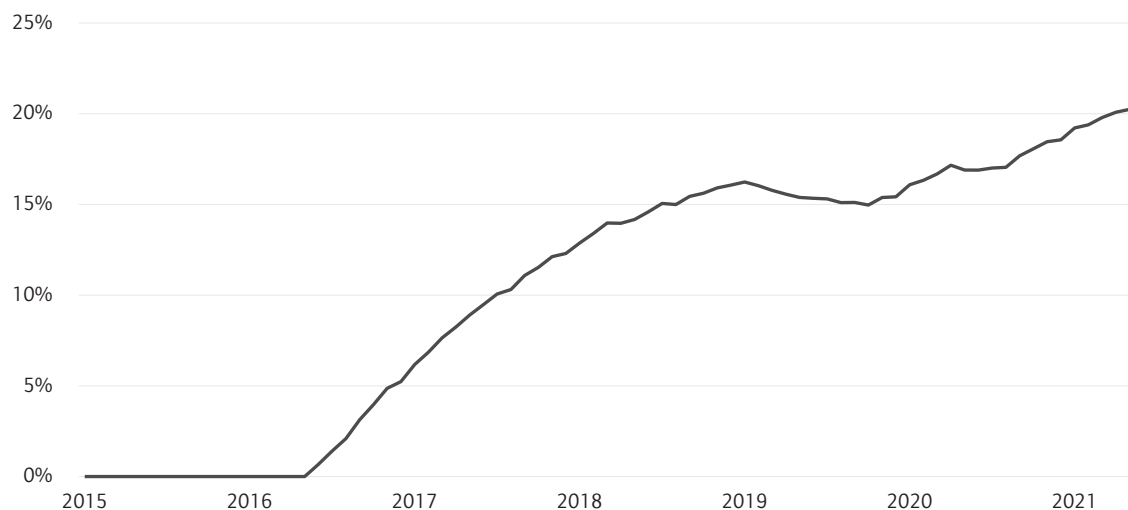
Central banks can also take a more radical ‘market-shaping’ approach, which would involve a more direct and proactive reallocation of resources by penalising the financing of dirty activities and promoting the financing of green activities (e.g. Dafermos 2021; Mazzucato and Ryan-Collins 2019; Ryan-Collins 2019). On the one hand, they could compel private banks to hold more capital and reserves vis-à-vis dirty assets and allow them to hold less capital and reserves vis-à-vis green assets; such differentiated capital and reserve requirements would shift credit from dirty firms towards green ones, raising the borrowing cost of the former and lowering it for the latter. On the other hand, central banks could green their monetary policy operations by including CRFRs in the evaluation of asset eligibility as part of collateral frameworks or asset-purchase programmes, thereby giving a more (less) favourable treatment to green (dirty) assets. Central banks could also assume an even more direct role in the reallocation of resources by subsidising and underwriting bank loans to fund green private investments (‘green

credit guidance’) and/or monetary financing public investments in green infrastructures.

Until recently, both the BoE and the ECB were reluctant to green their monetary policy operations and take this second approach. While acknowledging that climate change posed new challenges for monetary policy by affecting, in the long term, key macroeconomic variables and policy targets like inflation and economic growth, there was a relatively broad consensus among central bankers – embodied in the first report of the NGFS (2020) on the subject – that they should include CRFRs in their macroeconomic forecasting models instead of proactively mitigating CRFRs and promoting an orderly transition towards a net-zero economy via their monetary policy operations. BoE and ECB officials used to justify their hesitance to green monetary policy operations by emphasising their role as politically neutral policymakers, which makes them intrinsically wary of redistributive resource allocation typically associated with green monetary policies. Nowhere was this more explicit than in their resistance to the notion of greening their corporate bond purchase programmes, which both the BoE and ECB had structured on the basis of the principle of ‘market neutrality’. According to this principle, central banks had to minimise the impact of their asset purchases on relative borrowing across sectors and activities by mimicking the structure of corporate bond markets in their purchases. If, for example, only 5 per cent of all non-bank corporate bonds in the market are issued by green companies, there can be no more than 5 per cent green corporate bonds in central banks’ asset purchases.

Market neutrality is a myth, however: the corporate bond purchase programmes of the BoE and ECB have had a bias towards dirty assets (e.g. Dafermos et al. 2020; van ’t Klooster and Fontan; Jourdan and Kalinowski 2019). As large carbon-intensive manufacturing, oil and electric utility companies require more capital spending and rely more on external bond funding, they have a relatively larger share in corporate bond markets. Small and medium enterprises, however, rely mostly on bank credit and do not equally profit from these purchases. As such, the pursuit of market neutrality exerts sectoral-distributive effects that inhibit the transition to a carbon-neutral economy. This is all the more problematic as the market neutrality doctrine is nowhere to be found in the EU Treaties or ECB’s statutes and is therefore entirely self-imposed (Herceling 2019; Jourdan and Del Vasto 2021). It can even be argued that the carbon-bias embodied in the principle of market neutrality clashes with the ECB’s ‘secondary mandate’, expressed in Article 127(1) of the Treaty on the Functioning of the European Union (Jourdan and Del Vasto 2021). At the ECB, Frank Elderson (2021, original emphasis) was the first executive board member to acknowledge that the secondary objective to support the EU’s general economic policies stipulated ‘a *duty*, not an option’ to consider the EU’s environmental objectives and policies (see also Schnabel 2021).

Figure 2 CSPP holdings as a percentage of euro market non-bank corporates



Source: ECB, authors' calculations.

It is in this context that the ECB's announcement of starting with the greening of its monetary operations should be understood. The ECB pledged to base its corporate bond purchases on the principle of 'market efficiency' instead of 'market neutrality', taking the view that financial markets do not adequately internalise climate risks and must thus be guided towards a better equilibrium. In practical terms, this means that the ECB will switch its purchase programme from 'dirty' to green corporate bonds; from the second half of 2022, the ECB will adjust the CSPP to ensure that it buys fewer dirty bonds and more green ones. Whilst the CSPP accounts for only a relatively small part of the ECB's total purchase programme – 80 per cent of which is the Public Sector Purchase Programme (PSPP), through which it buys sovereign bonds – purchases under this programme are relatively large as a proportion of the total market in bonds issued by non-bank corporation in the eurozone (Figure 2). By virtue of its purchases, the ECB can have considerable influence on the prices of these non-corporate bonds – and thus on the financing costs of European companies in bond markets, penalising dirty companies and favouring green ones. These effects can become even more pronounced when the ECB starts with the announced greening of its collateral framework. By assessing the risks associated with these bonds pledged by eurozone banks in return to euro liquidity differently, banks and financial institutions will find it more attractive to use 'green bonds' as collateral rather than 'dirty bonds'.

4. Covidflation: a return to normalcy?

The Fed's new strategy and its response facilitated the incoming Biden administration's spending ambitions by making it more outspoken on the need for more fiscal accommodation: 'Given the number of people who have lost their jobs and the likelihood that some will struggle to find work in the post-pandemic economy', Chairman Powell emphasised that 'achieving and sustaining maximum employment' would 'require more than supportive monetary policy' (Powell 2021). A key objective of the Biden administration's American Rescue Plan (ARP), which offered US workers and businesses fiscal support to the tune of 1.9 trillion dollars, was to avoid the negative hysteresis effects of the Great Recession. As Cecilia Rouse, Chair of the Council of Economic Advisors (CEA), explicitly stated: 'By making up for family income lost due to the pandemic, supporting the unemployed, and reducing child poverty, the rescue agenda prevented much of the long-term scarring... that can be a persistent drag on long-run growth after deep recessions' (Rouse 2022). Another prominent member of the CEA was Jared Bernstein, who repeatedly summoned the benefits of a high-pressure economy during his tenure as senior economist at the Economic Policy Institute, one of the most prominent progressive US think tanks (e.g. Bernstein and Kentele 2019). More generally, a central objective of Biden's economic policy programme was to create an inclusive wage-led growth model based on strong labour markets and a strengthened working class.

The Fed's accommodation of fiscal expansionism and its commitment to a high-pressure economy became increasingly challenged in the second half of 2021 when inflation soared to levels unseen since the 1970s. The return of inflation resulted from a combination of pandemic-induced supply-side disruptions, a sharp recovery in aggregate demand due to supportive macroeconomic policies and a shift in consumption patterns away from services towards durable goods. Russia's invasion of Ukraine on 24 February 2022 further fuelled inflation by pushing up energy prices to unprecedented levels.

Up until the autumn of 2021, the official interpretation of the Fed was that the inflation surge was only 'transitory' and would dissipate relatively quickly, as '[c]urrent tailwinds from fiscal support and pent-up consumption are likely to shift to headwinds, and some of the outsized price increases associated with acute supply bottlenecks may ease or partially reverse as those bottlenecks are resolved' (Brainard 2021; see also Powell 2021; Waller 2021). The Fed's initial sanguine interpretation was contested by pundits who believed the

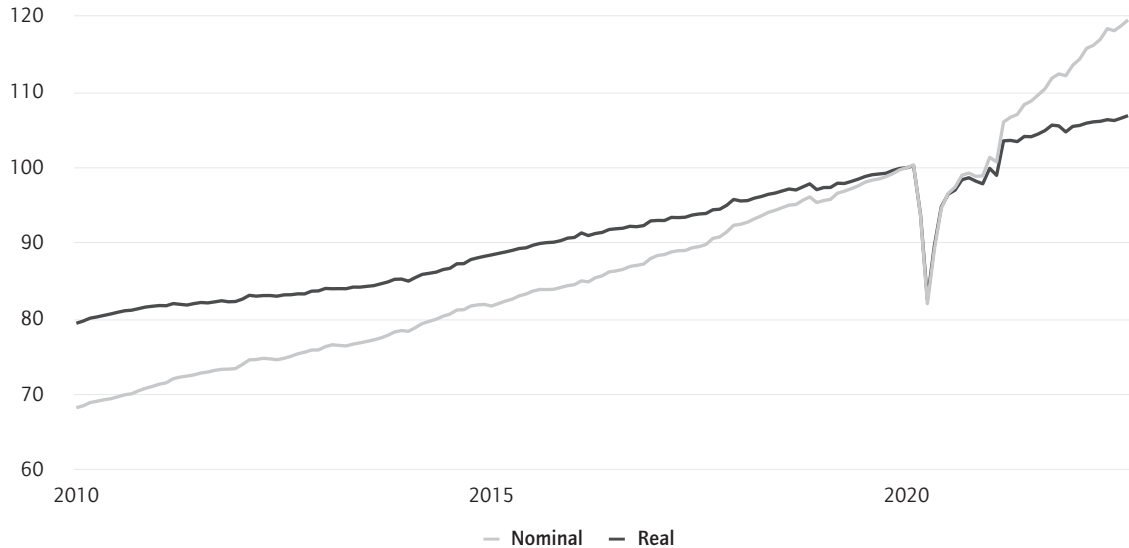
inflation surge confirmed their concerns that the stimulus measures had been ‘excessive’ and poorly targeted. Prominent New Keynesian economists like Lawrence Summers and Olivier Blanchard – who had previously defended expansionary fiscal policies to avoid secular stagnation and the associated ELB – criticised the size of the ARP, which they noted was a multiple of the US output gap and would thus lead to an ‘overheating’ economy (Summers 2021; Blanchard 2021). The Fed’s new framework was seen to be complicit in facilitating this overheating and fuelling an upward de-anchoring of inflation expectations.

By the end of 2021 the Fed began to share these concerns. Given that ‘strong demand and a very tight labour market have also contributed to inflation pressures’, it was agreed that ‘the FOMC can help alleviate those pressures by removing the extraordinary monetary policy accommodation that is no longer needed’ (Bowman 2022). When the Fed eventually raised the federal funds rate in March 2022, Powell explicitly recognised that the planned rate hikes were meant to reduce inflationary pressures by ‘moving down the number of job openings’ and create ‘less upward pressure on wages, less of a labour shortage’, thereby pointing to ‘a very, very tight labour market - tight to an unhealthy level’ (Powell 2022: 14). The Fed’s move put pressure on other major central banks to tighten as well. The ECB, faced with both rising inflationary pressures and a historically weak exchange rate of the euro, began to raise its key interest rates (by 50 basis points in July and by another 50 basis points in September).

4.1 Why rising interest rates hurt workers

A key motivation behind these rate hikes is to alleviate inflationary pressures by reducing demand in the economy and making labour markets less tight (and hence ‘healthier’). Even if they acknowledge that the initial surge of inflation originated from global supply-side disruptions (Covid-related bottlenecks in global supply chains and skyrocketing global energy prices, especially since the Russian invasion of Ukraine), central bankers fear that persistent labour shortages can further fuel inflation by triggering a wage-price spiral – a shift towards a regime of persistently higher inflation accompanied by a de-anchoring of inflation expectations. As economists of the Bank of International Settlements have noted, ‘one trigger for such a shift in regime could be nominal wage increases beyond price increases and productivity gains’, which is much more likely ‘if labour markets continue to tighten, raising workers’ bargaining power’ (Boissay et al. 2022: 1). This interpretation is based on two assumptions. First, the inflation surge – especially the broadening of inflationary pressures measured by core CPI, which excludes volatile energy and food prices – is at least partly attributable to an overheating economy leading to an overly tight labour market. Second, raising interest rates is necessary to bring back demand and raise unemployment to more sustainable levels.

Figure 3 Nominal and real consumption expenditures in the US (Jan 2020 = 100)



Source: FRED Database.

Both assumptions can be questioned. There is no reliable indication that advanced market economies have been overheating. For the US – the quintessential case of the overheating thesis – arguments about excessive growth in aggregate demand are often derived from the observation that by the end of 2021 the total amount of *nominal* consumption expenditures in the US economy significantly exceeded the level it would have achieved based on its pre-pandemic trend growth. However, this excess in nominal spending should be seen as an *effect* and not a *cause* of inflation, which, after all, made goods and services more expensive for US consumers. *Real* consumption expenditures – adjusted for CPI inflation – have remained slightly below their pre-pandemic trend growth (Figure 3).

There is also no convincing evidence that tight labour markets have fuelled wage inflation. In both the US and the eurozone worker compensation in 2021 and the first quarter of 2022 has even failed to keep track with rising inflation: real wage growth has been *negative* throughout this period (Table 1). In the US, a profit-price spiral instead of a wage-price spiral can be observed. Rising profit margins due to price gouging – i.e. the ability of businesses to exploit structural shortages in supply by raising their prices over and above the increase in their own production costs – have played a more important role in fuelling inflation than rising wages (Bivens 2022; Konczal and Lusiani 2022). In the eurozone, ECB economists have noted how the wage share has fallen in 2021 – a market contrast to the stagflation crisis of the 1970s, which they partly attribute to changes in labour market institutions (less widespread wage indexation and a lower degree of unionisation) (Battistini et al. 2022).

Table 1 Evolution of productivity, wages and profits in the eurozone and the US (year-on-year, quarterly data, averages)

	Overall	Q1 2020-Q4 2021	
		Q1 2020-Q1 2021	Q2 2021-Q4 2021
Productivity			
Eurozone	1.0%	1.8%	-0.4%
US	1.9%	2.7%	0.5%
Nominal wages			
Eurozone	1.7%	1.8%	1.6%
US	3.0%	2.6%	3.5%
Real wages			
Eurozone	0.3%	1.3%	-1.5%
US	0.0%	1.2%	-2.0%
Real profits			
Eurozone	1.1%	1.7%	0.2%
US	1.6%	1.5%	1.8%

Source: Gomez-Salvador & Soudan (2022, 24).

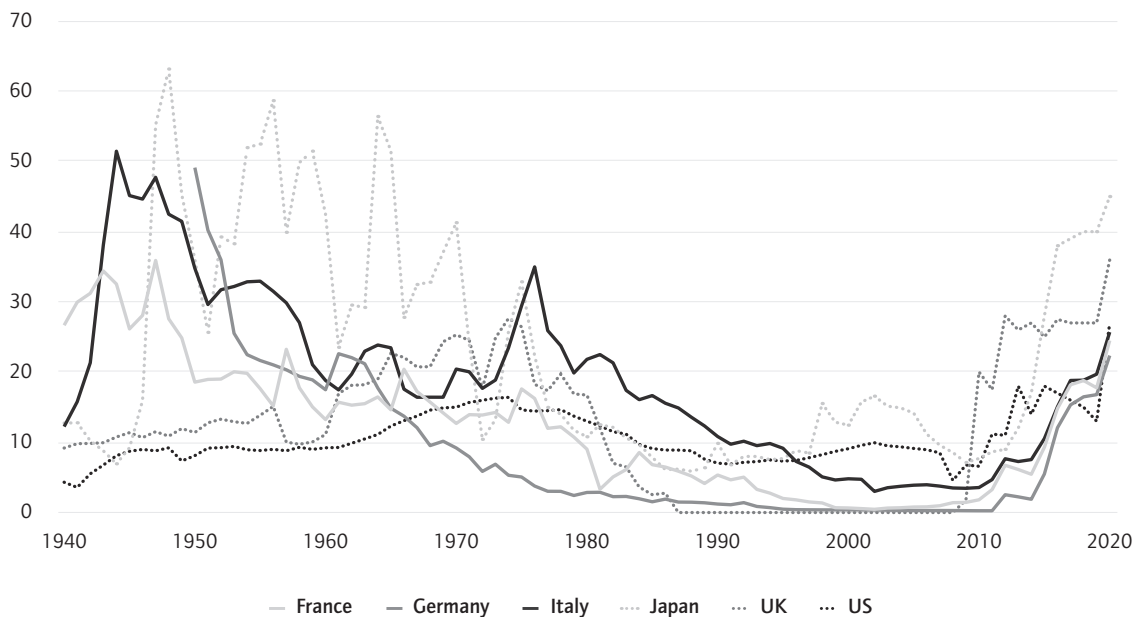
Raising interest rates is an overly blunt mechanism to contain contemporary inflationary pressures, especially as they are linked to supply-side shortages rather than demand-side excesses (Gosh 2022; van 't Klooster and Van Doorslaer 2022). Rate hikes can actually 'lock-in' current supply side problems: higher credit costs discourage producers from investing further in additional capacity. As J.W. Mason and Lauren Melodia (2021: 14) note, it would be 'a decision to keep society poor enough that we can only afford what businesses are currently able to produce'. A high-pressure economy and tight labour markets might not only bring benefits to low-skilled workers by boosting their bargaining power and wages but could also alleviate inflationary pressures in the longer term by raising potential GDP, as discussed above. The belief in these positive hysteresis effects is based on the idea that 'supply-side constraints are not absolute but respond to demand with varying lags – that inflation should be seen as often a temporary cost of adjustment to a new higher level of capacity' (Mason 2021). This does not mean that nothing should be done to curb inflation, but rate hikes by central banks are not the adequate solution: governments could and should play a role in fighting inflation, for example through oversight of supply chains, fiscal tools, targeted price controls and regulatory action to contain monopoly power and financial speculation.

4.2 Why rising interest rates portend fiscal austerity

Apart from damaging the interests of lower-skilled workers directly by raising unemployment, rate hikes will affect many people more indirectly by putting pressure on governments to cut public spending and/or raise taxes in order to reduce fiscal deficits. During the pandemic, fiscal deficits skyrocketed as governments were forced to provide income support for workers and businesses affected by the lockdowns. At the same time, central banks

facilitated the funding of these deficits by engaging in large-scale purchases of sovereign bonds that pushed down government borrowing costs. The value of their sovereign bond purchases was even greater than the cumulative primary fiscal deficits (excluding interest payments). From March to the end of July 2021, the ECB's total sovereign bond purchases – 1 220 billion euros – were 40 per cent higher than the eurozone's cumulative primary fiscal deficits during this period. Central banks' sovereign bond holdings as a percentage of total outstanding public debt rose to an average of nearly 30 per cent in 2021 (Figure 4), reminiscent of the post-war period when monetary financing of fiscal deficits was more common (Ryan-Collins and van Lerven 2018). A more effective coordination between monetary and fiscal policy appeared to have emerged during the pandemic. As the research staff of the Eurosystem (the ECB and the national central banks) acknowledged in their strategic review, 'the experience gained in the 2008-09 global financial crisis, the 2011-12 euro area crisis and the 2020-21 global pandemic suggests that effective macroeconomic stabilisation requires fiscal policy and monetary policy to complement each other in times of crisis' (ECB 2021b).

Figure 4 Sovereign bond holdings by central banks as percentage of outstanding public debt



Source: IMF and national central bank databases, authors' calculations.

Nevertheless, the main motive of central banks always has been to stabilise the financial system and not to facilitate fiscal deficit spending. Sovereign bonds play a crucial role in the (shadow) banking system. Because they are widely seen as the safest financial assets, large banks use sovereign bonds as collateral to borrow from non-bank financial institutions in short-term money (repo) markets. The stability and liquidity of sovereign bonds must be guaranteed by the central bank; if not, their collateral role in money

markets is imperilled. The ECB's reluctance during the first phase of the euro crisis from 2010 to 2012 to intervene as a 'market-maker of last resort' – i.e. backstopping the markets of sovereign bonds issued by peripheral eurozone countries – was one of the main reasons why the crisis spiralled out of control (Ban and Gabor 2016). It made peripheral sovereign bonds much less attractive as collateral; the collapse in their market valuation raised margin calls on banks that had used these assets as collateral, while soaring interest rates undermined the sustainability of peripheral sovereign debt. The ECB's programmes to purchase sovereign bonds – and those of other central banks – have been designed, above all, to prevent these dynamics, making the coordination of fiscal and monetary policy during the pandemic an 'optical illusion', as Daniela Gabor (2021) has convincingly argued:

These purchases aim to ease private financing by backstopping sovereign bond market liquidity (a prudential or market-maker of last resort function), and by lowering yields via QE (a macrodriven intervention) [...] For central banks, lowering the long-term yield on sovereign bonds matters because it signals its commitment to maintain cheap financing conditions for private finance, not for fiscal authorities. It is not intended to provide an explicit coordination framework with fiscal policy or to reassure fiscal authorities that fiscal activism will be supported by central banks.

The 'normalisation' of interest rates in response to the current inflation crisis will have profound implications for fiscal policy. The most important variable for the sustainability of public debt is the difference between the nominal rate of interest on this debt (r) – often represented by the 10-year sovereign bond benchmark yield – and the nominal growth rate of GDP (g). If r is less than g , fiscal deficits can easily rise without undermining the sustainability of public debt; if r rises above g , however, governments will be under pressure to cut fiscal deficits and address solvency concerns (Blanchard 2019). This does not have to cause immediate troubles, since 'most governments have taken advantage of years of historically low interest rates by lengthening the average maturity of outstanding debt and locking in favourable financing costs...the pass-through of rate increases to total sovereign financing costs will be gradual over the coming years' (Lagarde 2022a). Nevertheless, arithmetic logic suggests that the longer r is higher than g , the more governments will feel the need to redress rising public debt levels with new rounds of austerity.

What is easily forgotten is that central banks can have a major influence on both r and g . Lowering their policy rate and buying sovereign bonds contributed to the depression of sovereign bond yields (r) after the financial crisis at the same time as bolstering growth (g). Tellingly, the yield-growth rate differential ($r - g$) only fell below zero for the eurozone during the last quarter of 2014 when it had become clear that the ECB decided it would embark on a QE programme. The US differential, in contrast, had already turned negative in the first quarter of 2010 in the wake of the Fed's first QE programme in 2008 (Figure 5). Rate hikes by central banks herald a return to a positive yield-growth differential – the common situation during the

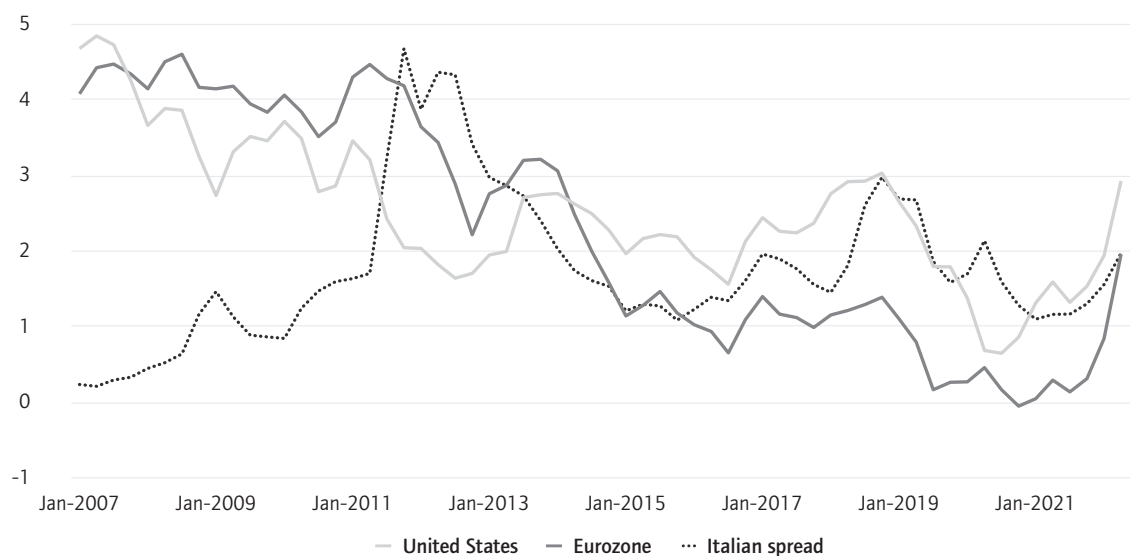
post-1980s era of independent central banking and ‘sound money’ (i.e. low inflation and fiscal consolidation as key macroeconomic policy targets). This prospect looks especially daunting in the eurozone, where the end of the low interest rate environment had already led to widening spreads between peripheral sovereign bond rates and those of Germany (Figure 6).

Figure 5 Interest rate growth differential in the US and the eurozone



Source: OECD, authors' calculations.

Figure 6 Sovereign bond yields in the US and the eurozone



Note: Italian spread is the difference between the 10-year Italian sovereign bond and the German 10-year Bund.
Source: OECD.

The ECB is well aware that these rising spreads could trigger a new sovereign debt crisis, which would also destabilise the eurozone's shadow banking system by undermining the collateral role of peripheral sovereign debt. For the time being, the main concern of the ECB is that rising spreads will hamper the transmission channel of its monetary policy decisions, as its rate hikes can generate more restrictive financing conditions in the peripheral member states than in core member systems like Germany. To contain this problem, the ECB announced a new Transmission Protection Instrument (TPI) in July 2022. The TPI enables the Eurosystem to make potentially unlimited 'secondary market purchases of securities issued in jurisdictions experiencing a deterioration in financing conditions not warranted by country-specific fundamentals' (ECB 2022b). The TPI will not significantly reduce pressures on eurozone governments to cut spending and improve their primary budget balance, however. After all, the ECB introduced the new instrument to *proceed* with monetary tightening without destabilising peripheral sovereign bond markets. Moreover, governments must comply with the restrictive EU fiscal framework and pursue 'sound and sustainable macroeconomic policies' for their sovereign bonds to be eligible for purchases via the TPI. The key objective of the new instrument seems to be – again – to prevent a sovereign debt crisis in the peripheral countries and preserve the stability of the (shadow) banking system rather than bolstering the fiscal capacity of weaker Member States. In the face of continuing monetary tightening, a return to fiscal austerity is the most likely scenario.

4.3 Why raising interest rates exacerbates climate change

If rising interest rates force governments to cut spending, highly needed public investments for decarbonisation will be curtailed. Monetary tightening more generally risks hampering private funding of the energy transition, which requires a shift from technologies with high operating costs (fuel and labour) to technologies with large upfront capital expenditures. Sustainable technologies are more capital-intensive than fossil-based technologies and become comparatively more expensive when central banks use monetary policy to raise the cost of financing. This comparatively higher capital-intensity makes green technologies more sensitive to interest rate hikes, meaning that tighter monetary policy will most likely put a strain on green innovation by discouraging green investments by both governments, companies and households. Raising interest rates across the board therefore risks derailing the transition by inflicting a form of 'green collateral damage' on the economy (Voldsgaard et al. 2022).

The turn to 'policy normalisation' (read: higher interest rates) is therefore rife with contradictions. First of all, the current inflation is not the typical monetary-induced inflation caused by an excess in credit-led demand, but the consequence of our economy's reliance on imported fossil fuels with highly volatile prices. Sustained fossil fuel dependency lies at the heart of the current

inflationary problem, especially in Europe. In a speech in March 2022 ECB executive board member Isabel Schnabel (2022) rightly described the current problem as one of ‘fossilflation’, driven mainly by the ‘legacy cost of the dependency on fossil energy sources, which has not been reduced forcefully enough over the past decades’ (Schnabel 2022). The main drivers behind today’s inflation are spikes in energy costs, particularly fossil gas and oil, and supply-side bottlenecks that drive up the prices of other goods. Interest rate hikes have notoriously little traction on these rising costs of energy. It follows from this that accelerating the energy transition should be an important part of the answer to controlling both today’s fossilflation challenge and in contributing to longer-term price stability (Kedward et al. 2022). To preempt future inflationary shocks, governments, firms and households should be massively investing in clean energy production, energy efficiency and adaptation to increasingly extreme weather events caused by climate change (van ’t Klooster 2022).

Current central bank actions work against the goal of rapidly transitioning away from fossil-based energy production by disincentivising the necessary new green investments. Rate hikes present central banks with a nasty new trade-off: by lowering demand, raising unemployment and delaying (green) investments, rising rates will at best make prices go down in the short run, but will simultaneously make the US and the EU economy more vulnerable to climate-related economic shocks in the long run (Glynn 2007; Schmidt et al. 2019; van ’t Klooster 2022). An insufficiently strong push for decarbonisation today will keep the economy longer exposed to the volatility of fossil fuel prices — and will thus mean more rounds of fossilflation in the future (Voldsgaard et al. 2022). Instead of paving the way to the low-carbon transition, today’s elevated oil and gas prices are shifting the relative balance of power between fossil capital and green capital back towards the former. Hiking rates in a macroeconomic environment of rising energy prices risks aggravating the economy’s carbon lock-in and prolonging its dependence on outdated and polluting carbon technologies (Krebel and van Lerven 2022). It is fair to say that undifferentiated rate hikes will exacerbate both the climate-change challenge and the central banks’ primary objective of securing long-term price stability.

A simple return to a pre-2008 normal, where central banks rely on a single interest rate tool, should not be the default option. Central banks should make more creative use of the innovative tools they have developed throughout the past decade and should look more actively for ways to better align their existing policy toolkits with long-term green industrial policy goals. To fight off the GFC and the Covid-19 crisis, most central banks turned to new tools (large-scale asset purchase programmes and non-standard lending or refinancing operations) that remain crucial today in ensuring long-term monetary and financial stability. By recalibrating these instruments, central banks could use their existing policy toolkits more effectively to shield necessary green investments from linear interest rate hikes. More specifically, to avoid green collateral damage, central banks could switch from undifferentiated rate hikes to a green ‘dual’ rate system. Employing a dual interest rate system

would allow central banks to provide a targeted stimulus to the economy by offering preferential discount rates for green lending. In applying a dual-rate system, central banks would try, for strategic reasons, to separately set a specific interest rate on commercial banks borrowing electronic cash reserves from them and another one on the deposits commercial banks hold with them (Greene and Loneragan 2020; Loneragan 2019).

Such a dual-rate system has actually already been put into practice by the ECB in its ‘targeted longer-term refinancing operations’ (TLTROs) instrument, created in the aftermath of the Great Financial Crisis. TLTROs are Eurosystem operations that provided long-term funding to banks and credit institutions at beneficial rates with the aim of stimulating bank lending to the real economy. They essentially rewarded commercial banks with cheap and abundant finance if they succeeded in transmitting the ECB’s accommodative monetary policy stance to specific sectors, namely non-financial corporations and households. This practically meant that while the ECB’s deposit facility rate stood at -0.5 per cent, under the TLTRO programme, banks could borrow from the central bank at a -1 per cent rate as long as they achieved a certain threshold of loans that went into financing the real economy. In generating a generous supply of credit towards the real economy, TLTROs clearly made sense in an environment of structurally low inflation (as we saw before Covid-19 shook the world economy). However, the arrival of higher inflation and the concomitant end of loose monetary policy should not lead to the instrument being completely abandoned.

The older TLTROs could easily be turned into ‘green’ TLTROs. This could be done by making the interest rate that banks get on the money they lend from central banks provisional on how much green loans they issue. The access to interest-free or lower TLTRO rates could hence be made conditional on the volume of bank lending that complies with the European Commission’s Green Taxonomy or its REPowerEU agenda (van ’t Klooster and van Tilburg 2020; van ’t Klooster 2022). By doing this, the existing TLTRO instrument could be turned into a ‘special longer-term refinancing operation aimed at providing favourable conditions for investments in energy efficiency improvements (e.g. house insulation) and clean energy generation’. This would allow central banks to incentivise the allocation of capital towards green investments, despite simultaneously raising rates (Darvas and Martins 2022: 30). As such, green TLTROs would direct banks’ lending more actively towards green ‘priority’ sectors: energy-efficient housing, green manufacturing, sustainable mobility and clean energy. Moreover, by incentivising the flow of credit to projects aiming to improve energy efficiency and clean energy generation, a green TLTRO programme would lower the demand for fossil energy in the short run. This would allow central banks to address the current supply-side drivers of inflation more directly, instead of choking off overall demand with undifferentiated rate hikes. Rate differentiation based on green criteria would therefore lead to a double win for central banks: it would allow them to better safeguard long-term price and financial stability (by preventing new upshots of fossilflation in the future) and curtail short-term inflation (by reducing fossil-based energy demand).

By installing a targeted credit policy framework that keeps interest rates low for green investments but allows higher rates for other economic activities, green TLTROs are a concrete example of a broader policy approach that is generally referred to as ‘credit guidance’ or ‘window guidance’ (Bezemer et al. 2021; Kedward et al. 2022; Mikheeva and Ryan-Collins 2022). Credit guidance is a technique whereby central banks ‘manipulate’ and ‘shape’ the flow of credit in line with pre-established monetary and industrial policy goals. It allows for a selective macro-level direction of credit across the economy, meaning that central banks can proactively direct finance towards supporting certain ‘desirable’ sectors of the economy while simultaneously repressing others (McDonagh 2021).

Credit guidance is a proven policy tool. From the end of World War II up to the 1980s, most advanced economy central banks and finance ministries routinely used forms of credit guidance as the norm rather than the exception. These included instruments that affected both the demand for credit for specific sectors (e.g. loan-to-value ratios or subsidies) and the supply of credit (e.g. credit ceilings or quotas and interest rate limits) (Bezemer et al. 2021). Credit guidance policy has its modern origins in a macroeconomic approach developed by Germany’s Reichsbank during the 1920s, based on the theoretical conviction that to maximise productive economic growth ‘a system of state guidance of market economies’ was crucial (Werner 2002: 15; see also McDonagh 2021). This example later inspired the credit and window guidance policies in post-war France and Japan that helped these economies to support a structural transformation and rapid industrialisation and curbed the excessive growth of speculative finance (Monnet 2018; Werner 2005). More recently the central banks of Bangladesh, South Korea, Japan and China have begun to use credit guidance policies to help them fill their respective green investment gaps and shift their economy away from more high-carbon activities (Dikau and Ryan-Collins 2017; Krebel and van Lerven 2022). Western central banks could learn from these examples, as suggested by Lagarde during the most recent Green Swan Conference: ‘Japan is doing it. China is doing it. Why wouldn’t we have an open mind about it?’ (Lagarde 2022b).

Credit guidance policies could inform an alternative policy framework that articulates a more ‘market-shaping’ role for public policy, driven less by financial market incentives and more by mission-oriented economic and industrial policies geared towards structurally transforming energy, food, housing and transport systems in accordance with a rapid green transition (Dafermos 2021; Kedward et al. 2022; Mazzucato 2021; Mazzucato and McPherson 2018; Mazzucato and Penna 2016). By establishing a clear trajectory for capital allocation in alignment with green transition plans, credit guidance policy has the potential to actively shape an orderly and more rapid transition by providing certainty for private sector actors (Chenet et al. 2021; Kedward et al. 2022). Installing such an alternative policy framework will require greater collaboration and coordination between central banks and ministries of finance and industrial policy. Because of this requirement, this alternative policy framework runs up against existing institutional

limits. By forcing central banks to better coordinate their policies with elected government officials and to more ostensibly distinguish between clean, desirable sectors or activities and dirty, more undesirable ones, it is seen as potentially undermining central banks' neutrality and independence (Dafermos et al. 2020). Yet, as the history of credit-guidance tools shows, this limit is mostly self-imposed.

5. Conclusion

Soon after the Great Financial Crisis of 2008 all of the major advanced economies' central banks hit the zero lower bound, paralysing conventional interest rate policies. As a consequence, central banks were forced to embark on a quest for new, innovative ways to stimulate economic growth and fight off deflation. Despite unprecedented monetary accommodation, inflation and economic growth remained persistently low in the aftermath of the crisis, raising the spectre of secular stagnation. In response to these new challenges, both the Fed and the ECB conducted strategic reviews of their existing policy frameworks.

The main goal of these reviews was to recalibrate monetary policy for a low interest rate environment and the increased risk of a binding ZLB. Despite broadly sharing the same goal, the reviews had a different outcome. At the Fed, the review process heralded a shift towards average inflation-targeting and the embrace of a wider interpretation of its second mandated goal of maximum employment. By seemingly adopting a 'wait-and-see' approach in terms of reaching maximum employment, the Fed's new monetary policy framework seemed to reflect a resolution to abandon its preemptive tightening strategy in favour of one pursuing a 'high-pressure-economy'. The ECB, however, while adopting not an average but a symmetrical inflation target, went further in its strategic review in aligning its policy framework with the climate-change challenge. It pledged to incorporate climate considerations in its policy framework in terms of the corporate assets it would buy in the future and in the way it would organise its collateral framework.

In an ironic twist of fate, these reviews quickly became antiquated when inflation started to rise as a consequence of Covid-induced supply-side disruptions and the ensuing energy price spikes due to the war in Ukraine. This reversal in macroeconomic environment (from sustained low inflation to persistent higher inflation) led many commentators and central bankers to advocate 'policy normalisation' and a return to 'sound money' policies by increasing the short-term interest rate, reducing the size of the central banks' balance sheet and returning to a regime of fiscal consolidation. This went hand-in-hand with allegations that central banks had compromised their mandate and credibility by being too accommodating during the Covid-19 shock. Stimulus measures had been 'excessive' and poorly targeted, leading the economy to overheat. The Fed's new framework was especially seen to be complicit in facilitating this overheating and fueling an upward de-anchoring of inflation expectations. In the meantime, to restore their 'credibility', most

advanced economies' central banks have moved to aggressively hike interest rates.

We have argued that this is not the way forward. A simple return to a pre-2008 normal, where central banks rely on a single interest rate tool, should not be an option. First of all, interest rate hikes are principally meant to dampen demand, but the current inflation is mostly linked to supply-side shortages and energy price shocks rather than demand-side excesses. This means that the very shocks that have led to a surge in inflation are simultaneously also depressing output. While rate hikes have notoriously little traction over supply-side pressures, they do risk locking-in current supply-side problems and the lower output trend by discouraging investments in additional capacity. Interest rate hikes also have other detrimental side effects. They damage the interests of low- and medium-skilled workers directly by raising unemployment and constraining wage growth. Indirectly, they affect many more people by putting pressure on governments to cut public spending and/or raise taxes in order to reduce fiscal deficits. In the eurozone, rate hikes also breed new risks of major spread differentiations between government bonds from northern and more peripheral southern Member States.

Tighter monetary policy will also put a strain on green innovation by discouraging green investments by both governments, companies and households. Raising interest rates across the board risks derailing the green transition by inflicting a form of 'green collateral damage' on the economy. This presents central banks with a 'nasty' new trade-off: by lowering demand, raising unemployment and delaying (green) investments, rising rates will at best make prices go down in the short run, but will simultaneously make the US and EU economies more vulnerable to climate-related economic shocks in the long run. In sum, the turn to policy normalisation is rife with ambiguities and contradictions that will continue to erode the current policy consensus. The time for 'normal' central banking is over. A new, more strategic approach to central banking is expedient.

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