

THE EURO IN 2024



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**MOVING FORWARD IN TIMES
OF DISINFLATION, FISCAL
CONSOLIDATION, AND CHALLENGES
TO PRUDENTIAL POLICIES.
A yearbook on the Euro 2024**

**Edited by
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FOREWORD

In 2012, the Fundación ICO and the Instituto Español de Analistas decided to publish an annual review of the Euro, the Yearbook, with the aim of expanding knowledge and raising awareness about the single currency and proposing ideas to strengthen its acceptance and sustainability. This collaboration resulted in the regular production of an annual publication that informs readers about changes in the monetary, banking, fiscal, economic, and political union. The Yearbook highlights progress, limitations, and possible shortcomings.

The report we are presenting now, the eleventh in the collection, is titled “Moving Forward in Times of Disinflation, Fiscal Consolidation, and Challenges to Prudential Policies: A Yearbook on the Euro 2024.”

The book is divided into four sections:

- *Context*: The initial chapter examines political priorities and power discussions in Europe. The following article provides a comprehensive overview of the role of monetary policy and its interrelations with other economic policies.
- *Monetary Policies in Inflationary Times*: This section contains two articles. The first explores the changing nature of inflationary shocks experienced during this period, while the second discusses the implications of reducing the size of central bank balance sheets for liquidity and financial stability.
- *Changing Course in Fiscal Policies*: The section on fiscal policy begins with an analysis of the new fiscal rules agreed upon in December. The subsequent chapter delves into their implications for the long-term fiscal challenges faced by member states in the Union. The section concludes with a preli-

minary assessment of the structural reform component of the Resilience and Recovery Plan, aimed at increasing growth potential in Spain.

- *Revisiting Financial Regulation and Supervision Policies*: This section first outlines the roadmap for the implementation of the digital euro. It then includes two articles on lessons learned from the banking crisis.

The report includes, as is customary, an executive summary that presents a critical analysis of the different contributions and concludes by summarizing the authors' recommendations in each chapter. We continue to believe that it is necessary to explain the Monetary Union and raise awareness about its implications. The Euro Project is too often taken for granted, but it still needs to be better understood and improved. This is the task assumed throughout this report to ensure its sustainability.

The Yearbook is a collective effort led by Professor Fernando Fernández Méndez de Andés, who has selected the different topics and assembled an impressive team of experts with close ties to academia, policymaking, and the financial community. We would like to express our gratitude to each of them and congratulate them on a job well done.

The Instituto Español de Analistas and the Fundación ICO are confident that the Euro Yearbook 2024 makes an important contribution to the current debate on the Monetary Union and European integration and that it will prove useful and interesting to all readers.

Instituto Español de Analistas

Fundación ICO

EXECUTIVE SUMMARY. MOVING FORWARD IN TIMES OF DISINFLATION, FISCAL CONSOLIDATION, AND CHALLENGES TO PRUDENTIAL POLICIES

FERNANDO FERNÁNDEZ¹

1. THE EUROPEAN MONETARY UNION AT 25 IN SEARCH OF A NEW NORMAL

In January 2024, the euro celebrated its 25th birthday. Expectations and anxiety were big at the time. I remember well since I was then a chief economist in charge of adapting a commercial bank analysis and operations to the new currency. The euro has been an undisputable success, despite pervasive skepticism in academic circles about the possibilities of a common currency for a region that was far from meeting the stringent criteria for an optimal currency rates. And yet here we are, 25 years later admitting a new member state, Croatia, to a club that paraphrasing Groucho Marx “we should refuse to join if it would have us a member.”

The euro has survived its imperfections, the many design flaws we have extensively studied in the different editions of this Yearbook. It has weathered major economic, financial, and social crisis, repeated asymmetric shocks, be them fiscal or balance of payments, that have questioned its existence. It has even resisted many well-intentioned but drastically wrong political decisions, both at national and European level. It has survived many governments and political parties.

Because what its critics have consistently failed to understand is that the euro is an illusion, a dream, a living political project, a work in constant progress, a necessary

¹ Fernando Fernández Méndez de Andés serves as a member of the Board of Governors of Banco de España and of its Executive Council since February 2023. Editor of the Yearbook since the first edition. The opinions expressed in this summary, when not explicitly attributed to the authors of the different chapters, are exclusively his own and may not, under any circumstance, be interpreted as representing the views of Banco de España and the Euro system.

European public good. Because Europe may not be an optimal monetary union, but it wants to be one. And it has worked these last 25 years to get closer; often desperately slow, always awaiting a crisis to move forward, but getting ever closer. It is not a fiscal and political union, if it possible to separate both in modern times, and it probably never will, but the degree of transfer of sovereignty to European institutions is only growing and will continue to do so, despite legitimacy problems and pending institutional reforms at the core of the Union.

The Russian invasion of Ukraine, as anticipated last year, has resulted in a prolonged war effort that threatens to undermine European unity, stress its finances, revive old divisions of the world in political and trade blocks, challenge the economic and social benefits of globalization and increase structural risks. In the narrow focus of the Yearbook, inflation became dangerously high and persistent, growth slowed, and trade was disrupted. To these new realities, to a more fragmented and uncertain world, the Union was forced to respond in 2023. And it did so without major shocks, crises or otherwise social stress.

As the von der Leyen Commission approaches the end of its term, with the European elections in June, it is time for a first assessment of its achievements. To do so, it is useful to look at the political priorities she herself formulated in December 2019,² focusing on economic and financial matters and in particular on deepening the European Monetary Union, EMU. The program included six ambitious lines of action: (i) a new fiscal governance framework, (ii) the revision of the Treaty of the European Stability Mechanism, ESM (iii) the adoption of a fiscal macro stabilization instrument, (iv) completing banking union with a European Deposit Insurance System, EDIS, (v) building an effective capital markets union, CMU, and (vi) strengthening the international role of the euro.³

But the realities of European politics soon prevailed. And progress in these areas has been timid, as with the reform of the Stability and Growth Pact, limited in its scope as with the 2020 CMU Action Plan, or simply inexistent (ESM, EDIS, and the stabilization facility). The different conceptions of the nature and implications of EMU, what I have described in previous Yearbooks as the two souls of EMU, have once again proven extremely difficult to reconcile. Even for a Commission that has showed unexpected determination. But a Commission that perhaps, given the magnitude of the external shocks, had no alternative but to spend its large political capital on extending European politics to pressing new areas, like energy and defense. To the detriment of Monetary Union.

In an effort to reconcile political and economic realities, the Commission formulated a new mantra, open strategic autonomy, that has come to dominate discussion on in-

² See von der Leyen December 2019.

³ Fabio Panetta, president of Banca de Italia recently argued that having an international reserve currency allowed eurozone countries to issue debt cheaper, and warned against the danger of weaponizing the euro, estimating current savings could be worth about half a percentage point of interest that amounts to about 0.5 per cent of gross domestic product. See FT, January 226th, 2024.

ternational relations. A concept as attractive as it is dangerous. A first European political priority so open to interpretation that allows a wide array of implementation policies: from radical protectionism to smart industrial policies, from a necessary rethinking of state aid rules to outright government intervention in markets, industries and even concrete companies and Boardrooms; from new fiscal policies to address emerging global public goods to irresponsible fiscal expansions and unsustainable levels of public debt.

The world has certainly become more unsecure, the economy more uncertain, and markets more volatile. But these trends highlight the need for the European Union and increase its attraction as a role model; if it can maintain its basic tenants: an area of rules and stability, of shared responsibilities and consensus decision making, an open market economy where the rule of law prevails, and free access is guaranteed to all rule abiding counterparties. But also, an economic area that needs to regain its competitiveness, preserve its privileged status as a major international player, and learn to pay the cost of its ambitions.

The Union seems determined to enlarge, rebuild its foundations, consider further transfers of sovereignty and redefine the subsidiarity principle to encompass new rules for the distribution of responsibilities among the different actors in the provision of public goods -European institutions, Member states and subnational entities. In its strategic repositioning, the Union has challenged its own borders, reopening access negotiations to neighboring countries socially, economically, culturally, and institutionally very far apart. And it has shown its willingness to define and implement a new European policy of security and defense.

Some may consider the process set in motion by the von der Leyen presidency, an extravagant centralization. Others would call it insufficient and excessively timid. But the fact remains that what seemed to be a transition Commission has resulted more decisive and resolute than anyone expected. It has shown remarkable leadership, has dominated public debate in the Union throughout the year and has put forward relevant proposals in many issues - i.e., defense, energy, fiscal rules, accession - that will, most likely, shape the Union for years to come. The Council, however, has been mired in confrontation and stalled by domestic policies. An unwelcome development for those who are weary of the lack of democratic accountability in the Union and who are skeptical of the increasing power of the Brussels bureaucracy.

This Yearbook focusses on the challenges and opportunities for Monetary Union. It assesses policies in the narrow area of fiscal, monetary, and prudential policies. In that respect, the European year has been marked by the remarkable resilience of the economy in the wake of an unprecedented but necessary monetary policy contraction; the last minute agreement on the fiscal governance framework, albeit limited to new fiscal rules; the implications for supervisory and regulatory policies of the financial crisis in spring; and the launching of the exploration phase of the digital euro project. All these issues are covered extensively in this Yearbook, with the usual aim of giving the reader both a sense of the directions for change in the Euro area and of the rationale and policy discussions behind this progress.

Economic activity in 2023 showed unexpected resilience, suggesting a softer landing

and a smoother disinflationary process than many feared. Economic policies have once again proven useful in curbing a traditional inflationary episode. Global growth remained moderate but steady amid strong private consumption and surprisingly robust labor markets. Emerging market economies including China, buoyed by strong commodity prices through the year and spurred by the recovery from Covid19, supported this growth. The United States economy continued to surprise on the upside and its labor market showed little signs of abating.

In response to high and rising inflation in the EA, the ECB tightened monetary policy at an unprecedented rate in its short history. Since July 2022, the cumulative increase in the policy rate amounts to 450 bp, taking the deposit facility rate from a negative value of -0.5% to a positive rate of 4%, and the Eurosystem balance sheet has shrunk by more than €2trn since the end of 2021, largely due to the repayments of targeted longer-term refinancing operations (TLTRO). Ultimately, however, the effectiveness of monetary policy depends on how other economic policies, fiscal, financial, and structural, are being implemented.

The European economy has barely avoided a recession in 2023, and after minimal growth in the first semester, “weakened further in the second half of 2023, as subdued confidence, earlier competitiveness losses, renewed geopolitical tensions and tighter financing conditions all weighed on activity...”⁴ In the ECB latest scenario, EA growth is expected to gather some momentum in 2024, helped by moderate increases in real incomes as inflation falls and wage increases remain strong, and exports catch up with foreign demand. This central ECB scenario rests heavily on the absence of further exogenous shocks, i.e., a new wave of Covid, an escalation of existing military conflicts, a sudden fracture in trade flows, or a new financial shock. The December 2023 Euro system staff projections for the EA foresee annual real GDP growth slowing to 0.6% in 2023, before picking up to 0.8% in 2024, before rising to 1.5% in 2025 and 2026. These same projections foresee that headline inflation in the EA will decline gradually, averaging 2.7% in 2024, 2.1% in 2025 and 1.9% in 2026.

Given this generally benign macro scenario, markets have started to speculate, already at the end of 2023, with a rapid decline in interest rates, as early as the first quarter of 2024. A speculation that central banks around the world, not only the ECB, have tried hard to counterargue by insisting that (i) rates need to remain at the current level by a sufficient long period of time to avoid a sudden change in inflation expectations,⁵ (ii) the last mile in the fight against inflation (bringing core inflation down to 2% from 3%) is the hardest as there is no linearity in inflation protection performance by consumers and firms,⁶ (iii) previous unsuccessful episodes of disinflation all failed because

⁴ ECB, Economic Bulletin Issue 8, 2023. December.

⁵ “Based on our current assessment, we consider that the key ECB interest rates are at levels that, maintained for a sufficiently long duration, will make a substantial contribution to this goal. Our future decisions will ensure that our policy rates will be set at sufficiently restrictive levels for as long as necessary”. Christine Lagarde, 2023.

⁶ “The last mile is about this change in the disinflation process. It is no longer about mechanical

of premature loosening,⁷ and (iv) current market expectations are inconsistent because if inflation falls as abruptly as anticipated by analyst and market participants, the output costs will be significantly larger and current asset valuations would not be realistic. Thus, the need to be extremely cautious and avoid excessive optimism.

The discussion on the velocity of the return of real interest rates to its normal long term level will dominate the first half of 2024. But it is rather irrelevant, at least in the realm of policy makers and academics. Much more significant for the future direction of monetary policy is the debate about “the new normal”, the level of the natural rate of interest in the steady state (known in the literature as the debate on r^*), once the previous and fragile consensus about r^* being around zero has proven a misleading mistake.⁸ In sum, to what extent the secular disinflation forces (globalization, digitalization and demographics) may have reverted or given way to more current and pressing inflationary trends (strategic autonomy, polarization, debt dynamics, state interventionism, distributional conflicts, and energy transition).

The essential building block of the European Monetary Union is its inflation anchor. Therefore, it cannot be a surprise that after an episode when inflation has risen much higher and for much longer than ever anticipated, disinflation policies have been at the core of ECB actions in 2023. And the need to complement monetary restriction, both in prices and quantities, with other demand and supply policies. This fast and steep monetary tightening has brought back old fears of financial fragmentation and a revival of the sovereign and bank doom loops, particularly since no major breakthroughs have happened in completing banking and capital markets union. The only noteworthy development in the year being the CMDI initiative by the Commission, the Crisis Management and Deposit Insurance framework, which is at best a modest step in the right direction and at worst another lost opportunity to set up a European Deposit Insurance Scheme.

Liquidity in financial markets was a concern at the start of the contractionary period. In particular, the termination of the TLTRO programs raised the specter of potential liquidity events in the process of reducing the ECB balance sheet. Although the private interbank market has yet to be restored after its practical demise with the Great Financial Crisis, other private and public financial instruments have taken its stabilization function, basically securitization and excess commercial bank reserves (deposits) at the ECB. And no major liquidity event has happened in the EA, even during the spring banking crises that affected the US and Swiss markets.

The ECB maintained its two instruments to prevent financial fragmentation and neutralize undue market pressures, not supported by fundamentals, against a sover-

price reversals but about creating the conditions required for the indirect and second-round effects of supply-side shocks not to become entrenched in underlying inflation”, Isabel Schnabel, November 2023.

⁷ IMF WP/23/190, September 2023, Washington D.C.

⁸ The so called “natural rate” is defined as the real interest rate that maintains output at its potential level and inflation stable at its target level. For a discussion on the assumptions and implications of the use of this concept as a policy guide, see *The Euro in 2021 Executive Summary*.

eign. The TPI, Transmission Protection Instrument, a refined version of the “whatever it takes argument” that has not been necessary to use, given that (i) the ECB has used its second instrument, the flexibility in the reinvestment of the PEPP proceeds. (ii) Governments have in general kept adequate debt and deficit policies given the ample room for public expenditure provided by the inflation tax and the NGEU program. In fact, many member states have proven unable to absorb these funds in their budgetary outturns. And (iii) markets have remained very calm while the costs of servicing public debt were at record lows. But 2024 will bring increasing public deficit and debt challenges in a very different political scenario and member states would be wrong to find comfort in last year market benevolence and abundant demand for government paper.

Central banks all over the world, and certainly the ECB, have been repeatedly demanding a more active role of other economic policies in the fight against inflation: fiscal consolidation to curb excessive growth of public expenditure (in the USA through the Inflation Reduction Act, IRA, and in the Euro Area with the Recovery and Resilience Program, ERRP), and structural reforms to increase growth potential and shift outwards the production possibilities frontier. But their claims have met limited success, with fiscal impulse remaining still positive all through 2023. The ECB has argued for a neutral stance of fiscal policy in the Euro area, after taking into consideration the impulse provided for the ERRP (Next Generation EU). A program that was theoretically designed to avoid the Covid and Ukraine war induced recession impairing the necessary investments in some strategic European public goods, like decarbonization and digitalization. This European facility disbursed happily and without hesitations by the Commission in the form of practically unconditional grants should have made possible for member states to run considerable structural surpluses. Unfortunately for the resilience of the Union entering a new phase in the business and fiscal cycle, this has not been generally the case.

Revamping the fiscal framework was a priority for the Union, mindful that reestablishing the old rules would lead to deepen the economic contraction, and prolonging the exceptional period of non-observance would hinder the EA much needed credibility and commitment to prudent public management. At the last turn of the clock, in the most European way, a new set of fiscal rules was agreed. Whether this agreement delivers on the three goals of the reform –simplification, transparency and reducing the cyclical– is another question. Commentators agree that further complexity has been the price paid for introducing flexibility. Furthermore, the December 20th EU Council agreement ignored other crucial areas of fiscal governance, a macro stabilization facility for the EA, the definition and implementation of a fiscal stance for the area as a whole, and the role of Independent Fiscal Authorities in the surveillance of fiscal rules. Once again, what was politically possible was far from economically perfect, but there was some progress, and the Délor's bicycle is still moving.

Completing banking and capital markets union is always in the agenda of the Union. Despite the inability to move forward with EDIS or the lack of substantive progress with CMU, where the implementation of the 2020 Action Plan has been at best sketchy and very timid, there was some progress. A major one, in terms of improving

banking supervision in Europe is the release in March of the Experts' Assessment of the European Central Bank's Supervisory Review and Evaluation Process, SREP.⁹ The report recommends different ways to improve the efficiency and effectiveness of the current supervisory procedures: (i) enhancing risk-based supervision and empowering supervisory judgement, which entails legal and policy risks but acknowledges reality; (ii) promoting better integration of the outcome of other supervisory assessments into the SREP, to make better use of all available information, (iii) streamlining SREP processes and shortening their timeline, to avoid being right but being useless, (iv) rebalancing capital and qualitative measure, since capital alone cannot address all risks, and (v) reforming the process for determining Pillar 2 capital requirements, specially cumbersome and mechanic, to focus it specifically on the risks not already covered by Pillar 1. In sum, the report rightly highlights the importance of supervisory judgment and discretion, but it is also important to balance that discretion with full disclosure of supervisory expectations, assurances of fair and equal treatment, and some mechanism for dispute resolution.

The reform of the supervision, regulation and resolution frameworks in Europe intensified after the spring financial markets stress that resulted in the failures of Silicon Valley Bank (SVB), Signature Bank of New York (SNBNY), and First Republic Bank in the USA, and the "fire" acquisition of Credit Suisse by UBS. All major monetary and financial authorities in the world have published papers with their main findings to further improve the framework for preventing and managing banking crisis.¹⁰ Let me briefly summarize here what seem to me the main lessons to be learnt, and the recommendations for further policy action.

The spring banking events underscored the risk that rapid interest rate adjustments may cause market instability and demonstrated the critical importance of preventing crisis through adequate banking supervision, forward-looking, proportionally intrusive, risk focused and comprehensive. The crisis was also a wake-up call of the implications of digital financial customers for the velocity of bank runs and the assumed stability of deposits. Thus, prompting further research on the characteristics of deposit insurance systems.

These bank failures constituted the first real test of the international resolution framework established by the Key Attributes of Effective Resolution Regimes for Financial Institutions in the aftermath of the Global Financial Crisis. And we learnt. First, banks not identified as G-SIBs can still be systemically significant or critical upon failure. In other words, contagion can be more pervasive than so far identified, and affect banks grouped by many different characteristics on their asset and/or liability side of their balance sheet. Therefore, second, resolution planning should potentially be extended to all banks, with due account for proportionality, and all banks, including non-systemic, would benefit from having in place loss absorbing capacity. Third, fund-

⁹ See *Assessment of the ECB's Supervisory Review and Evaluation Process, March 2023*.

¹⁰ *Board of Governors of the Federal Reserve System 2023, IMF WP/23/181, Financial Stability Board, 2023, Basel Committee on Banking Supervision, 2023, European Banking Authority 2023.*

ing in resolution is critical and it has not yet been properly addressed, particularly in EMU where the ESM backstop is not yet operational. Fourth, resolution-related capabilities, such as the ability to quickly produce information needed to market an institution or to implement key resolution tools, are of critical importance, in particular the sale of shares or assets which have proven the most realistic instrument, if not the only realistic instrument, for an orderly resolution in the real world.

The ECB, fulfilling the mandate received from the Commission, launched in October 2023 the second phase of the digital euro project, experimentation, being very careful not to commit itself to a final go ahead decision nor to a concrete introduction date. The ECB report,¹¹ argues for the introduction of a retail digital euro mostly on defensive reasons: to protect the autonomy of Europe in a world, where (i) other central banks may issue digital currencies soon, (ii) some private institutions may rush to issue their own private money, and (iii) the main existing providers of available digital means of payments, digital credit and debit cards issuers, are not Europeans.

The digital euro would essentially be a digital liability of the central bank versus the European citizens, the immaterial equivalent to cash in circulation, euro notes and coins. This point is very important, because it is perhaps the only real economic argument to support the digital euro; the real possibility of a world without cash, without central bank money, as feared for instance in Sweden. The technical challenges for issuing digital euros are not irrelevant and could be summarized in how best to maintain two basic characteristics of cash: anonymity and general accessibility and usage. But the crucial questions are not technical but economic; (i) how to ensure that the digital euro will complement cash and not substitute bank deposits, (ii) how to protect financial stability and not facilitate banking crises, and (ii) how to preserve monetary sovereignty in a world of central bank digital currencies, CBDCs.

In sum, the European Union has continued improving the financial architecture of its monetary union. In particular in 2023, progress has taken place in partially adjusting its fiscal governance framework to arrive at a new balance between the dual requirements of stability and growth, in solving some of the problems of its banking resolution framework, and in preparing for a digital world in money and finances. The European Central Bank has continued its fight against inflation and the “immaculate disinflation” appears a real possibility at the end of 2023, even paving the way for an “immaculate recovery”. But there has been no progress in too many important building blocks of a stable monetary union that are too familiar to the reader of this Yearbook: (i) a fiscal macro stabilization instrument, (ii) a common fiscal stance for the Euro Area, (iii) EDIS, the European deposit insurance system, (iv) a fiscal back stop for bank resolution, since the ESM Treaty has not yet been ratified, (v) a common insolvency procedure for less significant banks in the Euro Area, and (vii) a European risk free asset. Until meaningful progress in these seven areas takes place, the Union will remain at the mercy of benevolent or fearful financial markets, and European policy makers

¹¹ See ECB, October 2023.

and monetary authorities, will need to show remarkable determination, imagination, professionalism, and good luck to navigate recurrent episodes of financial and economic stress.

2. TIMES OF DISINFLATION, FISCAL CONSOLIDATION, AND CHALLENGES TO PRUDENTIAL POLICIES.

The Yearbook has been a collective effort from its first edition in 2013 and the preceding two ad hoc studies on the nature of the European debt crisis of 2008-12. Once again, this year, an impressive list of professionals from very diverse background, perspectives, current positions, and past experiences have contributed. They provide the reader with an excellent account of what has happened in the Union, in terms of monetary, fiscal, and regulatory policies, and also of the political and economic rationale for the decisions, of the thinking in the academia and policy makers about what to do and why. My role as usual has been limited to select contents and authors and to write this executive summary. And to complement or question some of the recommendations of the different authors, for the benefit of the reader, who can then grasp the different views and sensibilities around issues that are controversial, and political by definition. In the most European tradition, the excellent contributions to this Yearbook leave a unanimous sense of satisfaction and concern. Satisfaction because once again Europe has defeated denialists and catastrophists and united it stands after facing unchartered shocks like a war in its borders, the substitution of its traditional energy suppliers and the most serious inflationary threat of its existence. Concern because with so many structural and design issues still to be resolved, the feeling of uncertainty, instability, and crisis, may become entrenched, constraining its future.

The book is divided in four sections: the context, monetary policies in inflationary times, changing course in fiscal policies and financial regulation supervision policies revisited. In the first section, following our long held view that the European Union is a political dream of our founding fathers, the initial chapter looks at the political priorities and power discussions in Europe. But immediately after, as it should be in a book dedicated to EMU, we present a comprehensive overview of the role of monetary policy. Section II contains two articles, one looks at the changing nature of the inflationary shocks experienced in this episode, the other at the implications of reducing the size of central bank balance sheets for liquidity and financial stability. Section III, on fiscal policy, opens with an analysis of the new fiscal rules agreed in December; followed in the next chapter by the implications for the long term fiscal challenges of the Union. The section ends with a preliminary assessment of the structural reforms' component of the Resilience and Recovery Plan in increasing growth potential in Spain. Finally, section IV on financial policies, looks first at the roadmap for the implementation of the digital euro, and then contains two articles on the lessons from the banking crisis in March 2023, one focusing on what went wrong and why in the USA and the other on the implications for resolution policies in Europe.

2.1. THE POLITICAL AND MONETARY CONTEXT.

Reflecting our understanding of the political nature of the Monetary Union, we start the Yearbook by looking at the political landscape in Europe. Three large shocks highlighted Europe's strategic vulnerability stemming from its economic interdependence: the pandemic, the disruption of supply chains in 2021, and Russia's brutal invasion of Ukraine. Taken together, these three shocks have dramatically increased the value of autonomy as a policy good, write Jorge Galindo and Teresa Raigada on chapter 1, *Europe's political agenda in a fragmented world*. A call for greater European autonomy amplified by the protectionist evolution of China under the Jinping leadership, and of Europe's natural partner, the USA.

In her inaugural speech in 2019 Ursula von der Leyen articulated her vision for the European Union, "The world is calling for more Europe. The world needs more Europe". That vision has filtered into a new European political priority, Open Strategic Autonomy, OSA. A loose concept based on the idea that Europe should be more self-reliant and assertive in its external relations, while remaining open to global trade and cooperation. The term "autonomy" logically implies the Union's ability to make decisions that prioritize its own interests. The "open" aspect, however, acknowledges the intricate web of interdependencies. The Union must balance internal interests with external factors, acting "multilateral, when possible, unilateral when necessary".

This need for autonomy is challenging European politics which will be dominated by a "strategic bifurcation" between its traditional multilateral approach and a renewed protectionism. The first implies deepening diversification (in trade, politics, security.) within the current framework of trade rules and integrated markets, to avoid excessive unilateral dependence. The second reduces dependency and strengthens self-sufficiency within the Union, but at a price in terms of inflation, employment, and growth. The outcome is far from univocal, and instead may vary according to the specific challenges at hand.

This cleavage, in the opinion of Galindo and Raigada, will dominate the future of European politics together with other two: the speed and compensation policies of the energy transition and the recurrent tensions between a more centralized union versus a flexible union of sovereign states which surrender policies only in cases of desperate need, as was Covid or the Russian aggression. The central political task of any incoming ruling coalition in 2024 will be to keep the coupling between the Union's autonomy and the decarbonization process. Multilateral diversification will be the political weapon of choice, especially in shaping more resilient value chains for intermediate goods and raw materials, but it is likely to need to be complemented by a much more dynamic green industrial policy. None of this will be feasible, however, unless the Union continues its slow march towards the creation of a common fiscal space, write the authors who argue for an extension of the current political platform.

The center-converging collaboration between liberal conservatives and socialists has been a feature of European politics for decades. But two differential factors make this coalition much more relevant and by no means a given ex ante: the growing diver-

gence between and within ideological blocs, and their relative decline in their electoral strength. In 2019, an S&D-EPP coalition was not arithmetically sufficient, as it was after the previous elections. An alternative majority from the center to the far right was viable, but the center right parties at the European Parliament decided not to pursue it, in radical contrast to polarizing political decisions taken in some member states. Polls ahead of the upcoming European Parliament elections suggest that the political platforms are likely to find themselves in a similar situation after the June 2024 vote, in the sense that the center-right will likely play a truly pivotal role but will need a grand coalition. The resulting programmatic content of this coalition would need to fill the concept of an Open Strategic Autonomy with actionable content, bridging the divide between discourse and policymaking.

Economic policies are more effective when they are complementary and create room for one another. This is even more important in a monetary union where a common inflation goal is shared by countries with heterogeneous public debt levels, fiscal space, and financial cycles. This is the starting point of chapter 2 by Pablo Hernández de Cos, *Monetary Policy and its interaction with other economic policies*.

When analyzing first the interaction between fiscal and monetary policy, it is useful to distinguish between the optimal combination of fiscal and monetary policies in any given moment and the governance framework that maximizes the likelihood of having an optimal policy mix in all circumstances. The second consideration is crucial in a monetary union and has received much less attention. Generalized fiscal support after the pandemic has led to a significant increase in public debt levels and a reduction in fiscal space in the EA, thus a more prudent fiscal policy would facilitate the loosening of monetary policy, alleviate demand-driven inflationary pressures and keep inflation expectations anchored while containing risks to debt sustainability and more generally to financial stability. Moreover, Hernández de Cos underlines that from a longer-term perspective, the Union lacks an appropriate framework to achieve an optimal combination of macroeconomic policies.

He welcomes the recent reform of the European fiscal rules, especially since it anchors debt sustainability at the center of the debate, uses an expenditure rule as an intermediate target, and allows for greater cross-country heterogeneity. But it cautions that (i) the success of the new framework will depend on its effective implementation, (ii) the choice of the optimal fiscal policy stance by each country does not necessarily guarantee an optimal stance at the European level, (iii) public investment requirements in mitigating global warming and accelerating the digital transformations cannot be achieved within the available national fiscal space, and therefore, a common, permanent, European financing instrument needs to be introduced, and (iv) the limited degree of risk-sharing that still characterizes EMU, requires the optimal fiscal framework to include the issuance of benchmark pan-European safe assets.

Interactions between monetary and macroprudential policies are potentially significant, given that their transmission channels are similar. The pursuit of price stability through monetary policy, and of financial stability through macroprudential policy, the separation principle, generally holds true in normal times. In stressed conditions in

which a deflationary demand shock is present, financial stability risks might also materialize in a manner that does not create a trade-off with monetary policy. A case in point was the COVID-19 pandemic when financial stability and deflationary risks were high. In this context, the pandemic emergency purchase program (PEPP) was the right tool both to expand the monetary policy stance, and, in parallel, to provide liquidity, avoid fragmentation and guarantee financial stability. Even if liquidity crises occur in high-inflation periods, tools can be skillfully designed to ensure separation. The announcement of the transmission protection mechanism (TPI) in July 2022 is a good example, ensuring the smooth functioning of financial markets needed to transmit the tighter monetary policy stance.

But there may be cases in which there is a trade-off between the two objectives. For instance, when solvency issues emerge in the banking sector in a high inflation environment. Then, monetary policy needs to anchor inflation expectations, and prudential policies, micro and macro, have to strive for minimum financial disruption. Another instance of a trade-off is when a build-up of systemic risk occurs in a situation of subdued inflation. In such a context, as we have seen during the pandemic, a prolonged loosening of monetary policy could exacerbate financial stability risks, and the activation of macroprudential policy tools may not be enough to prevent the emergence of systemic risk.

Moreover, the role of macroprudential policies may be particularly relevant in the euro area, where a common monetary policy is shared by countries whose economic and financial cycles are still heterogeneous and where idiosyncratic shocks cannot be ruled out. To expand the policy space generated by macroprudential buffers, Hernández de Cos argues that “there may therefore be a case for increasing releasable buffers, particularly the countercyclical capital buffer (CCyB).” He discusses the conditions under which a given economy may find desirable to move to a positive neutral CCyB, the position of the BCBS which “supports the authorities’ ability to set a positive cycle-neutral CCyB rate voluntarily”. In this context, agreeing on the desirable level of structural bank capital requirements becomes a most important policy discussion.

Structural reforms have the capacity to increase potential output growth while making the economy more resilient to shocks, which could be particularly interesting for the smooth functioning of monetary policy. Increasing potential output growth would also raise the equilibrium real interest rate, meaning that monetary policy is less likely to be constrained by the effective lower bound and, by extension, reducing the likelihood of having to resort to unconventional policies.

Hernández de Cos illustrates these interactions through the concept of the natural interest rate, or r^* , defined as the short-term real interest rate at which investment fully absorbs savings at full employment. As we have often discussed in this Yearbook, prior to this inflationary episode there seemed to be a consensus about a secular drop in r^* due mainly to the decline in trend productivity growth, and demographics. This chapter argues that there are several newly identified developments and channels through which structural policies could increase r^* and help to reverse the declining trend. Carefully designed structural reform policies can raise potential output growth and the

equilibrium real interest rates and may play a crucial role in providing monetary policy with ample room for manoeuvre.

In sum, this chapter strongly argues that economic policies are more effective when they are complementary and create room for one another. This is even more important in a monetary union, where a common inflation goal is shared by countries with heterogeneous public debt levels, varying fiscal space and asymmetric financial cycles.

2.2. *MONETARY POLICY, COMBINING DISINFLATION WITH QUANTITATIVE TIGHTENING.*

The section on monetary policy starts analyzing the different inflation shocks experienced by the global economy since 2021. In chapter 3, *The nature of the inflationary surprise in Europe and the USA*, Paula Bejarano Carbó writes that understanding how the nature of inflationary pressures has changed over time is crucial for assessing the monetary policy response to high inflation. The nature of inflation in the past three years has not been homogeneous, neither within economies nor between economies. The extent to which inflation has been demand-driven or supply-driven has varied across time and space. On the demand side, the main drivers of inflation have been generous fiscal stimulus packages, expansionary monetary policy, and shifts in consumer preferences and behavior. On the supply-side, the main drivers have been supply-chain bottlenecks, goods and labor shortages, and energy and food price increases following Russia's invasion of Ukraine. Second-round inflationary effects, such as increases in wages and profits in response to elevated inflation, must also be considered.

This chapter provides a wealth of data and theoretical arguments to explain the dynamics of inflation. Bearing in mind that the foundations for high inflation were laid well before the pandemic, she identifies four phases in the current inflationary period: Phase I (2020 Q1 - 2020 Q2), or the Covid shock phase, characterized by a joint negative demand and supply shock; Phase II (2020 Q3 - 2021 Q4), or the reopening phase, with conflicting positive demand and negative supply shocks; Phase III (2022 Q1 - 2023 Q1), or the post-reopening phase, also characterized by conflicting positive demand and negative supply shocks driven by an exogenous increase in energy prices; and Phase IV (2023 Q2 - present), the post-energy-shock phase, characterized by falling CPI, alongside still-elevated and broad-based underlying inflationary pressures.

The Covid shock is likely to have been a combination of negative demand and supply shocks, which explains the need for fiscal stimulus at the time but also indicates that the demand deficit was going to be as transitory as the pandemic itself. Both elements would prove to be important drivers of inflation during Phase II. During this initial Covid shock phase, jointly, aggressive QE and fiscal stimulus were needed to stabilize welfare and prevent illiquidity. This stability, however, was achieved at the expense of large fiscal deficits and expanded balance sheets, and the initial stoking of inflationary pressures.

That said, there were large differences in countries' abilities to provide stimulus during this period. Fiscal support was the largest in the US, its exorbitant privilege,

both in cash terms and in terms of deviations from pre-Covid projected spending and went as far as providing an unconditional cash transfer to all taxpayers. This contrasts to Spain, where fiscal stimulus took the form of public guarantee schemes, or contingent liabilities, resulting from limited fiscal space. Using NiGEM data, Paula Bejarano estimates that government transfers accounted for 15, 57, 17, and 8 per cent of growth in aggregate real personal disposable income in the second quarter of 2020 in the UK, US, Germany, and Spain, respectively.

The fiscal stimulus, paired with inability to spend due to lockdowns and increased intertemporal substitution led to an overall rise in savings. The possible inflationary effect of aggregate augmented savings is dependent on who holds these savings, given the different marginal propensities to consume, and whether savings have risen because households are forced to save (lockdowns) or because of a precautionary motive (e.g., recession fears).

As economies began to re-open during summer 2020, aggregate demand increased sharply, driving a quick recovery in GDP. This was partly caused by pent-up or delayed spending, in the wake of loose fiscal and monetary policies. Moreover, a shift in consumer preferences that occurred during lockdowns, alongside still-stringent government policies, jointly with the excess aggregate demand, led to the first signs of an inflationary surge as early as the second half of 2020, particularly in the US. Throughout 2021, this mismatch would be exacerbated by supply chain disruptions. Altogether, these conditions drove an initial ‘overheating’ of the three economies. One important consequence of this excess demand was a rise in commodity prices. For example, by 2021Q3, energy prices were 50% above their 2019 level, and already contributing a significant amount to CPI inflation. Also, consumer behavior changed during the first half of 2020 in response to the pandemic shutdown, and some of these behavioral changes may have proven persistent.

Supply chain disruptions, such as increased shipping costs, delivery backlogs and reduced inventories, re-emerged in Phase II, further aggravating supply and demand mismatches. At their peak, supply chain issues may have contributed around 50% of the increase in manufacturing producer price inflation and some 2 percentage points to CPI inflation in 2021 in all three economies.

During Phase II, unemployment rates fell back towards pre-Covid levels, most notably in the US, which had a very different labor market experience during Phase I relative to Europe. Also, weakened labor force participation decreased labor supply relative to labor demand, particularly in services industries. Unemployment rates alone do not convey the full post-Covid labor market story; measures such as the unemployment-to-vacancy ratio (U:V) in the US and UK, and the gap between the unemployment rate and its natural rate (U-U*) in the EA illustrate the extent to which labor market tightness increased, particularly during Phase II.

The economic effects of Russia’s invasion of Ukraine in February 2022 were immediate. Following the implementation of sanctions on Russia and given Ukraine’s role as a key exporter of certain foods, energy and food prices skyrocketed from February onwards. Gas prices rose by 43% between February and March, peaking in August 2022

at over 14 times their March 2020 level; oil prices rose by 20% between February and March, peaking in June 2022 at nearly 3 times their March 2020 level. At the same time, price rises in categories such as bread and cereals, and meat became noticeable contributors to CPI inflation within months.

The decomposition of inflation data in this chapter 3, suggests that the effect of energy price increases faded rather quickly and was replaced by food inflation, goods shortages, and a labour market tightness shock as the key drivers of inflation from 2022Q2 onwards. Bernanke and Blanchard (2023) provide a simple explanation as to why worries that a vicious cycle where wage rises would lead to price rises, and vice-versa, never materialised: inflation expectations have remained remarkably well-anchored throughout this inflationary shock. Data on profit as a share of GDP indicate that greedflation alone cannot explain inflationary dynamics during Phase III.

Finally, expansionary fiscal policies were implemented to mitigate the impacts of the energy shock, helping to dampen European households' experienced inflation. Fiscal support was, nevertheless, not sufficiently targeted to those who needed it the most. Idiosyncratic fiscal policies throughout Phases I-III alongside structural differences across countries generated an increased variance in CPI inflation rates within the EA, rendering the ECB's job even more difficult during this post-reopening phase.

With the steep energy price increases 'dropping out' in the first half of 2023, we have now entered a post-energy-shock phase. In December 2023, the annual rate of CPI inflation stood at 4.0%, 2.9% and 3.4%, in the UK, EA and US, respectively. Given that the recent downward trend in the headline rate of CPI inflation has been driven by volatile price movements, understanding the underlying trend of inflation is thus essential for monetary policymakers. Measures of underlying inflation vary¹² and it is important to analyze all of them to get a distinct insight into inflationary dynamics.

Despite significant falls in the headline rate of CPI inflation, underlying inflationary pressures remain elevated, and broad-based. Thus, while the supply and demand shocks that drove inflationary impulses during Phases I-III have largely faded out, their pass-through to the general price level may continue to generate persistence in inflation (e.g., it may take longer than generally expected to stabilize fully at the conventional 2% target). That said, there is plenty of evidence that monetary policy tightening has propagated through the macroeconomy.

Given that inflationary pressures in this episode have been at least partially demand-driven in all three economies, the monetary tightening cycle can be safely assumed necessary. However, the composition of demand-side inflationary pressures has been distinct across the three economies, requiring slight differences in monetary policy responses and timing among their central banks (though overall, monetary tightening has occurred in concert, which is to some degree reflective of spillovers).

¹² Exclusion-based measures omit certain items from the price index when performing the CPI inflation calculation. Trimming-based measures eliminate a percentage of items on both ends of the distribution of price changes in order to disregard outliers. Another common indicator is the GDP deflator, which gives us a good sense of domestically-generated inflation.

With the benefit of hindsight, it is possible that central banks were ‘behind the curve,’ or arriving late to tighten monetary policy during the post-Covid inflationary surge, writes the author. It is also true that fiscal policy was at times better placed to offset certain price rises in this episode. Still, a more decisive monetary policy response to early signs of general economic overheating could have made taming inflation less costly. But Paula Bejarano goes on to conclude that central banks starting their tightening cycles behind the curve is partially a story of forecast failure, when a forecast is “significantly less accurate than expected given how well the model explains the data over the past.” It remains the case that forecasts consistently under-predicted inflationary dynamics during this episode. Therefore, a simple lesson for central bankers is the need to re-assess their inflation modelling capabilities.

In chapter 4, *ECB monetary policy in 2023 and beyond: much more than interest rates*, Sofía Rodríguez Rico reflects on what has happened over the past year in terms of the ECB’s balance sheet policy and the implications of Quantitative Tightening (QT) for bank liquidity. All this in a context in which the structural demand for high-quality liquid assets (HQLA) and the preference of credit institutions to hold reserves at the central bank is greater and more unpredictable.

The ECB’s balance sheet reached an all-time high in June 2022 (€8.836 trillion). Since then, it has fallen by almost 21%, although it remains at historically high levels. This balance sheet reduction is, proportionally, one of the most aggressive of any major central banks. The main driver of the ECB’s balance sheet reduction has been the repayment of TLTROs III as these have come to maturity. Through these operations, €2.34 trillion were injected, of which only about €454 billion remain to be repaid, half of which falls due in March 2024. The last tranche will mature at the end of 2024. The start of the QT of the main Asset Purchase Programme (APP) has also contributed. As of November 2023, the central bank had reduced its bond portfolio by €214 billion. Moreover, the ECB indicated in December 2023 that it would stop fully reinvesting PEPP maturities by the end of 2024.

Looking ahead to 2024, the decline in the ECB’s balance sheet is expected to continue to be led by TLTRO III maturities (€454 billion), followed by the APP (which will drain around €345 billion) and the PEPP (around €45 billion). To date, no member of the central bank has been in favour of actively selling the assets purchased to accelerate the process of reducing the balance sheet. As part of its monetary policy normalisation, in July 2023, the ECB announced that it was no longer remunerating Minimum Reserve Requirements (MRR), which are funds that credit institutions must hold with the central bank on a mandatory basis and is liquidity that cannot be used for any other purpose.¹³

Thus, in 2023 the ECB has implemented a major tightening of its monetary stance without major shocks in terms of economic growth and financial stability. However, it is

¹³ Between the end of 2022 and July 2023, minimum reserve requirements were remunerated at the marginal deposit rate, but historically they had been remunerated at the rate of the ECB’s main refinancing operations. In the same decision in July 2023, the ECB decided to maintain the minimum reserve requirements at 1%.

reasonable to think that the full impact of these measures has not yet been observed. In particular, QT is a complex process, not only because of potential fragmentation in the context of reduced fiscal space, but also because of the difficulties to estimate financial institutions' structural demand for HQLA and their preference for holding reserves at the central bank.

The balances that credit institutions hold at central banks in excess of the required reserves are known as “excess reserves”, usually deposited in the ECB's marginal deposit facility, and remunerated at an interest rate that has become a key policy rate. The current amount of excess reserves in the EA mainly constitutes the counterparty on the ECB balance sheet to the APPs and (T)LTROS of the past decade. These excess reserves play an essential role in managing liquidity. The rest of HQLAs – government bonds, covered bonds, corporate debt, loan securitisations (ABS) and shares listed on wholesale stock indices – are all subject to volatility and valuation adjustments. In some EA countries, excess reserves account for 73% of the total HQLAs held by banks, and the average for the region is 58%. Banks will find it increasingly difficult to find an alternative within the universe of HQLAs.

The need for credit institutions to hold a higher level of liquidity than they did in the past has several underlying causes, mostly related to (i) economic uncertainty, (ii) regulatory pressures, (iii) fading deposit stability, (iv) problems in the EA interbank market and (v) the fragmentation of liquidity in the region. This chapter analyses these factors at length, and concludes that in today's environment, credit institutions, regardless of their solvency, are not assured of being able to access capital markets in a stable and undisrupted manner, and therefore raise their optimal supply of reserves. For banks to properly provide credit, it may be necessary for the ECB to provide excess reserves beyond those strictly necessary for operational reasons, and to do so through structural asset holdings and/or recurrent long-term refinancing operations with banks.

The ECB is expected to announce a new operational framework in spring 2024. It must decide which instruments to use and how to use them to control money market interest rates.¹⁴ Until the global financial crisis, GFC, the ECB operated with a low level of excess reserves (virtually zero). The bank provided the necessary liquidity to the banking system through refinancing operation and credit institutions distributed it via the interbank market. Under this “corridor system”, monetary rates stood around the rate of the main refinancing operations, MRO. In the GFC, the interbank market collapsed, and the ECB began to carry out fixed-rate full allotment refinancing operations, which led to an increase in excess reserves. The implementation of QE reinforced this increase in excess reserves. Thus, money rates sat around the marginal deposit facility

¹⁴ Currently, the central bank operates with a wide set of instruments: open market operations (such as refinancing operations to the banking system or asset purchases), standing facilities (such as the marginal deposit and credit facility, which absorb or inject liquidity overnight), the minimum reserve requirements and forward guidance. In addition, the central bank directly controls its three official rates: the marginal lending facility rate (currently at 4.75%), the marginal deposit facility rate (that sits at 4.00%) and the rate for main refinancing weekly operations (which stands at 4.50%).

rate (the bottom of the corridor) and, de facto, the ECB now operates under a “floor system”, which is a system of abundant excess reserves. The discussion of how far to reduce the ECB’s balance sheet and the optimal level of excess reserves in the system is closely linked to that of the ECB’s own operational framework. Several statements by ECB members suggest that the central bank could opt for a system of ample reserves, although it is not yet clear how the central bank will provide them.

This chapter also presents a discussion on the level and remuneration of Minimum Reserve Requirements, MRR. The ECB decided, in July 2023, to stop remunerating MRR, which were traditionally remunerated at the same rate as excess reserves. The decision was the result of the big losses being experienced by some central banks, particularly in core countries, due to the combination of a high level of excess reserves, major hikes in official interest rates and a low profitability of the bond portfolio acquired as part of the purchase schemes.

Arguments in favour of a rise in the MRR consider its impact on credit institutions manageable. However, it is difficult to understand why should monetary policy be subject to the budgetary constraints of central banks, thus leading to fiscal dependence. Increasing non remunerated MRR is like setting an additional tax on banks; it would not help provisioning nor would improve bank’s buffers. Moreover, the fragmentation of liquidity in the EA would lead to an asymmetric regional effect on banks. Increasing MRR would also have regulatory implications by tying up additional excess reserves, and banks would lose part of the most valuable HQLAs. This chapter presents estimates that suggest that for every additional percentage point of the minimum reserve requirements, the LCR (Liquidity Coverage Ratio) would be reduced by 4.5 p.p. Another consequence could be greater use of the Eurosystem refinancing operations. If the ECB fails to dissipate the stigma effect associated, it could complicate the liquidity management of some banks and jurisdictions.

In conclusion, this chapter argues that QT must proceed cautiously, with a pragmatic, flexible and telegraphed approach and in a reversible manner if necessary. In the same vein, it seems appropriate that the review of the ECB’s operational framework should be carried out without foregoing any of the instruments put in place over the last fifteen years, and preserving a broad level of voluntary reserves that functions as an insurance against systemic risks, guarantees a sufficient supply of safe and liquid assets, helps to cope with the problems of fragmentation in the EA and limits the likelihood of official interest rates ending again in the effective lower bound.

2.3. FISCAL POLICY: CONSOLIDATE AND INVEST WHILE HELPING DISINFLATION.

Section II on fiscal policy opens with a detailed description and preliminary assessment of the reform of the fiscal governance framework in the EU. In chapter 5, *Designing and implementing the new fiscal rules*, Enrique Feás writes that following its suspension with the pandemic, the European Union faced a dilemma in resuming the Stability

and Growth Pact in 2024. If the existing fiscal rules were to be applied, the economic recovery would suffer, if they were not, the fiscal credibility of the euro area would be further in jeopardy. That made the reform of fiscal rules a truly urgent matter. Based on the March Commission Communication, at the end of the Spanish Presidency the Council reached an agreement on 20 December 2023, which will be discussed with the European Parliament in the first quarter of 2024. Minor changes are to be expected, but it is unlikely that the fiscal framework be significantly altered.

The purpose of the reform was to make the fiscal rules less complex, more flexible, and more credible. But any monetary union requires not only fiscal rules, but also a central fiscal capacity to facilitate macroeconomic stabilization, a sufficient common budget, and a clear definition of supranational public goods and policies (to be provided with common funds). Unfortunately, the Council agreement has only addressed the first issue, i.e., the design of new fiscal rules. It will be a partial solution, if any. And Enrique Feás writes his disappointment, “the problem is that these rules will not be applied in a vacuum but in an extremely complex geopolitical and economic landscape. In the absence of parallel debates on how to improve European financing, the EU will be left behind in the economic and technological race.”

The new framework of fiscal rules has three components: (i) a set of fiscal sustainability criteria and objectives, (ii) a mandatory fiscal trajectory for countries towards a sustainable fiscal position, and (iii) penalties in case of non-compliance. What constitutes a sustainable fiscal policy is not trivial and would advise the use of easily understandable variables and, if possible, observable. Typically, in the EU debt sustainability analysis (DSA) implies calculating the structural deficit (linked to potential GDP and output gaps). Although a “transparent methodology, agreed with member states” has been promised, the discussions will most likely end in bitter political debates disguised as technical disagreements. In the end, the DSA will be carried out by the Commission and approved by the Council, to underline collective ownership but also removing it further from a purely technical and transparent decision.

Based on the DSA, the Commission and each member country will agree on a “technical trajectory” to bring the deficit and debt below the limits of 3% and 60% of GDP, respectively. An individual multi-annual technical trajectory will be negotiated by the Commission with each member state, with final endorsement by the Council. Each member state will prepare a “medium-term fiscal-structural plan” setting out its commitments to fiscal adjustment, structural reform, and public investment. The standard horizon for these plans will be four years, extended to seven years provided that the extension “is supported by a set of priority reforms and investment commitments.”

The technical trajectory requires a control variable to measure annual performance, the net primary expenditure, thus basically adopting an expenditure rule. The net primary expenditure will be calculated as the observable expenditure net of discretionary revenue measures and excluding interest expenditure, expenditure derived from EU funds, and cyclical unemployment expenditure. The medium-term path will be translated into the corresponding annual spending ceilings, the performance criteria of the new rules.

Although the adopted expenditure rule implies some progress towards transparency, it remains dependent on the systematic use of non-observable variables, i.e. structural deficit, cyclical expenditure on unemployment, structural and cyclical income, potential GDP, and output gap. Moreover, in assessing compliance with the new rules, the Commission will also consider, the degree of public debt challenges, the size of the deviation from target, the progress in the implementation of structural reforms and investments and, “where applicable” the increase of government spending on defense. Discretionary judgements will therefore continue to be the norm and will lead to politicized decisions.

Compliance with the trajectory does not guarantee a specific rhythm of adjustment, and some member states insisted on additional safeguards. The Commission April proposal included the requirement of a minimum structural deficit reduction of 0.5% of GDP per year. The Council discussions led to even more complexity with additional four requirements, whose detailed analysis can be found in the text of the chapter. In sum, the new rules incorporate (i) a minimum rate of reduction of the structural deficit of 0.4% of GDP per year, limited to 0.25% if the country is under a 7-year plan, (ii) a deficit resilience safeguard that basically sets a medium term target deficit of 1.5% of GDP, instead of 3% GDP, to generate a buffer for adverse times, (iii) a new “debt sustainability safeguard” so that debt at the end of the period should imply an average annual reduction of 1% of GDP for countries with debt above 90% of GDP and of 0.5% for countries with debt between 60% and 90% of GDP, and (iv) an additional expenditure ceiling for countries subject to an Excessive Deficit Procedure.

From a technical point of view, the new fiscal rules represent an undeniable step forward, writes Feás. However, if the idea was to increase simplicity, flexibility, and credibility, these objectives have been only partially fulfilled. In terms of simplicity, the replacement of the structural deficit by net primary expenditure as the control variable is welcome, but in practice the new rules will include many other control variables which are non-observable and plenty of discretionary judgements. Moreover, the existence of multiple safeguards damages simplicity since an excess of control variables leads to complex, non-straight forward decisions.

The new framework has also increased flexibility, but subject to several important constraints. First, the maintenance of the benchmarks of 3% deficit and 60% debt as arbitrary reference values, given the unwillingness to even contemplate a Treaty change. Second, the new safeguards act as additional restrictions in an already complicated optimization process; the debt sustainability is the most problematic of the new safeguards.

Finally, the EU needs fiscal rules, but it also needs to finance long-term investment, in particular in the green and digital transitions. The debate about the EU investment needs has been absent during the negotiation of the new fiscal rules, and this is a big mistake, argues Enrique Feás. And he makes the point that all fiscal rules (no matter their perfection) reduce the volume of investment from “what is needed” at the European level to “what is sustainable” for each of the member states.¹⁵ Total European

¹⁵ It could be argued though, that financial markets will force that adjustment more violently in the

investment will be insufficient in the absence of a central fiscal capacity, an argument often mentioned in the public debate.

The lack of credibility is also problematic. Rules are only as effective as their implementation mechanisms. Implementation depends on the credibility of the targets and the role of incentives. The targets are so many and, in some cases, so arbitrary that are in themselves a problem. As for the incentives, the lack of active participation of independent fiscal institutions makes it easy for member states to refuse compliance to an adjustment path imposed by the Commission. Moreover, the rules lower but maintain economic fines that continue to operate on a pro-cyclical basis, and moral sanctions were abandoned.

In conclusion, the new fiscal rules are a step forward in coordinating fiscal policy in the EU. But simplicity has been sacrificed on the altar of flexibility, and credibility remains to be seen. In any case, these rules are far from being the solution for all EU fiscal challenges.

In chapter 6, *Longer-term fiscal challenges facing the EU*, Zsolt Darvas, Lennard Welzlau and Jeromin Zettelmeyer write that the pandemic and war shocks have increased longer-term fiscal pressures in the EU through three channels: higher debt, higher expected real interest rates, and higher public investment needs; these shocks have impacted long-term primary fiscal balances between 0.5 percent to 1.5 percent of GDP for most countries.

This chapter shows the evolution of the distributions of public debt and the primary (non-interest) fiscal balance in the current 27 EU countries since 1993, the year after the signing of the Maastricht treaty. And observe that although the 2022 debt ratios of countries at or below the median are not exceptionally high, the debt ratios above the 75th percentile, the quarter of countries with the highest debt ratios, are at historic highs. Furthermore, these debt levels have drifted further from the median than at any time since the early 1990s.

Yet, these changes do not offer a definitive assessment of how much the fiscal outlook has changed since 2019. A more precise evaluation requires an examination of the drivers of longer-term fiscal pressures. To do so, the authors look at the ‘debt-stabilising primary balance’. This is the primary balance that is necessary to stabilise the debt at a particular level, assuming the economy is in a steady state in which the primary balance, gross financing needs, real interest rates and real growth rates remain unchanged. And they calculate that the steady-state debt-stabilising primary balance has risen, but not dramatically: by about 0.9 percentage point at the median, and from 1.1 to 2 percentage points at the 75th percentile. This means that an economy that in the steady state could previously afford to run a primary deficit of about 1 percent of GDP forever without seeing its debt ratio rise, would now need to run a primary surplus of about 0,5 percent of GDP to achieve the same result.

The future trajectory of these debt drivers is subject to uncertainty, and this chapter

absence of fiscal rules and credibility, as the Union should have learnt by now. In the end, economics is nothing but assigning scarce resources to unlimited ends.

estimates the probability that a country will fail to stabilise its debt, using the IMF's (2022) fan chart methodology.¹⁶ While in 2019 the median probability was only 0.1, it has now increased to 0.4. The 75th percentile saw an even larger climb from 0.3 to 0.6, implying that for these countries, an explosion of debt resulting from insufficiently high primary balances is now more likely than a debt decline.

In the next section Darvas, Welslau and Zettelmeyer address the question of how much extra adjustment would be needed to prevent such scenarios. They estimate the medium-term adjustment requirements, i.e., structural primary balances at the end of the four- or seven-year adjustment period implied by the December Council agreement. These calculations are based on November forecasts by the European Commission, market expectations for interest rates and inflation, ECB data on the composition of government debt, and an updated version of their own replication of the Commission's DSA methodology.

The results of their analysis show that medium-term structural primary balance (SPB) targets vary considerably across countries and, depending on the adjustment horizon, range from negative for some low-debt, low-deficit countries, to positive and large for some high-debt countries. The largest SPBs to be achieved by the end of the adjustment period are, quoting first results for the four-, then for the seven-year adjustment period: 3.7 (3.3) percent of GDP for Italy, 2.5 (3.0) for Spain, 2.4 (2.6) percent for Belgium, 2.8 (2.6) percent for Portugal, and 2.6 (3.2) percent for Hungary. In their view, the agreed fiscal consolidation is manageable by historical standards in all EU countries in a seven-year period, but ambitious in some cases, and will have to be reconciled with pressing investment needs. Moreover, the safeguards will require continued fiscal adjustments to levels that may be excessive for some countries. And they highlight the wide differences in fiscal space across EU countries, differences that have only widened further.

Given the high uncertainty around nominal interest rate expectations, and its importance in estimating the actual fiscal targets for member states, the authors study the possible direction of real rates in the next few years. The question is whether in the new inflationary environment, the steady downward trend observed in the recent past is reversing, resulting in a regime shift towards higher real interest rates. Whether these structural factors persist or unwind rests on arguments on both sides. Hence, uncertainty calls for caution and fiscal policymakers should not make plans that assume a return to near zero interest rates.

This call for fiscal prudence is reinforced by the failure of current spending plans to adequately account for pressing public investment needs in priority areas: defence, climate transition, and digital transition. In defence, reaching the 2 percent target would require 0.7 percent of GDP in additional annual defence spending on average in the EU (1.0 percent in Spain). Based on the National Energy and Climate Plans of EU countries for overall climate-related investments during 2021-2030 (including tax in-

¹⁶ For a description of the methodology see chapter 6 in this Yearbook and IMF (2022).

centives and subsidies), the public sector should fund about 0.6 percent of GDP of the total 2 percent of GDP additional climate investment needs. Other estimates quoted in this chapter are even higher, suggesting 1.8 percent additional annual public investment needs. The European Commission estimated the digital transformation investment gap at 0.9 percent of GDP, per year. And certainly, some part of this funding need must be covered by the public sector.

Chapter 7 concludes the fiscal section and looks at the investment issue highlighted before. Ángel de la Fuente writes on *The Reforms component of Spain's Recovery Plan*. The Spanish Recovery and Resilience Plan, RRP, was submitted in October 2020 and approved in July 2021, with a financial contribution of 69,500 million euros in grants. An addendum to the Plan was presented in June 2023 and was approved in October. The revised Plan includes an additional 10,300 million euros in grants and 83,000 million in loans.

The Plan includes a detailed listing of 140 investment targets and 111 reform milestones. The NGEU program¹⁷ introduces a pay for performance criterion. Performance will be measured in terms of the implementation of reforms that are expected to have long-lasting positive benefits for growth, equity, or sustainability. This chapter assesses to what extent this is happening in the case of the reforms contained in the Spanish Recovery Plan.

Over the last two and a half years, Spain has approved a large number of reforms, generally respecting the deadlines, although often at the expense of an excessive use of urgent legislative procedures. This chapter reviews the main reforms and concludes that the balance of the reforms approved “has been spotty, with some important reforms pointing in the wrong direction and some others lacking ambition.” The Commission, however, has mostly ignored the problems and has condoned lukewarm compliance. The author warns that in its future assessment of two crucial measures: pension reform and the new housing law, “the Commission will be doing both Spain and Europe a disservice if it does not raise its voice against ill-conceived measures and fails to push for a course correction.”

De la Fuente acknowledges that the Spanish RRP is on paper consistent with the country specific recommendations (CSRs). In both cases, the focus is on the improvement of labor market performance, educational outcomes, and social protection, while preserving sustainability. But adds that some of the measures that have been approved are not consistent with their stated objectives or fail to pursue them in an effective or efficient manner, while fiscal sustainability considerations have not received the attention they deserve.

The chapter reviews (i) the introduction of a minimum income scheme (IMV, for its Spanish initials) that has failed to break the poverty trap; (ii) the labor market reform, that has greatly increased the share of open-ended contracts, but has had little effect on average contract durations and wages; and (iii) the tax reform, an area where aside from tinkering with indirect taxes on energy and foodstuffs, has only seen the introduc-

¹⁷ See chapters 5, 6, and 7 in the Euro in 2023.

tion of new ad hoc levies on certain large corporations in the energy and financial sectors, and a supplementary wealth tax, all of which are problematic on both procedural and substantive grounds.

One of the most important and controversial measures included in the Spanish Recovery Plan has been a comprehensive package of public pension reforms approved in successive tranches between 2021 and 2023.¹⁸ The first stage of the reform involved the repeal and substitution of two automatic expenditure control mechanisms that ensured sustainability. While the Government is very optimistic about the budgetary implications of the increased contribution system for self-employed workers and the strengthening of incentives for postponing retirement, most private analysts are highly skeptical of those estimates and have concluded that the reform hurts sustainability of the public pension system.

To get a feeling for the magnitudes involved, Angel de la Fuente compares the Government's projections of the public pension system's revenues and expenditures after the reform with an alternative based on the most recent edition of the EU's Ageing Report, (that of 2021), and his own estimates of the incremental effects of the reform published by FEDEA.¹⁹ While official estimates expect that the reform will have only a moderate impact on the system's deficit, and would never exceed 1 percentage point of GDP, de la Fuente calculations, in line with most private and academic analysts, point to an increase of more than 3 points of GDP in the system's basic deficit (i.e. its deficit without ad hoc Government transfers).

The reform includes a safeguard clause, introduced under pressure from the European Commission, that forces the introduction of unspecified corrective measures in the case of estimated excess expenditure. If no agreement is reached on additional measures, social contribution rates will automatically be increased. There is practical consensus among academic specialists that the safeguard clause will have to be activated right away. Average pension expenditure between now and 2050 would be above 15% of GDP while the incremental revenues of the pension system generated by recent reforms would not exceed 1% of GDP. These projections would immediately trigger the safeguard clause, forcing an increase in social security contribution rates of between 3 and 4 percentage points. Obviously, the implications for the sustainability of public finances, the necessary public investments, employment and even potential GDP growth in Spain are very significant.

The second reform explicitly analyzed in this chapter is the new housing law, "that is likely to be not only unsuccessful but also counterproductive", since it introduces a set of policy options that will aggravate the existing shortage of affordable rental housing, mostly by weakening private property rights. To increase the supply of housing, the new law increases investment in the public stock of rental housing and fiscal deductions for income from private rentals, but also introduces (i) the possibility of rent controls, (ii)

¹⁸ The main measures of the Pension Reform are listed in Box 3 in chapter 7, which includes a description of content, objectives, and possible shortcomings.

¹⁹ See de la Fuente, A. (2023).

the imposition of general limits on the actualization of rents, (iii) mandatory extensions of rental contracts after their expiration, (iv) provisions that complicate recovering property from delinquent tenants or illegal occupants, and (v) language and provisions that would allow public authorities to expropriate without proper compensation in order to finance an unspecified social good, “housing”. All these measures reduce the return to investment in residential real estate destined for rental or increase its expected risk, thus reducing its current and future stock through the withdrawal of properties from the market and a decline in investment in the construction of new units.

The author is very critical of the Commission reaction to these ill designed reforms. All three Spain’s requests for payment on the basis of the fulfillment of the successive tranches of required targets and milestones have been approved. In many cases, the reports simply note that the relevant law has been passed, without even looking at its content, and the Spanish Government’s estimates of likely economic or budgetary effects are generally accepted without question.

The Commission’s report on Spain’s second request for payment, having to do with pension reform, is the one significant exception, and questions the Spanish Government’s estimates of the savings generated by the new incentives. However, these concerns miraculously disappear in the third assessment report, despite those estimates being widely questioned in Spain. Presumably because of the introduction of the escape clause. We will have to wait for the report on the fourth payment request to know the Commission’s assessment of the entire pension reform, as well as its opinion on the new housing law. De la Fuente hopes that the Commission will not allow such questionable reforms to go through unchallenged and will push for corrections that will increase the sustainability of public finances and raise potential growth. It will be an excellent opportunity to deny mounting presumptions that the Commission is only concerned about ensuring NGEU is fully disbursed and spent.

2.4. LESSONS FROM PRUDENTIAL POLICIES IN A WORLD OF DIGITAL FINANCES.

Section III looks at the evolution of prudential and regulation policies in the context of financial digitalization and the Spring banking crisis. And it starts in chapter 8 by assessing developments with central bank digital currencies. Maria Abascal and Laura Mullor write *A digital euro: How to face the challenges of an eventual future issuance*.

Bank money has been digital for decades. More recently, central banks are exploring digitalization to ensure that citizens maintain access to risk-free sovereign money as a payment option, promote financial inclusion and prevent the possibility of rapid market adoption of private stable currencies (stable coins), which could generate systemic risks and endanger monetary sovereignty.

A retail Central Bank Digital Currency, CBDC, refers to digital central bank money available to all citizens, as opposed to a wholesale CBDC which is designed for the use among financial intermediaries for the settlement of interbank transfers and related

wholesale transactions in central bank reserves. A retail CBDC is potentially a new form of digital central bank money, different from reserves held by commercial banks at central banks since it amounts to a new form of CB liability to the general public.

The issuance of a CBDC for the general public will have important implications for the financial system and should be carefully analysed. CBDC are meant to complement cash, currency in circulation, not to substitute banks deposits. There is a risk, though, that if the design is not well crafted, the issuance of CBDCs end up facilitating bank runs in times of risk aversion, more so in a world dominated by social networks. In less extreme situations, the introduction of CBDC could structurally reduce financial intermediation and lead to a tightening of credit conditions, both because of the increase in bank funding costs and the reduction of loanable amounts. A risk particularly acute in Europe, where banks account for 95% of credit to the private sector, compared to 51% in the US.

The denationalization of money and monetary policies, the situation in which a national Central Bank loses control over the supply of money on his jurisdiction, is another potential risk. That is the reason why European authorities intend to make the digital euro available only for EA residents and visitors. The extension to third countries will only be possible prior an agreement between the ECB and the central bank of the other country.

The Eurosystem launched its digital euro project in October 2020, when it published a preliminary report. In October 2023, the Governing Council of the ECB made the formal decision to move on to the preparation phase, expected to last two years. It is in this period that the digital euro rulebook will be finalised, and providers that could develop the digital euro platform and infrastructure will be selected. This phase also includes testing and experimentation of prototype products and platforms.

The digital euro would co-exist with cash and other electronic means of payment, offering the citizens more payment options and helping to preserve the role of public money as the anchor of the payment system in the digital era. A digital euro would also contribute to Europe's strategic autonomy and economic efficiency, by reducing the dependence on the non-European payment solutions that dominate some market segments. It will also be based on a European infrastructure and governance. This seems to be important to the European audience, given that recent geopolitical tensions have highlighted the risks of relying exclusively on external providers for critical needs. But there is an undeniable defensive tone in this argumentation, as if the digital euro were a second-best solution.

This chapter describes the key elements of the design of a digital euro that have been considered by the Eurosystem. Notably, the use cases, the limits on holdings, the allocation of activities and the distribution model. The use case prioritizes online e-commerce, physical store (point of sale, PoS), and peer-to-peer payments (P2P). The ECB is explicitly considering incorporating limits to individual holdings of digital euros, to curb their use as a store of value and prevent excessive migration from banks deposits

to the digital euro.²⁰ If holdings of digital euros are limited, a waterfall functionality²¹ can be introduced to allow users to make or receive payments in digital euros above any holding limit established by the central bank. Merchants and government and public institutions in the euro area will have zero-holding limits (i.e., they cannot hold digital euros), with deviations limited to what is required for the technical implementation of the waterfall and reverse-waterfall functions (i.e., exceeding holding limits only for a few seconds).

Although complete anonymity is not considered a viable option from a public policy point of view, the Eurosystem will explore a higher privacy configuration for low-value transactions and “offline” payments, thus reproducing some cash like characteristics. In that respect, although clients would be subject to holding/amount controls during onboarding, real-time information on holdings, balances, and transaction amounts would only be known by the user and not to third-party intermediaries.

Holding a digital euro will imply holding a direct liability of the central bank, as it currently happens with banknotes. This means that a digital euro would be recorded as a liability on the Eurosystem's balance sheet and that the Eurosystem is responsible for any settlement errors. The Eurosystem will therefore retain full control over the issuance of digital euros and the settlement of online digital euro transactions, including registration and associated verification tasks.

Payment service providers (PSPs) will be the sole intermediaries of the digital euro and will have a contractual relationship with end users in relation to account management. The distribution of the digital euro will be mandatory for credit institutions providing account servicing payment. PSPs will be responsible for opening accounts and wallets, carrying out KYC (know your customers) and AML (anti money laundering) checks and initiating transactions, customer authentication and the validation of the transaction, as well as the reconciliation. The supervised intermediaries would also carry out tasks related to funding and defunding in digital euros (recharge/withdrawal). Users will be able to choose to convert private money or cash into digital euros, and vice versa, manually, or automatically.

End users will be able to access and use the digital euro through online banking, applications of payment service providers or through an application provided by the Eurosystem that offers a harmonized entry point for basic payment functionalities. The Eurosystem considers that the digital euro should be free for a basic use by individual

²⁰ In the investigation phase, the Eurosystem also considered a *two-tier remuneration system* as a tool to avoid the digital euro being used as a store of value. This system discourages digital euro's excess holdings through penalizing interest rates. It has been abandoned because it would be confusing, discourages widespread adoption, and may prove ineffective in crisis situations.

²¹ Waterfalling in this context means that when receiving a payment, liquidity exceeding the holding threshold would be automatically transferred to a linked private money account chosen by the end user.

Similarly, at the discretion of the end user, a reverse waterfall functionality would ensure that end users could make a payment even if the amount exceeds their current digital euro funds. Additional liquidity would be drawn from the linked private money account and the transaction would be completed in digital euros at its full value.

users. These free basic services – that will be established on a future Regulation - could include: (i) opening/holding/closing of a digital euro payment account, (ii) non-automated and automated funding and defunding from a non-digital euro payment account, (iii) waterfall/reverse waterfall services, (iv) provision of a basic payment instrument and (v) initiating and receiving payment transactions.

PSPs will only be able to charge customers for the provision of additional payment instruments or for additional value services on top of the digital euro. PSPs would also be able to charge merchants for using digital euro acquiring services. At the same time, PSPs that provide fee-based acquiring services to merchants will compensate the PSPs distributing the digital euros to end users by paying an inter-PSP fee, similar to what happens in the payment card fees model.

The authors argue that adoption of the digital euro could be supported by the current instant payment infrastructures and the different end-to-end solutions that already exist, allowing their interoperability. This strategy would also facilitate the complementarity of the digital euro with other means of payment currently available. For instance, in Spain Bizum is the reference solution for P2P payments and users could manage their P2P payments, both with digital euros and with commercial bank money, through the same mobile application, regardless of whether it could coexist with other solutions promoted by third parties or by the Eurosystem itself. If so, the project could also help to boost the interoperability of existing private payment solutions and thus strengthen the strategic autonomy of payments in the EU.

The required investments and expected returns for intermediaries of launching and distributing the digital euro must be thoroughly analysed. And this chapter insists that it is essential to create the right incentives for intermediaries to provide the related services, as well as for the development of new value-added functionalities. An adequate compensation model for the intermediary entities, so that they can build a sustainable and competitive business model, based on equal conditions with other means of payment. Therefore, it is necessary to identify the use cases and business models around the digital euro, as these will be a key factor for the successful creation and long-term functioning of the new ecosystem.

Regulated intermediaries could develop value-added services such as chargebacks or dispute resolution mechanisms for merchant payments, payment-on-delivery functionalities in e-commerce, micro-credit and other services that are currently available in private solutions. For this to happen, it is important to ensure that the ECB develops a flexible infrastructure and rulebook that leaves sufficient room for private innovation to deploy new business models.

In concluding the chapter, Abascal and Mullor emphasize that the issuance of the digital euro is a strategic decision for Europe with far reaching consequences. Authorities must therefore ensure that the digital euro has a clear purpose and value for citizens before it is launched, so that the benefits outweigh the costs and risks of its roll-out. The decision must be made on the basis of a rigorous analysis by all stakeholders.

In chapter 9, *The US Banking Sector since March 2023 Turmoil. Navigating the aftermath*, Nassira Abbas, Silvia L. Ramirez and Gonzalo Fernández Dionis, write that in March

and April of 2023, the global financial system experienced the most significant banking stress since the Global Financial Crisis (GFC). The chapter presents a chronological and analytical story of these events, based on a wealth of data, and concludes with some lessons for monetary authorities worldwide. The collapse of a few US regional banks highlighted the lack of preparedness of some financial institutions for the fast cycle of monetary tightening after a long period of low rates. A large part of the surge in deposits brought about by pandemic savings had been invested in longer-duration securities posing considerable interest rate risk. Moreover, as interest rates started to normalize, depositors moved out of banks and into higher return products like money market funds, leading to an acceleration of deposits outflows. Technological advances such as mobile banking and the rapid spread of information through social media accelerated the deposit run.

SVB defined itself as the “go-to financial partner” for investors in the innovation ecosystem. Benefiting from the enormous expansion of the technology sector, SVB quadrupled in size between 2017 and 2023, surpassing US \$200bn. SVB was unique in a number of ways. First, its client base was especially homogenous, composed of mainly wholesale deposits with a high sectoral and geographical concentration in Silicon Valley. Thus, a high degree of uninsured deposits (90 percent of total deposits). Second, management invested heavily in long-term residential mortgage-backed securities (RMBS). Third, enhanced supervision and regulatory requirements for banks of the size of SVB had not been fully phased in due to its rapid growth. Fourth, SVB’s access to the Fed’s discount window was not operationally active.

The bank became a concern for investors and in March 2023, SVB was unable to complete its announced plan to raise capital. The reporting of US\$ 42 billion of deposits leaving the bank on March 9, with another US\$ 100bn forecast to flow out the next day, triggered a liquidity crisis, marking it the fastest and largest deposit run in history. The bank was closed on March 10 by the California Department of Financial Protection & Innovation and the Federal Deposit Insurance Corporation (FDIC) was appointed receiver.

The collapse of SVB sparked a re-evaluation of the US banking sector, with investors focusing on certain regional institutions and their level of uninsured deposits. Signature Bank of New York (US \$110 billion in assets), with a large exposure to volatile crypto-assets and high share of uninsured deposits (close to 90 percent), quickly became a target of contagion and a run on the bank followed almost immediately. The New York State Department of Financial Services and the FDIC closed the institution on March 12 after it had lost more than 70 percent of its equity value within days. First Republic Bank with US \$212 billion in assets, provided preferential long-term rates to high-net worth individuals, while keeping their large savings as uninsured deposits. In particular, almost half of their loan book was residential real estate mortgages. After losing almost 75 percent of its equity value, the bank was closed by the California Department of Financial Protection and Innovation. The FDIC was appointed receiver, and JPMorgan Chase acquired all deposit accounts and nearly all assets on May 1.

To contain further contagion, US financial regulators enacted a series of bold meas-

ures ranging from close monitoring and coordination to a blanket coverage of all depositors, and emergency lending programs. The FDIC announced on March 12, that it would guarantee all SVB and SBNY's uninsured deposits by declaring the "systemic risk exception", sidestepping the least-cost requirements of the FDIC's Deposit Insurance Fund (DIF) for resolution. Seven months later, once the market had eased, the FDIC approved in November a special levy to recover the losses to the DIF.

Also, the Federal Reserve put in place a new liquidity facility, the Bank Term Funding Program (BTFP), to provide emergency liquidity to institutions under market pressures, improve market sentiment, and contain future deposits runs. Under this new facility, banks were able to generate liquidity without selling securities and crystallizing mark-to-market losses caused by higher interest rates. In addition, certain institutions opted for the use of credit through the discount window, and bank borrowing from the Primary Credit facility surged to an all-time high of US\$153 billion. In parallel, the Department of the Treasury made available up to US\$25 billion from the Exchange Stabilization Fund as a backstop for the BTFP.

Since March, use of the BTFP had remained fairly stable at around US\$100 billion. However, the fast-approaching end of the program, it expires in March 2024, combined with the very attractive lending rate compared to the secured market, led to a sharp increase in use since November. The additional take-up suggests arbitrage behavior by banks and might not reflect real liquidity needs from the banking system. As of January 2024, BTFP borrowings reached the highest level since the inception of the facility, standing at US\$ 167 billion. Despite the ongoing quantitative tightening since the collapse of SVB, banks' reserves have increased significantly reflecting a precautionary behavior. As of January 25, 2024, reserves amount to US\$ 3.6 trillion—US\$ 500 billion more than before the US regional stress.

After telling the story of the crisis, chapter 9 provides meaningful insights into early warning signals and some implications for prudential and regulatory policies. In March 2023, after the failure of SVB and SBNY, depositors and investors became concerned about liquidity and about the financial soundness of banks matching a certain profile: (i) sizable deposit outflows, (ii) high concentrations of uninsured deposits, (iii) reliance on other borrowing and higher use of liquidity facilities, the Federal Home Loan Banks (FHLB) in particular, (iv) substantial unrealized losses, and (iv) high concentration to commercial real estate (CRE).

Several factors had contributed to the surge in deposits: (i) cash payments to the population as part of fiscal stimulus measures; (ii) a high personal savings rate; (iii) the creation of deposits by the Federal Reserve's asset purchase program and the drawdown in commercial and industrial credit lines. By year-end 2021, deposits reached \$18.5 trillion and were \$3.85 trillion (or 38 percent) above pre-pandemic levels. After the run on deposits, and thanks to forceful government intervention, outflows stabilized and still today remain 28 percent above pre pandemic levels.

In first quarter of 2023, unrealized losses were US\$510 billion, of which AFS, available for sale, unrealized losses accounted for 55 percent of total, and HTM, held to maturity, losses accounted for 45 percent. Unrealized losses from holdings of RMBS

represented nearly two-thirds of total unrealized losses and were driven by increases in mortgage rates. By the third quarter of 2023 unrealized losses were US \$653 billion. The median ratio of unrealized losses to Tier 1 capital suggests large banks (34 percent) have a higher concentration of unrealized losses to Tier 1 capital compared to small and medium banks (28 percent).

Deposit outflows and rising unrealized losses on securities contributed to the decline in liquid assets, particularly for medium banks. Liquidity, as measured by the ratio of liquid assets to total assets, declined the first quarter of 2023; medium banks had the lowest liquidity ratio (15 percent) compared to small (24 percent) and large (26 percent).

The high concentration of CRE exposures represents a serious risk. Small and medium banks hold nearly two-thirds of the US\$3 trillion in CRE exposures in the banking system. Non-farm non-residential loans represented the largest subcomponent, accounting for more than half of CRE loans. An estimated 48 percent of medium banks reported CRE concentrations above the 300 percent regulatory threshold compared to 27 percent for small banks and 6 percent for large banks.

Beyond the descriptive analysis of the key characteristics of regional banks, the authors try to infer causality from the available data. To that effect and using a subset of 108 listed banks in the KRE bank regional index, they run a simple cross-sectional regression of bank stock performance between May 1 and May 4, 2023, on a number of potential drivers.

An increase in the Federal Home Loan Banks (FHLB) advances shows a particularly strong and significant negative impact on stock performance. This suggests the use of these funding options didn't calm the market; rather, investors have taken it as a sign that the bank faced liquidity stress. Deposit outflows and larger CRE exposures were also associated with stronger selling pressures. The share of unsecured deposits, as well as unrealized losses in HTM and AFS portfolios as of the first quarter of 2023, do not seem to have had a statistically significant impact on individual stock performance during the May sell-off. A potential reason is that the market had already priced-in most of this information ahead of May as the incremental losses were not substantial. Within this sample of regional banks, banks with assets less than US \$50bn seem to have more resilient stock prices, controlling for other factors, consistent with the market focus on US mid-size regional banks, rather than the smaller institutions with limited footprint.

Bank equity has broadly recovered since the March 2023 turmoil, but bank valuations remain at a discount. Price to book values for US regional banks have suffered as uncertainty around medium-term prospects for their current business models and the potential for heightened regulation and increases in required capital deter investors. Despite this, the market continues to pay a premium for US banks, and the wedge between price-to-book values for the US compared to Europe has expanded since the third quarter of 2023 and returned to pre-turmoil levels.

In the third quarter of 2023, a weak tail of banks remained (close to 40 representing almost US\$ 5 trillion in assets), as a number of small and medium banks still have high levels of unrealized losses, high CRE concentrations, higher reliance on other borrow-

ings, higher funding costs, and lower profitability. The pocket of weak banks stands out across earnings, liquidity, and market risk dimensions.

In concluding, this chapter argues that the recent bank failures must serve as a stark reminder of the importance of an adequate management of interest rate and liquidity risks. But it also demonstrated how a group of weak medium sized banks were disproportionately impacted, putting financial stability at risk, amid concerns of regulatory and supervisory short-comings. Thus, there is an urgent need to strengthen the prudential framework and address lapses in supervisory oversight. Supervisors should continue to ensure all banks maintain adequate capital buffers, and they need to reinvigorate supervision and risk assessments, including through enhanced stress testing. Continued vigilance is warranted to monitor vulnerabilities and concentrations in the CRE sector to minimize financial stability risks supervisors should ensure that banks have corporate governance and risk-management processes commensurate with their risk profile. Adequate minimum capital and liquidity requirements, inclusive of smaller banking organizations, are essential to contain financial stability risks.

For their part, authorities should be prepared to deal with financial instability, by acting swiftly and providing liquidity support to prevent systemic events, and by ensuring banks contingency funding plans are operational, and are prepared to access and use central bank facilities. Authorities should intervene early to address weaknesses of banks, and, where needed, strengthen bank resolution regimes and preparedness to deploy them.

The last article in the Yearbook, chapter 10, is about *Strengthening the Resolution Framework in the EU: The CMDI Proposal and Next Steps*. Carla Díaz Álvarez de Toledo, director of Resolution at FROB at the time of writing, looks back on the development of the European resolution framework since the approval of the Bank Recovery and Resolution Directive 2014/59/EU (BRRD) ten years ago, and in the aftermath of the financial turmoil caused by tensions in the banking sector in US and Switzerland in the Spring of 2023.

A decade ago, the new resolution regimen enshrined the principle of bail-in, shareholders and creditors are the first to bear losses, and if these funds are not sufficient the joint, gradually mutualized, Single Resolution Fund (SRF), made up of contributions from the industry, r steps in enforcing the principle that the cost of financial crises is borne by the private sector. The new regulation also focused on resolution planning and preparation in stable times, as well as on the establishment of a minimum requirement for own funds and eligible liabilities (MREL), to ensure that entities have a sufficient loss absorbing capacity, LAC.

Over the past ten years, resolution authorities have worked with banks in resolution planning and operationalizing resolution tools, reducing obstacles to resolvability on a wide range of dimensions (governance, liquidity, operational continuity, etc.), and ensuring adequate financing in resolution, both through the build-up of the necessary loss-absorption capacity as well as through the constitution of the Single Resolution Fund. In January 2024 the SRF should be fully built-up and mutualized, reaching its target of 1% of covered deposits (an amount close to 80 billion euros). As of end-2022, the cut-off

date for the SRB's latest Resolvability Assessment Report, the vast majority of banks were well on track to complying with the SRB's Expectations for Banks (EfB) as well as with their final MREL target for 2024, including the Combined Buffer Requirement (CBR).

The new framework was successfully put to the test for the first time in 2017 in Spain, with the resolution of Banco Popular, and then in Croatia and Slovenia in 2022.²² But the true test to the new global framework came in the first quarter of 2023, with the US and Swiss bank crisis. The previous chapter has already drawn important lessons from these events, and this chapter adopts a crisis management perspective. All spring bank failures were addressed by selling the entity in crisis, as had already been the case with Banco Popular and Sberbank. In addition, it was also necessary for authorities to provide: (i) substantial liquidity support from Central Banks and (ii) ample guarantees from the Treasury.

The fact that these guarantees ultimately came from the taxpayer and that, in the case of Credit Suisse, the situation was managed outside of a formal resolution process was met with general skepticism over the resolution framework; skepticism aggravated by the write-down of AT1 instruments without a prior write-down of shares. However, this chapter takes a more positive approach and writes, "time has shown that the decisions taken at the time were effective for preserving resolution objectives and that in the end, US and Swiss authorities successfully managed to stabilize the markets and the banking sector, protecting financial stability and the economy, at no ultimate cost to the taxpayer," although because of the ex-post introduction of a special levy on the industry.²³

In the context of EMU, the recent bank failures provide an opportunity to refine and complete the existing framework. And Carla Diaz underlines three lines of progress: (i) the funding in resolution, (ii) the guarantees, and (iii) the role of deposit insurance. Only Central Banks have the firepower to provide potentially unlimited resources to support liquidity and confidence in the aftermath of a resolution. Considering the expected depletion of collateral in the run-up to a crisis, some sort of public guarantee would be needed to support access to central bank facilities until confidence is restored and the entity regains access to private sources of funding. In the Banking Union it is paramount that this guarantee is provided at a European level, in order to avoid the damage of fragmentation, and to be consistent with the fact that the entity has been resolved by European rules.

²² In between these two events, there were several other bank failures in Italy or Latvia, when the SRB concluded that resolution action was not warranted in the public interest, and as a result, the banks were wound up under national insolvency proceedings, in some cases with State aid to support the liquidation process. A double standard that has been criticized in previous editions of this Yearbook. See Antonio Carrascosa, in *The Euro* in 2021.

²³ In the US, the estimated cost of the resolution cases to the FDIC (around 16.3 bn USD), attributable to the protection of uninsured depositors, is expected to be recouped from a special assessment on the industry which will start to be collected in 2024. In Switzerland, UBS voluntarily terminated in August the CHF 9 billion Loss Protection Agreement and the CHF 100 billion Public Liquidity Backstop that had been granted by Swiss authorities in March.

The sale-of-business tool and the guarantees required to facilitate it have proven the most viable resolution tool. In the absence of nationalization, only a credible new owner can ensure continued access to deposits. But experience shows that, at the moment of crisis, uncertainties over legal and risk-contingent liabilities discourage potential buyers. As we have learnt in Spain with APSs (Asset Protection Schemes), the capacity to cover certain liabilities is instrumental. Developing the role that the Deposit Guarantee Schemes (DGSs) and the SRF can play in offering these guarantees, which is very limited in the current framework, is worth exploring, so that these guarantees are granted by the industry rather than the taxpayer.

Uninsured deposits are now expected to contribute as creditors to the cost of a resolution. With the digitalization of finances, this has resulted in instability and contagion. Several options are on the table to offset this development, including the possibility of extending depositor protection to additional or all deposits. Obviously, in EMU this consideration leads to the EDIS issue, the absence of a European Deposit Insurance Scheme.

The Crisis Management and Deposit Insurance, CMDI, proposal presented in April and designed before the Spring events, aims at improving the tools used to manage the failure of small and medium-sized banks and restore a level playing field. This chapter describes in detail the main elements of the proposal: (i) the extension of the scope of resolution, with proposed reversal in the “burden of proof” in the public interest assessment (PIA), a change particularly relevant for countries like Spain, without a bank-specific insolvency regime. Being subject to resolution implies certain obligations in terms of planning and MREL requirements, difficult to meet by small banks, which would require the use of proportionality (ii) the use of DGS resources to increase financing capacity in resolution, and to offer a bridge to access the SRF funds. This bridge function limits the use of national resources to the amount necessary to unlock funds that are mutualized in the Banking Union, thus avoiding fragmentation in the management of banking crises along national lines, and (iii) the change of the depositor preference in the hierarchy of claims, removing the “super-preference” of DGS and establishing the preference of all deposits relative to ordinary unsecured claims, a most controversial feature. But the proposal also introduces a number of other novelties in a wide range of areas, more technical in nature that cannot be accounted for in this summary.

This chapter also offers a personal assessment of CMDI. On the positive side, recognizing the potential systemic implications of even smaller banks, greater use of DGS financing to support the transfer of all deposits in resolution, and facilitating the implementation of transfer strategies as the preferred resolution tool for smaller and medium-sized entities. However, the proposal could have been more ambitious on other elements to address long-standing issues in the Banking Union, and Carla Diaz reminds us that the CMDI proposal makes sense as a package and highlights the risk that some elements of the reform could move forward without others in the continuing CMDI negotiations.

Finally, this chapter adopts a “disruptive” approach to jumpstart necessary discussions on (i) revisiting the need for a Least Cost Test (LCT) when using the DGS in res-

olution and advocating for a systemic risk exception, (ii) providing the smallest banks with sufficient loss absorbing capacity, given they usually lack regular access to capital markets. Incentives for these entities to constitute voluntary, pooled funds to be used at the discretion of resolution authorities could be considered, and (iii) facilitating the sale of business, a tool that has proven to be ultimately the best solution, by strengthening the legal basis that enables resolution authorities to start sale preparations in advance, empowering Boards of Directors to assess the purchasing opportunity in a resolution and submit binding offers, and creating mechanisms to ensure that guarantees are provided by the industry.

3. SOME CONCLUDING REMARKS

Customary, this Yearbook concludes with ten lessons for the European Monetary Union. It will not this time, because it would be too repetitious since I have kept drawing the same lessons for many years, although worded differently and argued each time in the language of the debates of the year. The key structural reform the Union needs are well know and have been diagnosed ad nauseam by academics and policy makers in opposition. We know what we need to do, we simple do not know how to make it political possible. In that sense, European politics is no different from national ones. Even less so in an election year.

So, I will simply conclude by summarizing in a few words what the authors recommend in each chapter. It is my personal account, but one I am confident they would all agree.

- i. The Union needs to give content to the concept of open strategic autonomy, while it avoids falling into the old fortress Europe. Strategic arguments have too often been used politically to justify the worst policies. But it would be naïve to ignore that the world has become more dangerous and fractional.
- ii. Monetary policy appears to have worked well in bringing about disinflation without undue output or employment costs. But it cannot work alone, and it needs to be complemented with fiscal consolidation, efficient public investment and structural reforms. Central banks cannot deliver all public goods and need to refocus as other policy agents come to the forefront.
- iii. The nature of inflation in the past three years has not been homogeneous, neither within economies nor between economies. The extent to which inflation has been demand-driven or supply-driven has varied across time and space. With the benefit of hindsight, it is possible that central banks were ‘behind the curve’. This is partially a story of forecast failure, thus the need to strengthen and reassess inflation modelling capabilities.
- iv. The process of reducing the size of the ECB balance sheet will continue, but it is very likely that the financial system will continue to work with a higher level of excess reserves. And central banks, and in particular the ECB, would likely acknowledge it in its incoming reform of the monetary policy framework. A return

- to the old corridor system seems unlikely, and increasing minimum required reserves seems counterproductive.
- v. The recent reform of the European fiscal governance framework is an insufficient step in the right direction. It moves closer to an expenditure target, but additional flexibility has been obtained at the cost of complexity and discretion. And the framework still needs a macro stabilization facility and a process to arrive at a Euro area fiscal stance.
 - vi. The new rules imply an adjustment to primary fiscal balances that do not appear excessive for historical standards. But they will require persistent, meaningful and durable adjustment to public expenditure in the most indebted countries. And they do not incorporate any fiscal room for the increase in public investment necessary for security considerations or the digital and green transitions.
 - vii. We may lose another opportunity to increase potential GDP in Europe as the Commissions seems to be more concerned with spending all NGEU funds that with ensuring its proper use. Once again, fostering productivity-enhancing structural reforms is not only a matter of available funding but of political commitment and discipline.
 - viii. The launching of the digital euro cannot be only justified on defensive or protectionist grounds. Proper features, mechanism and incentives need to be built in its implementation to ensure that it complements cash and does not substitute bank deposits. Use case and business models have to be thought through with the industry to ensure success.
 - ix. The spring banking crisis was a reminder of the importance of an adequate management of interest rate and liquidity risks. And of the potential systemic importance of medium sized banks. Supervisors should ensure that banks have corporate governance and risk-management processes commensurate with their risk profile. Authorities should intervene early to address weaknesses of banks, be prepared to use contingency funding plans and strengthen bank resolution regimes and preparedness to deploy them.
 - x. In the European context, the CMDI refines the existing resolution framework along three lines: funding in resolution, the availability of guarantees, and the role of deposit insurance systems. But it could have been more ambitious and leaves many unresolved issues. Namely, a level playing field for resolution is not ensured, and financial fragmentation is still an additional risk to any potential confidence crisis on European banks.

Madrid, January 2024

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THE CONTEXT

1. POLITICAL AGENDA IN A FRAGMENTED WORLD

JORGE GALINDO - TERESA RAIGADA

ABSTRACT

Over the past four years, the European Union has undergone a transformation that has taken most observers by surprise. Faced with a series of unprecedented challenges, the EU has found a new political agility and capacity to evolve. After dealing with the unexpected COVID-19 pandemic and derived supply chain disruptions, and Russia's invasion of Ukraine - the biggest conflict on European territory since the Second World War -, the goal of becoming a geopolitical Union, once greeted with skepticism across the continent, seems to have become more relevant than ever.

We devote **Section 1** of the present text to outline Europe's relative governance success maneuvering this complex environment. Indeed, what the bloc has achieved in the past two years has surpassed even the most optimistic expectations: from the coordinated initial response to the pandemic and the subsequent economic recovery plans, to imposing joint sanctions on Russia and reducing its energy dependence on Moscow without major disruptions, these are all advancements that looked inconceivable not too long ago. However, such successes only seem so when compared to the counterfactual of the (rather pessimistic) forecasts about the future of the Union made in the context of the Eurozone crisis. Compared to the challenges ahead, enumerated as cleavages in Sections 1.2 to 1.4, the results so far are still far from achieving a sufficiently cohesive polity capable of navigating them.

2024 can be seen as an inflection point within this process. Marked by the European Parliament elections in June and the formation of a new European Commission, it is unlikely to be a very consequential year policy-wise - certainly not as much as the previous four. However, the primacy of politics in 2024 will help to define not only common platforms and agendas, but also the most crucial areas of conflict between the Union's main actors. The European policy agenda will not be entirely formed during these

months, but its framework and guidelines will be determined. To shed light on its potential contours, we anticipate in **Section 2** its defining cleavages: the balance between a multilateral approach to avoid strategic vulnerability, particularly in decarbonisation efforts; the management of distributional impacts arising from the environmental transition; and the choice between deeper unification or a more state-centric, flexible approach within the EU's institutional framework.

This leads us to outline in **Section 3** our proposed, potential way forward that addresses these cleavages and deepens the path taken over the last four years, beyond the pessimistic counterfactual and towards a possible horizon. The central political task of any incoming ruling coalition will be to keep the coupling between the Union's gain of autonomy and the decarbonization process together. Multilateral diversification will be the political weapon of choice, especially in shaping more resilient value chains in terms of intermediate goods and raw materials, but it is likely to need to be complemented by a much more dynamic green industrial policy which, for political feasibility, should focus on those points of minimum potential consensus between the different economic (and energy) set-ups of the countries.

To keep the focus on these objectives, it will be useful to build on what has already been achieved in defining a unified and assertive voice on foreign and defense issues. In this, as has always been the case in the history of the Union, the economy is the lever to be activated. Both in the definition of multilateral trade agreements, and in the joint purchase of strategic goods, as happened during the pandemic and became incipient in the recent energy crisis.

None of this is feasible, however, unless the Union continues its slow march towards the creation of a common fiscal space. This will undoubtedly face old barriers of frugality, but in the new light of the need to invest in European capacity for strategic autonomy, it could partially overcome them. We will close **Section 4** (and the whole of this text) by calling attention to a trade-off that will gradually become more prominent as the Union's political agenda advances on all the above fronts, and will increasingly condition them: between cohesion, greater with a more homogeneous Union with more rigid borders and limits, and inclusion, potentially increased by making its borders more porous and welcoming new members.

1. DECADE-DEFINING EXTERNAL SHOCKS

1.1. A BET ON A GEOPOLITICAL UNION AWAITING ITS DEFINING CHALLENGE

In her inaugural speech in 2019¹, Ursula von der Leyen began with words that were meant to resonate deeply: “The founding fathers and mothers of Europe created some-

¹ Von der Leyen, U. (2019, Jul 19). *Opening Statement*. European Parliament Plenary Session. Retrieved from https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_19_4230

thing powerful out of the rubble and ashes of the world wars. Peace.” She went on to articulate her vision for the European Union, emphasizing its role in the global arena: “The world is calling for more Europe. The world needs more Europe.” encapsulated her view of a geopolitical Union and underlined her ambition for the EU to play a more assertive, self-consciously strategic role.

At the time of its delivery, the President’s speech was seen by many as overly ambitious, even bordering on unrealistic². The notion of a geopolitical EU aroused skepticism among observers and policymakers. This skepticism was rooted in the EU’s historical challenges with political cohesion and its traditionally economic and inward-looking, rather than strategic and outward-looking, bias in policymaking. Furthermore, the idea of aligning joint European positions in areas up to now nearly unexplored by the Union seemed unlikely, given the complexity and divergent interests of its member states. Skepticism also arose from the EU’s cautious approach to external conflicts and reliance on soft power, often a fallback without strong inter-state coordination, contrasting with the new Commission’s more assertive stance.

One way Brussels articulated this vision for a geopolitical EU was through the concept of **Open Strategic Autonomy** (henceforth OSA). OSA is based on the idea that Europe should be more self-reliant and assertive in its external relations, while remaining open to global trade and cooperation. The concept of “strategic autonomy” first appeared in official EU documents in the defense sphere a decade ago³, as part of the EU’s evolving approach towards a more assertive and independent role in global affairs, and initially focusing on defense and security issues. It then morphed into a broader foreign policy principle in the discussions surrounding the EU’s Global Strategy in 2016⁴, where the need for strategic autonomy, particularly in security and defense, was emphasized while the need to keep the Union “open” was featured as an additional requirement from an economic perspective.

The allure of the OSA concept lies in the tension it seeks to capture. The term “autonomy” logically implies the Union’s ability to make decisions that prioritize its own interests. The “open” aspect, however, acknowledges the intricate web of interdependencies, primarily economic but extending beyond, between its member states and external actors. Furthermore, these interdependencies, current and future, are not always aligned, reflecting the Union’s long-standing national and ideological interest

² Bayer, L. (2019, Dec 4). *Meet von der Leyen’s ‘geopolitical Commission’*. Politico Europe. Retrieved from <https://www.politico.eu/article/meet-ursula-von-der-leyen-geopolitical-commission/>; Koenig, N. (2019). *The ‘geopolitical’ European Commission and its pitfalls*. Hertie School’s Jacques Delors Centre – Policy Brief. Retrieved from

https://www.hertie-school.org/fileadmin/user_upload/Policy_Brief_Nicole_geopolitical_commission.pdf

³ European Council. (2013). *Conclusions, European Council 19/20 December 2013*. Retrieved from <https://data.consilium.europa.eu/doc/document/ST-217-2013-INIT/en/pdf>

⁴ European External Action Service (EEAS). (2016). *A Global Strategy for the European Union’s Foreign and Security Policy*. Retrieved from https://www.eeas.europa.eu/eeas/global-strategy-european-unions-foreign-and-security-policy_en

divergences. Pushing for openness alongside autonomy highlights these tensions, underlining the “strategic” aspect: the Union must balance internal interests with external factors, acting “multilateral when possible, unilateral when necessary”, as stated by Powell et al. in an article published in September 2023⁵.

However, like many concepts that emerge in the EU policy sphere, the OSA faced challenges in gaining widespread traction. It floated inside the “Brussels bubble” much like other potential consensual platforms: the broad and flexible nature of the concept allowed for a wide range of interpretations, making it appealing in theory but hardly a guiding principle in practice. Extrinsic factors were apparently not sufficient to provoke joint strategic action. Furthermore, in the post-traumatic aftermath of the 2008-2015 crisis and its deep impact on member states’ internal trust and alignment, as well as on the credibility of the Union itself, any detailed policy proposed under its banner risked lacking sufficient common ground, appealing only to a minority and unable to resolve debates on the balance between openness and autonomy. It was, therefore, **a policy framework lacking its opportunity to be seen as useful and credible enough**. However, such an opportunity would not take much time to present itself in the form of new challenges that would come to define emerging political debates.

1.2. THE CHALLENGES SINCE 2020: WHAT’S BEEN - AND WILL REMAIN - AT STAKE

In March 2020, a global pandemic took the world by surprise. To meet the challenge, it was necessary to activate a fast, coordinated strategy led by the only force in a position to protect livelihoods (both in economic and health-related terms). The Covid-19 virus required both national governments and Europe to swiftly assume a central role in fighting the crisis. And while ensuing measures were primarily emergency responses rather than long-term solutions, they have set a significant precedent for ongoing and future actions with a more structural ambition. Within months, the (previously unthinkable) mobilization of more than €750 billion in European funds to support the EU’s recovery was agreed⁶, and fiscal and budgetary rules were relaxed to allow for the necessary extraordinary spending⁷. The ECB launched emergency purchase programs⁸

⁵ Powell, C., Tocci, N., & Wolff, G. (2023, Nov 24). *Making European strategic autonomy work*. Project Syndicate. Retrieved from <https://www.project-syndicate.org/commentary/spanish-eu-council-presidency-eu-strategic-autonomy-blueprint-by-charles-powell-et-al-2023-11>

⁶ Council of the European Union. (2020, Dec 14). *Council Regulation (EU) 2020/2094 establishing a European Union Recovery Instrument to support the recovery in the aftermath of the COVID-19 crisis*. EUR-Lex. Retrieved from <https://eur-lex.europa.eu/eli/reg/2020/2094/oj>

⁷ European Commission. (2020). *Activation of the general escape clause of the Stability and Growth Pact*. COM(2020) 123 final. EUR-Lex. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0123>

⁸ European Central Bank. (2020). *Decision (EU) 2020/440 of the European Central Bank of 24 March 2020 on a temporary pandemic emergency purchase programme (PEPP)*. Official Journal of the European Union, L 100L.

and safety nets were created and expanded for workers (through the SURE instrument⁹), businesses (through the EIB's European Guarantee Fund¹⁰) and member states (through the European Stability Mechanism's Pandemic Crisis Support Instrument¹¹).

However, the pandemic also was the **first of three shocks that highlighted Europe's strategic vulnerability** stemming from the extreme economic interdependence between countries. It suddenly became clear that it is risky to depend on countries with which we do not share fundamental values and interests for essential components of our production processes or our public health.

This was made clear not only by the short-term monopolization of strategic goods like masks and respirators, but also, in the medium term, by the second shock: the **disruption of supply chains** in 2021. One component made itself particularly visible: the microchip. The unprecedented shortage of microprocessors revealed their crucial ubiquity in the European economy, with virtually no domestic production, in the wake of the technological revolution. The rapid development of new technologies such as AI, robotics, nanotechnology and 5G has opened a new world of opportunities for economic growth, but all of them rely heavily on imported microprocessors and other intermediate goods, underscoring once again our strategic vulnerability. In the technological field, this is also the case at the last level, the digital level: of the 50 largest companies in the world by market capitalization at the beginning of 2023 - a list now dominated by big tech companies - Europe has only one company that can be considered strategic in these fields¹². The data for the future is not encouraging either: in recent years, the flow of new venture capital-backed IPOs (the main growth mechanism for emerging innovative companies) has been overwhelmingly higher in the US and China than in Europe¹³.

The third major shock that exposed our strategic weaknesses was Russia's brutal invasion of Ukraine, which not only helped to expose the fragility of Europe's **security** but also its **energy dependency** problem, by forcing an immediate energy cut-off from Russia, an economy similar in size to Spain's but which supplied much of the energy

EUR-Lex. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020D0440>

⁹ Council of the European Union. (2020). *Council Regulation (EU) 2020/672 of 19 May 2020 establishing a European instrument for temporary support to mitigate unemployment risks in an emergency (SURE) following the COVID-19 outbreak*. Official Journal of the European Union, L 159. EUR-Lex. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32020R0672>

¹⁰ European Investment Bank. (2020, May 26). *EIB Board approves €25 billion Pan-European Guarantee Fund in response to COVID-19 crisis*. Retrieved from <https://www.eib.org/en/press/all/2020-126-eib-board-approves-eur-25-billion-pan-european-guarantee-fund-to-respond-to-covid-19-crisis>

¹¹ European Stability Mechanism. (2020 May 15). *Summary of decisions, Meeting of the Board of Governors 15 May 2020*. Retrieved from: https://www.esm.europa.eu/sites/default/files/migration_files/2020-05-15-bog-summary_of_decisions.pdf

¹² Statista. (2023). *Biggest companies in the world by market cap 2023*. Retrieved from <https://www.statista.com/statistics/263264/top-companies-in-the-world-by-market-capitalization/>

¹³ Browne, R. (2020, Oct 19). *Why tech IPOs are flourishing in the U.S. and China — but not Europe*. CNBC. Retrieved from <https://www.cnbc.com/2020/10/19/why-tech-ipos-are-flourishing-in-the-us-and-china-but-not-europe.html>

to the industries and homes of Europe's economic heartland. But the biggest conflict on European territory since the Second World War, which was a direct attack on the European system of values, has strengthened the Union as a political actor. What the bloc has achieved in the past two years has surpassed the most optimistic expectations. From imposing sanctions on Russia, reducing its energy dependence on Moscow without major disruptions, or boosting military cooperation in the Union, to reopening the debate on its enlargement and updating the EU treaties, these are all innovations that looked unthinkable not too long ago. However, Europe is finding it increasingly difficult to agree on concrete means of supporting Ukraine. In practice, Brussels has virtually reached the end of its sanctions leash, and Kiev's application for EU membership is also progressing slowly, with actual membership remaining highly unlikely in the medium term¹⁴. Thus, it is important to recognize that this is still an ongoing process, facing challenges in reaching consensus that could consolidate the buildup of a more assertive voice as structural.

Nonetheless, the increased internal coherence has led to an improvement in our joint management of conflicts that pose a direct and immediate threat to the Union's interests, precisely by setting it **on a path towards greater strategic autonomy**.

Taken all together, **these three shocks have dramatically increased the value of autonomy** as a policy good. The EU's unexpectedly firm and swift response to Russia, and its radical and rather coordinated (given the different circumstances of some of its members) repositioning, served as a landmark moment that remains particularly consequential, despite the emergency nature of some of the earliest measures (others, it is worth noting, are on train of becoming more structurally engrained, such as the goal to reach 2% of national budgets on defense spending, the reform of the European energy market, or the reconfiguration of the Union's fiscal rules after its multi-year suspension), subsequent internal tensions over the actual processing, and future implementation of the common position.

These difficulties already point to an emerging tension on how to navigate the path towards greater autonomy, the first of the three divisions that we will flesh out in this text, between promoting a multilaterally diversified agenda and encouraging greater internalization of those processes that have been externally exposed.

1.3. COMPOUNDING THE DECARBONIZATION CHALLENGE

This new dilemma intersects with what has become the defining global challenge of the decade: finding a **decarbonized path to balanced growth**. The rise of autonomy as a priority makes decarbonization a strategic challenge as much as an economic and social one: in 2019, the European Union committed to becoming carbon neutral by 2050 with

¹⁴ Rahman, M. (2023). Riesgos políticos en Europa: perspectivas para 2023. In *Informe Económico y Financiero del primer semestre* (2023). EsadeEcPol. Retrieved from <https://www.esade.edu/ccpol/es/publicaciones/informe-economico-y-financiero-32/>

the adoption of the European Green Deal¹⁵. Billions of euros have since been mobilized, but as the EU moves forward, the decisions to be taken are becoming increasingly complex. On the one hand, Europe faces a tough coordination challenge: decarbonization targets are European, but policy implementation falls within the competence of the member states. On the other hand, the required transition has distributional consequences that hinder political support¹⁶. The current economic context, with inflation only now beginning to moderate, adds to these redistributive consequences. But most significantly, these domestic problems come now to be **conditioned by our acquired strategic dependencies**: the EU's green ambitions have also been overshadowed by the repositioning of the other major powers.

China has rapidly become a nearly undisputed leader in several green technologies, such as batteries for electric vehicles - it produces 66% of battery cells¹⁷ - or solar panels - it accounts for around 80% of the volume at key stages of global production¹⁸. This exacerbates the dilemma of interdependence, which increases economic efficiency but leaves us strategically exposed. There is now a realization that what some self-proclaimed pragmatists have defended as the inescapable need to grant the giant all its trade wishes in exchange for making our own green transitions easier and less politically costly (i.e. alleviating distributional costs by making the necessary investments more feasible to attain) implied not only an economic but also a geopolitical dependence that the Union could not afford, something that President Xi himself has made undeniable by deepening China's entry into a new era, more focused on defending its own security. In short: cheap cars, batteries and solar panels for consumers have carried a hidden, now revealed, higher price for industries and governments.

The latest signal in this direction has come straight from one of the current Commission's legacy decisions: the announcement of an investigation into Chinese subsidies for electric cars¹⁹ shows that the current outgoing coalition government in the EU is taking a firm line in reassessing the cost-benefit of our dependence on China, although President von der Leyen was quick to add after this statement that both blocs would co-

¹⁵ European Commission. (2019). *Communication from the Commission: The European Green Deal*. COM(2019) 640 final. EUR-Lex. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2019%3A640%3AFIN>

¹⁶ Pisani-Ferry, J., Tagliapietra, S., & Zachmann, G. (2023). *A new governance framework to safeguard the European Green Deal*. Bruegel. Retrieved from <https://www.bruegel.org/policy-brief/new-governance-framework-safeguard-european-green-deal>

¹⁷ Chang, A., & Bradsher, K. (2023, May 16). *Can the world make an electric car battery without China?* The New York Times. Retrieved from <https://www.nytimes.com/interactive/2023/05/16/business/china-ev-battery.html>

¹⁸ International Energy Agency (2021, Jul 7). *The world needs more diverse solar panel supply chains to ensure a secure transition to net zero emissions*. Press release. IEA. Retrieved from: <https://www.iea.org/news/the-world-needs-more-diverse-solar-panel-supply-chains-to-ensure-a-secure-transition-to-net-zero-emissions>

¹⁹ European Commission. (2023). *Notice of initiation of an anti-subsidy proceeding concerning imports of new battery electric vehicles designed for the transport of persons originating in the People's Republic of China*. Official Journal of the European Union. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C_202300160

operate in other areas. The odd contrast between the two parts of the speech illustrated the unease of the pairing.

Turning to the EU's natural partner for support and coordination has been fruitful in cementing a stronger transatlantic relationship, but somewhat schizophrenically it has also provided additional reasons for the need for a separate European strategic voice. Over the past two years, **United States** President Joe Biden has announced measures to provide fiscal support on a scale not seen in decades, through initiatives - most significantly the Inflation Reduction Act (IRA)²⁰, but also the Chips and Science Act²¹ or the Green New Deal²² - aimed at limiting risks in their value chains and promoting domestic manufacturing. The IRA alone provides nearly \$400 billion in federal funding to boost American green industry and reduce dependence on China for electric vehicles and other components essential to the green transition. It has been described by US National Security Advisor Jake Sullivan as "a foreign policy for the middle class"²³, illustrating precisely how the United States aims to balance strategic independence, fairness, and the need to decarbonize through a state-led push.

Responding to Washington's moves by striking a delicate balance between preserving Europe's decarbonization and industrial policy goals while avoiding an escalated trade conflict with the United States is not proving easy for the EU, showing how much of a half-baked Union it remains despite the coordinated responses of recent years. Based on the current US Administration's policy track record, the **US-EU relationship** will not cease to be challenging regardless of whether there is a U.S. government change in 2024. Nonetheless, a turn towards a Trump-like profile could complicate the situation. The Republican platform consolidated by the former president has learnt how to govern, has a much more galvanized Republican bloc around its nationalist positions, and would take over the implementation of a (Democrat-approved) IRA that has already been quite a challenge to the economic partnership as explicitly admitted by European policymakers²⁴.

All these changes have opened up a new scenario of widespread mistrust towards economic openness. In this environment, the EU's fragmentation and its reliance on soft power appears insufficient, requiring to scale up its strategic and economic weight

²⁰ United States Congress. (2021). *H.R.5376 - Inflation Reduction Act of 2022*. Retrieved from <https://www.congress.gov/bill/117th-congress/house-bill/5376/text>

²¹ United States Congress. (2021). *H.R.4346 - Chips and Science Act*. Retrieved from <https://www.congress.gov/bill/117th-congress/house-bill/4346>

²² European Commission. (n.d.). *European Green Deal*. Retrieved from https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

²³ Sullivan, J. (2023, Apr 27). *Remarks by National Security Advisor Jake Sullivan on renewing American economic leadership*. [Speech transcript]. The White House. Retrieved from <https://www.whitehouse.gov/briefing-room/speeches-remarks/2023/04/27/remarks-by-national-security-advisor-jake-sullivan-on-renewing-american-economic-leadership-at-the-brookings-institution/>

²⁴ Reuters. (2023, Mar 5). *EU's von der Leyen says she will tackle U.S. green subsidies, overcome e-fuels*. Retrieved from <https://www.reuters.com/world/europe/eus-von-der-leyen-says-she-will-tackle-us-green-subsidies-overcome-e-fuels-2023-03-05/>

even if it is to sustain and defend such openness. In parallel, **middle powers** are willing to play a more assertive and autonomous role²⁵, rejecting any bloc-vs-bloc logic in favor of a more contingent and multilateral approach that gives them increasing leverage. Krastev et al. (2023) observed in a study that citizens of countries that are not strictly aligned with China, the EU or the US are not particularly interested in choosing between models, but in choosing piecemeal aspects of each model and in building strategically chosen multilateral alliances²⁶. This positioning will increase the bargaining power of these countries and multiply the complexity of decisions both for the Union as a whole and for the countries that make it up, increasing the risk of misalignment. This new strategic context also provides an opportunity, precisely in the context of new alliances, to diversify the European economy.

Taking all these elements together, the 2020-23 cycle has given way to a **critical juncture** that gives meaning to von der Leyen's call in 2019: "If we are united on the inside, nobody will divide us from the outside." This sentiment, initially perceived as aspirational, has gained practical significance: now there was someone (or, rather, a range of factors) that represented a clearly identifiable external threat. "**Strategic**" action was required to confront them. And, above all, "**autonomy**" dramatically increased its value as a goal in and on itself for avoiding these present threats and their future replications. Consequently, the "**open**" nature of the EU was required to have a much sharper meaning, even if defined on a case-by-case basis, a la Powell et al²⁷. This does not automatically imply increased protectionism, something that remains, and will remain, a choice, as explored in Section 3.

Indeed, taking these decisions is bringing about an extraordinary challenge for the Union, but one that is catalyzing a significant degree of unity that was far from guaranteed. If one had set out the successive 2020-23 challenges (pandemic, trade disruptions, Ukraine's invasion and energy crisis) and asked a group of sophisticated political risk analysts ahead of them (at the time of the 2019 speech, for instance) to place a prediction on how the Union was going to respond, within a continuum ranging from a unified functional response to a fragmented dysfunctional response, the analysts' consensus would probably have been skewed towards the latter. That is to say, the actual response to these challenges and the resulting new political reality has beaten the ex-ante counterfactual, even if it has not been able to beat the most idealistic or aspirational of the demands for joint political action. Now, to keep its finger on the pulse of these

²⁵ Carlstrom, G. (2023, Nov 13). *A new balance of power will emerge in the Middle East*. The Economist. Retrieved from <https://www.economist.com/the-world-ahead/2023/11/13/a-new-balance-of-power-will-emerge-in-the-middle-east>

²⁶ Ash T. G., Krastev, I., Leonard, M. (2023). *United West, Divided from the Rest: Global Public Opinion One Year into Russia's War on Ukraine*. European Council on Foreign Relations. Retrieved from <https://ecfr.eu/publication/united-west-divided-from-the-rest-global-public-opinion-one-year-into-russias-war-on-ukraine/>

²⁷ Powell, C., Tocci, N., & Wolff, G. (2023, Nov 24). *Making European strategic autonomy work*. Project Syndicate. Retrieved from <https://www.project-syndicate.org/commentary/spanish-eu-council-presidency-eu-strategic-autonomy-blueprint-by-charles-powell-et-al-2023-11>

advances, the Union will have to pivot from the feasible to more ambitious horizons of autonomy.

2. POLITICAL CHALLENGES AHEAD

During 2023, these decade-defining challenges, and the way in which the Union and its members have digested them, have materialized in political divisions. From the increased value of autonomy as a policy goal plus the need to maintain openness, choices range from multilateral diversification, with increased trade relations, to a more protectionist internalization of production. From the transition to unfinished and inevitably interconnected decarbonization, the tension is between moving quickly or doing so in a digestible way. The institutional dilemma of for whom the Union is for is mounted on these two divisions. And the political actors (parties, ideological platforms and member states) are, logically, the ones obliged to deal with the cleavages. To finish grounding the content of what it means to maintain an open strategic autonomy will involve, first, addressing these dilemmas.

2.1. EMERGING POLITICAL CLEAVAGES

In any case, the changes outlined here are only the first steps on the long and winding road ahead for the EU. The future path for the Union's actors is dominated by a **strategic bifurcation** stemming from the exposed growing demand for strategic autonomy. When and how to choose between the two essential strategies? The multilateral approach, which implies the diversification of relations (in trade, politics, security, etc.) in order to avoid any form of dependence that could lead to strategic vulnerability within the current **framework of trade rules and integrated markets**, or the privileging of the internalization of processes, chains, and decision-making through **increased protectionism**, which reduces dependence on external entities and strengthens self-sufficiency within the Union²⁸. The Union has already found out that, following the adage from Powell et al. quoted above²⁹, the answer is very far from univocal, and instead varies according to the specific challenges at hand. But these challenges are already emerging, and decisions should be made even if it is on a case-by-case basis.

The prime example in the last two years has been the need to diversify energy sources away from Russia. Initially, this challenge was addressed through a partial resort to

²⁸ Steinberg, F., & Wolff, G. (2023, Oct 9). *A European strategy of economic statecraft*. Internationale Politik Quarterly. Retrieved from <https://ip-quarterly.com/en/european-strategy-economic-statecraft>

²⁹ Powell, C., Tocci, N., & Wolff, G. (2023, Nov24). *Making European strategic autonomy work*. Project Syndicate. Retrieved from <https://www.project-syndicate.org/commentary/spanish-eu-council-presidency-eu-strategic-autonomy-blueprint-by-charles-powell-et-al-2023-11>

multilateralism³⁰. A structural long-term solution, however, seeks to combine this multilateralism with the internalization of processes, with the aim of reconciling the pursuit of autonomy with decarbonization objectives. Yet, finding the right balance, especially in the energy sector and other key areas of decarbonization, remains undefined and is an ongoing effort.

This instance helps us to define a **second, twin tension**, at a more distributional rather than a strategic level: while everyone assumes that the transition to a decarbonized economy will be gradual and economically feasible, as the distributional costs and benefits of this transition become very much real, it becomes a political priority to define the extent to which **the transition should not only be smoothed for those adversely affected** in the short to medium term (and thus implying a partial reliance on sources, products and services with relative emissions), **but even delayed in the name of our existing sources of growth**³¹.

The many solutions to these dilemmas will have to be articulated institutionally. Hence the **third division**, which is nothing more than the longstanding question the Union has faced since its birth: **the construction of an increasingly unified bloc**, willing to cede more national sovereignty in exchange for greater cohesion, and the alternative of **a more layered, flexible assembly of states**. As in previous iterations of this dilemma (e.g. the last eastward enlargement), the latter option allows for greater inclusiveness and individual leverage, but potentially dilutes the Union's collective strength. Now, a new iteration of this dilemma is taking center stage with new accession talks and proposals to reform the Union's structure to make it multi-tiered.

These three cleavages have been at the heart of the outgoing coalition's recent political maneuvering, as we glimpsed above, and will continue to be at the core of Europe's political agenda in the coming months and years, consolidating the cycle that began with the current decade.

2.2 THE BATTLE TO DOMINATE THE NEXT EU POLITICAL CYCLE

A broad ideological alliance has been crystallizing since 2019 and around the platform set out by the President's Commission since her first speech³², based in the notion of a more assertive, strategically autonomous, and (wishfully at least) coordinated voice for 'the 27', aligned with decarbonization goals. Ideologically, the coalition ranges from the non-radical left (both old and new) to mainstream conservative positions, occasion-

³⁰ Von der Leyen, U. (2022, Sep 7). *Statement by President von der Leyen on energy*. Retrieved from https://ec.europa.eu/commission/presscorner/detail/es/speech_22_5389

³¹ Carton, B., & Natal, J.-M. (2022, October 5). *Further delaying climate policies will hurt economic growth*. International Monetary Fund. Retrieved from <https://www.imf.org/en/Blogs/Articles/2022/10/05/further-delaying-climate-policies-will-hurt-economic-growth>

³² Von der Leyen, U. (2019, Jul 19). *Opening Statement*. European Parliament Plenary Session. Retrieved from https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_19_4230

ally including less moderate right- and left-leaning factions. The coalition was made possible by a slight but consequential repositioning in the political center and center-right, moving away from lean, small-state liberal economic policies and taking steps towards a brand of centrism more akin to that advocated by Emmanuel Macron, featuring an increased role for state power and political initiative. Liberal-conservatives made a calculated bet on this: sacrificing a degree of individual, entrepreneurial, and national autonomy in exchange for a stronger, more unified collective autonomy, in pursuit of a more consolidated and effective European Union.

The **center-converging collaboration** between mainstream liberal conservatives and social democrats has been a feature of European politics for decades now. But there are two differential factors that make the 2019-24 coalition much more relevant - and by no means a given *ex ante*. One is the growing divergence between ideological blocs, and even within them. Another is the decline in the votes of the two majority platforms, the conservatives and the social democrats, compared to their previous positions. Therefore, an S&D-EPP sum was not sufficient, as it was numerically after the previous election in 2014. Conversely, a numerical alternative majority from the center to the far right was viable on paper, despite its political unfeasibility. Therefore, centrist liberals and mainstream liberal conservatives were the pivotal actors and could, at least in theory, choose to move to the right. They did not, and ended up in the coalition outlined above, aligning security and business-oriented interests with priorities of the center and the right.

S&D and the Greens have in no small part been drawn by the prospects of a prominent role for the state in areas such as redistribution and environmental initiatives, in line with their emphasis on social welfare and environmental concerns. Although the most decisive factor was the outlook or feasible coalitions: even in the politically unlikely event that the extreme left and the centrist groups were able to join forces with the Greens and the Social Democrats as a core group on a common platform, the corresponding groups in the European Parliament would not have been able to achieve an absolute majority in the plenary unless they had been able to attract a large number of non-aligned MEPs.

The data ahead of the **upcoming European Parliament elections** is scarce and difficult to translate into an actual forecast, but it is enough to suggest that the platforms are likely to find themselves in a similar situation after the June 2024 vote³³, in the sense that **the center-right will likely play a truly pivotal role**³⁴. The alignment of the coalition

³³ Publyon. (2023, Oct 30). European elections 2024: Predictions and implications for European businesses. Retrieved from <https://publyon.com/european-elections-2024-predictions-and-implications-for-european-businesses/>; EUMatrix. (2023, Jun). Political trends and dynamics in the European Union: An outlook to the European elections 2024. Retrieved from <https://eumatrix.eu/en/blog/political-trends-and-dynamics-in-the-european-union-an-outlook-to-the-european-elections-2024>; Politico. (n.d.). Europe Poll of Polls. Retrieved Dec 2023, from <https://www.politico.eu/europe-poll-of-polls/>

³⁴ Rosa, B., & Poettering, B. (n.d.). *Can a centre-right coalition emerge after the next EU elections?* London School of Economics. Retrieved Dec 2023 from <https://www.lse.ac.uk/study-at-lse/executive-education/insights/articles/can-a-centre-right-coalition-emerge-after-the-next-eu-elections>

so far has been driven primarily by the platform's ability to provide a new narrative for the center-right, which lacked a clear direction for these new times. This shift entails a departure from the traditional liberal-conservative economic program in response to the new challenges that increase the political demand for a more prominent role of the state. While identity politics and cultural conflicts have been somewhat sidelined (with the notable exception of migration), the focus has largely been on the material challenges facing the Union. But as these challenges are common to virtually all member states, it is more difficult to argue for state action. Thus, while this new version of the centrist-mainstream coalition has acted as a lifesaver, it has also created internal tensions as EPP (and several Renew Europe) members find themselves competing for votes in their national elections with emerging right-wing parties, and as the context-driven demand for increased state role injects potential contradictions within the broad liberal-conservative political family: this more prominent role does not necessarily leads to greater interventionism and economic protectionism, but to the extent that it makes the objectives of increasing strategic autonomy (and therefore political power) gain positions in the ranking of priorities, it makes this outcome more likely.

This relationship is critical, as is that between two platforms competing for the same space but with different answers to the central dilemmas³⁵. While mainstream conservatives advocate a selective form of multilateralism that excludes certain partners (partly to amend past mistakes, especially regarding Russia), the **far right** has preferred a *sui generis* mix of economic nationalism and unreliable alliances. But it is perhaps on the conditions and criteria for joining the European club that the gaps are greatest. Indeed, it is within this framework that authoritarian leaders in places like Hungary or Poland have forged an “international nationalist union” with other rising actors in the core countries to demand more national autonomy and a less stringent form of multilateralism, prioritizing short-term political interests over democratic standards and geostrategic alignment. But two factors have weakened the strength of this movement. First, the divergent interests between external powers such as China and Russia and the core members of the Union, which has led to a credibility crisis for their European allies. Second, the sobering impact of the negative outcome of the Brexit, which has tempered Euroskeptic arguments.

While old assets have left the far-right faction, new ones have become powerful: Giorgia Meloni in Italy, Geert Wilders in the Netherlands, and Robert Fico in the Czech Republic, who are steering the movement towards influencing Brussels to protect national interests and, when feasible, aligning with the objectives of other countries. This strategy indicates a shift in far-right politics, potentially making them more appealing to center-right voters. Prime Minister Meloni seems to have taken this on board, framing her platform around an Atlanticist axis, balancing autonomy and security with (na-

³⁵ Hublet, F., Lanoč, M., & Schleyer, J. (2023, June 19). *Spelling out the European center-right's dilemma: Renewal of the Grand coalition or National-Conservative Alliance?* Groupe d'études géopolitiques. Retrieved from <https://geopolitique.eu/en/2023/06/19/spelling-out-the-european-center-rights-dilemma-renewal-of-the-grand-coalition-or-national-conservative-alliance/>

tive-only) redistribution. This strategy involves prioritizing sovereignty and selective multilateralism that looks to the West, emphasizing economic growth over decarbonization, and advocating for a limited Union based on national interests rather than broader coalitions. This could herald the resurgence of a sophisticated hard-right force, scaling up the challenge to mainstream conservatism.

At the other end of the political spectrum, the **center-left**, including Social Democrats, Greens, and other moderate new left factions, finds itself in an unexpected but comfortable (in the current circumstances) alliance with traditionally neo-liberal groups. However, this alignment is not without its tensions. In areas such as security and defense, the center-left struggles to reconcile spending and priorities with those of the center and center-right. Environmental issues further complicate the landscape, as the trade-offs and burdens of decarbonization become more tangible. This dynamic poses a dilemma, particularly for the new left and green factions, whose electorates may not be as directly affected by these costs. By contrast, the traditional center-left and center-right must navigate these environmental ambitions against a backdrop of economic pragmatism and the immediate needs of their wider constituencies.

Two potential directions for the center-left emerge from these tensions. The first is a neo-left approach that places decarbonization above all other considerations, including strategic or national security concerns. This strategy commits to strengthening multilateral alliances and domestic economic transformations at all costs in order to accelerate the ecological transition. This can only be afforded by those parties whose electorates, largely young, urban, middle-class and above service sector workers, are less affected by transition costs than by the effects of climate change. But it could be enough to condition the attitudes of S&D parties in those countries where new left platforms are stronger (or social democracy weaker). The other alternative for the center-left revisits the material-redistributive foundations of European workers' movements, focusing on protecting the livelihoods of the current European workforce. This approach veers towards positions that delay transition, show nativist tendencies, or favor sovereigntist with selective multilateralism driven by economic motives, reminiscent of the European left's past trust in leaders like Vladimir Putin. While few parties explicitly adopt this stance, not a few politicians or factions within the S&D group (especially in countries dependent on high-emitting sectors) do it.

As a result of these shifting dynamics between left and right, **centrist parties** might find themselves with expanded electoral opportunities. However, this expansion comes with the challenge of operating in a more state-oriented political environment, which is not their natural political habitat (with some exceptions, such as the Macronist platform in France). They are expected to retain significant influence, especially in decisions on the future direction of the outgoing coalition, anchored in a balance of strategic multilateralism that seeks to reconcile decarbonization and growth and favors a cautious, multi-stage approach to the enlargement of the Union. The continuity, partial or total amendment of this path is what will be at stake in 2024.

3. ENVISIONING A POTENTIAL WAY FORWARD

Getting now into normative territory, continuing of the political trajectory established in Europe over the last four years would mean, in our view, balancing the mosaic of divergent interests of the factions, while at the same time presenting a united front against the political extremes. We understand that this would imply forging a coalition as mixed in ideology and interests as the one that has been maintained so far, capable of offering each of its members an element that they can place at the center of their respective agendas, and which in turn will serve them to present competitive proposals against their opponents on the extremes (left and, especially, right). The resulting content of this coalition, as we envision it, would help finish the job of filling the OSA concept with actionable content, bridging the (always wide in Brussels) divide between discourse and policymaking.

3.1. THE AUTONOMY-DECARBONIZATION COUPLING

The core element of the latest version of the centrist, pro-EU, grand coalition since 2019 has been addressing at once the two core cleavages outlined in Section 2 through a decision-by-decision attempt to align the attainment of additional European autonomy with decarbonization and shared growth, to the point that they have tried to present themselves as mutually reinforcing, at least potentially. This has been the framework from which protectionist positions fostering internalization of supply and value chains has been nurtured in all their components: from the source of energy and raw materials to the final goods, with a possible outlet from both the left (pro-climate) and the new right (pro-national jobs). But, in our view and without renouncing concrete tools of internal impulse respectful of the single market, which would be almost naïve to renounce, trade has a head start in the long race despite what could seem under the short-term buoyancy of protectionist discourses.

Implicitly, **trade** is already being seen as a provider of security beyond mere efficiency gains: trade relations are no longer simply the dependent variable in a growth-maximizing function, but something that must be preserved in order not to lose past gains: indeed, it is now assumed that interconnectivity will help to solve the problems of dependency that it has created, as a kind of amendment of past mistakes.

Empirical evidence contradicts the notion that imposing tariffs and restricting cross-border trade automatically enhances sovereignty. On the contrary, we believe that a determined policy of strategically selected, **new trade agreements to diversify our sources of trade and supply of inputs** necessary to produce strategic goods is the first step to make Europe truly secure³⁶. This is what strategically searching for autonomy should be about: expanding security networks with allied nations. China's integration

³⁶ Roldán, T. (2023, Oct 15). *Principios para una política industrial sensata*. *El País*. <https://elpais.com/economia/negocios/2023-10-15/principios-para-una-politica-industrial-sensata.html>

into Europe's economic framework is deep-rooted. Thus, as Martin Wolf reminds us in 'The Crisis of Democratic Capitalism', decoupling from China would not only be suicidal, but virtually unfeasible and strategically counterproductive for the European economy³⁷. The way forward for Europe therefore lies in preserving and defending the rules-based multilateral order³⁸, ensuring diversified and resilient trading relationships, and maintaining a strategic balance in its global economic engagements. This system, despite its current challenges, has been instrumental in facilitating unprecedented global progress.

This will be particularly difficult for those products where path dependency as a by-product of specialization has narrowed the range of potential suppliers, as is the case in China for batteries and solar panels. It will be even harder for raw materials for which sourcing is almost impossible. The brand new Critical Raw Materials Act³⁹ aims to ensure access to a secure, diversified, affordable and sustainable supply of critical raw materials, and a glance at its approach makes clear the combination of internalization with diversification. But internalization, if achieved (doubtful in the case of intermediate goods, extremely unpredictable in the case of raw material discovery and sourcing) would take up most of the remainder of this decade. Diversification therefore seems the most likely short-term solution. Consequently, perhaps the clearest policy objective on the agenda for the coming months should be akin to allyshoring, i.e. to conclude broader, stronger and more balanced **Union-wide agreements with those third parties whose interests and values are relatively aligned *ex ante***, including but not limited to Mercosur, Australia or Canada. The alternative route would take the EU down a full-fledged double race of subsidies and protectionism that, in fact, has already begun⁴⁰, and in which the Union could only compete by damaging the single market, or only half-heartedly.

Because the truth is that, putting it all together, **European industrial action** to date has been more regulatory than dynamic. Two key constraints help to explain this inertia: the competing interests the Franco-German binomium and, related to this, the need to provide the Union with sufficient common fiscal capacity to finance the joint effort⁴¹. Leaving the latter constraint for subsequent sections, let us concentrate on the former. Up to now, the Union has been characterized by the preference of the northern economies for openness (export-oriented, highly competitive on the international stage) and a more integrated Union with the rest of the world, as opposed to those for

³⁷ Wolf, M. (2023). *The crisis of democratic capitalism*. Penguin Press.

³⁸ Steinberg, F., & Wolff, G. (2023, Oct 9). *A European strategy of economic statecraft*. *Internationale Politik Quarterly*. Retrieved from <https://ip-quarterly.com/en/european-strategy-economic-statecraft>

³⁹ European Commission (2023, Mar 16). *European Critical Raw Materials Act*. Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs. Retrieved from https://single-market-economy.ec.europa.eu/publications/european-critical-raw-materials-act_en

⁴⁰ Jones, M. G. (2024, Jan 8). *Brussels approves German state aid for Northvolt battery plant to avoid losing investment to US*. Euronews. Retrieved from <https://www.euronews.com/my-europe/2024/01/08/brussels-approves-german-state-aid-for-northvolt-battery-plant-to-avoid-losing-investment>

⁴¹ EsadeEcPol & EY Insights (2023, Nov 28). *MacroInsights #04*. EsadeEcPol, Center for Economic Policy. Retrieved from <https://www.esade.edu/ecpol/es/publicaciones/macroiinsights-04/>

which domestic markets are more important (with France at the forefront). These divisions have determined the shape of the common market from the outset. But now, after the beginning of the “sovereigntist turn”, common European protectionism for the whole Union is on the agenda as never before, and although the default equilibrium is still an uncoordinated one (“to each his own”), with the consequent damage to the single market, this is no longer a given.

There is therefore room for a new feature in the joint European policy package: a single market-respecting **green industrial policy as a mechanism for security and sovereignty**, which brings together appealing elements for both the center-right (business) and the left (job creation), as well as interesting components for national interests. But this alignment is by no means a given, as demonstrated by two flagship policies in 2023 that have failed to live up to *ex ante* expectations: the electricity market reform, that does not seem to provide sufficient incentives to build renewable capacity⁴²; and the Net-Zero Industry Act (NZIA)⁴³, which aims to promote clean technology manufacturing but struggles to define a common agreement on the scope of technologies classified as “green”. At the heart of this sub-par policy performance has been the pursuit of technology neutrality without actually removing national interests and ideological biases. Instead of focusing on the dual objective (autonomy and decarbonization), old path dependencies, interests and preconceptions have taken over to impose a de facto non-neutral approach to technology choice, with the risk of addressing current market failures and stated policy goals by relying on regulatory decisions based on imperfect information or measured by private or national interests⁴⁴.

Next policy steps may therefore take a more pragmatic approach: one that could attract transnational support could be limited to creating the right conditions for decarbonized industrial development within a single market, open economy logic. These “right conditions” can be concretized in certain public goods beneficial across the Union, two in particular:

— **Energy:** A further push towards tech-neutral decarbonization, with sufficient instruments to build a real long-term market, would be needed to complete the process started by the electricity market reform. The momentum has now been lost, after a great deal of political capital has been expended, but its unfinished nature requires it to be resumed at some point in the near future.

— **Research and development**, leveraging existing programs and funding schemes across the Union: In this sense, the economist Philipp Aghion advocates for the im-

⁴² Linares, P., Collado, N. & Galindo, J. (2024). *La reforma del mercado eléctrico europeo: una valoración y próximos pasos*. EsadeEcPol Reaction, January 2024. Retrieved from <https://www.esade.edu/ecpol/es/publicaciones/la-reforma-del-mercado-electrico-europeo-una-valoracion-y-proximos-pasos/>

⁴³ European Commission (2023, March 16). *Net Zero Industry Act*. Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs. Retrieved from https://single-market-economy.ec.europa.eu/publications/net-zero-industry-act_en

⁴⁴ Tagliapietra, S., Veugelers, R., & Zettelmeyer, J. (2023, June 22). *Rebooting the European Union's Net Zero Industry Act*. Bruegel. Retrieved from <https://www.bruegel.org/policy-brief/rebooting-european-unions-net-zero-industry-act>

plementation of horizontal policies with positive externalities, such as the creation of quality employment opportunities⁴⁵. He draws inspiration from the DARPA model in the United States, a Department of Defense program known for promoting technological innovation. This program is characterized by its support for high-risk but potentially high-reward ventures, and by its dynamic collaboration between government, academia and the private sector. Creating a European equivalent of DARPA could significantly empower Europe to take greater control of its defense capabilities, while effectively addressing pressing issues in energy, the environment, digital technology, and healthcare.

3.2. *GREATER FOREIGN POLICY & DEFENSE COHESION ALONG WITH FREE BUT POWERFUL MARKETS*

Both outward alliance consolidation and inward industrial policy buildup can be done either in a more strategically neutral manner or with a strong strategic focus on articulating a more assertive external voice. So far, pulling from the OSA toolbox the EU has been able to (gradually) better align its policy positions towards friend and foe. The tactic of exploiting its internal differences has worked much worse than the Union's enemies expected, even if it has provoked strong reactions in some cases. But this is far from a foregone conclusion: the more multifaceted the external challenge, the more likely it is that some of these tactics will work, as they have in recent months (e.g. the EU grain entry choke point, which temporarily decoupled Poland from the position of the Union as a whole).

The construction of a **single European foreign policy voice** is an admittedly far-fetched goal. Certainly, it is difficult to foresee that member states will have the last word on it, and their reaction to certain events in recent months, such as the response to the recent Gaza crisis, illustrates the inherent challenges in coordinating a unified stance among member states. The initial decision to suspend all EU development aid to Palestine, followed by the later clarification that aid would be 'reviewed' but not suspended, alongside President von der Leyen's controversial visit to Israel, highlight the continuing discord in the Union's foreign policy orientations⁴⁶. Nevertheless, those who are more willing to deepen the EU's single voice should choose certain areas where the Union will let go to build up common power in these areas wherever possible. And it is precisely the avenues outlined above that offer opportunities to do so, following the path of least resistance.

The fact is that multilateralism and diversification are not just strategies to gain autonomy: they are also an inevitability of the new geopolitical environment. Recall

⁴⁵ Aghion, P. (2023). An innovation-driven industrial policy for Europe. In Bruegel (Ed.), *Sparking Europe's New Industrial Revolution: Policy for Net-Zero Growth and Resilience* (pp. 29-41). Retrieved from <https://www.bruegel.org/book/sparking-europes-new-industrial-revolution-policy-net-zero-growth-and-resilience>

⁴⁶ Rahman, M. (2023, October 24). *EU's foreign policy weakness is here to stay*. POLITICO. Retrieved from <https://www.politico.eu/article/eu-foreign-policy-israel-ursula-von-der-leyen-weakness-is-here-to-stay/>

Krastev et al., and how countries not aligned with the West want to enjoy the benefits of the West plus good relations with China and Russia⁴⁷. They are not looking for a large-scale model to buy (and the Union should not aspire to that). Instead, **deepening alliances with those nations where *ex-ante* values and interests are more aligned** through more symmetrical win-win deals would help to broaden the European voice⁴⁸. In this framework, funding in low- and middle-income countries to develop secure, reliable and low-carbon supply chains can be strategic, investing in the economic conditions that allow companies to grow and expand internationally. Take Latin America, for example, where the current financial support pledged by the latest version of the Global Gateway amounts to €45 billion, a far cry from what China has been able to commit in recent years. We must insist, before moving on to the next point, that recognizing the interlocutor on an equal footing is a *sine qua non* requirement. This symmetry not only ensures that relations are more politically sustainable (because it spreads the benefits they may bring more evenly, a good in itself): it also serves as a built-in prevention to the weaponization of trade, insofar as it keeps it within the pursuit of mutual interest rather than focused on unilateral action.

Supply-side investment is only one part of the equation. The other lies in a more assertive demand, which has already proven its usefulness is to leverage the power of the EU's single market beyond its borders, as a **strategic buyer of goods**, not only as a space for the exchange of goods and services within the Union, but also as a tool for its member states to gain market power over external suppliers, as happened with the purchase of vaccines in 2021-22 and has been activated for the purchase of gas, which is currently being studied to become a permanent arrangement. Critical intermediate goods and, in particular, raw materials are other candidates for consideration.

These two paths build on what has been done so far without adding elements that might be too burdensome for the core of the Union, while adding safety and security features that appeal to political sensibilities further to the right of the political spectrum. The same goes for meeting the 2% **defense spending** already committed by the countries of the Union. National defense within a Union is also a public good, from which all countries can ultimately benefit. However, it should be remembered that the same public good logic has created free-rider problems within both the EU and NATO. It is to be hoped that the growing value of autonomy will make European countries somewhat more reluctant to entrust all our defense to the other side of the Atlantic, especially as there is no longer any guarantee that the EU can rely on US political leadership to maintain the alignment of interests after each election. A gradual approach to mechanisms that allow us to pool resources more closely seems inevitable, and here a

⁴⁷ Ash T. G., Krastev, I., Leonard, M. (2023). *United West, Divided from the Rest: Global Public Opinion One Year into Russia's War on Ukraine*. European Council on Foreign Relations. Retrieved from <https://ecfr.eu/publication/united-west-divided-from-the-rest-global-public-opinion-one-year-into-russias-war-on-ukraine/>

⁴⁸ Gil Pinzón, C. & Galindo, J. (2023). *Spain's EU Council Presidency and the Future of EU-Latin America Relations*. International Politics. FNF. Retrieved from <https://www.freiheit.org/publikation/spains-eu-council-presidency-and-future-eu-latin-america-relations>

logical building block is precisely the R&D push articulated around the European momentum. Part of this push should be integrated into the R&D pillar of industrial policy, so that its value is seen beyond purely economic and decarbonization factors.

This push should not be confused with the regulatory push that the Union has in fact been living politically for the last two decades. As economist Philipp Aghion has recently put it, Europe is a regulatory giant, but a budgetary dwarf⁴⁹. Aghion therefore suggests, along with its primary focus on innovation, **to rethink regulation in order to turn it into a factor of competition**, i.e. to make it easier for new players to enter the market⁵⁰. This will probably also mean concentrating R&D investment on small companies in particular, so that they can grow, which has also been shown to be effective in decarbonization⁵¹. This rounds out the platform towards business- and growth-oriented sensibilities. But it would be politically naïve to ignore the final, and always necessary part of the equation: how to finance all this.

3.3. JOINT FINANCING AND REDISTRIBUTIVE INVESTMENT

None of the proposed elements can be implemented without **increasing the common fiscal capacity** beyond its current level. In other words, the Union should continue its slow but steady path towards leaving “budgetary dwarfness” behind.

The transition of the European fiscal rules over the last three years has been the ultimate exponent of a new tool in the Union’s policy toolbox: the ability to introduce **flexibility** without dismantling coordination in policy areas previously defined as common to all member states, without losing their supranational character in the long run. The suspension and subsequent reactivation of the Schengen free movement during the pandemic was perhaps the clearest example, but the reconfiguration under less stringent and (comparatively) more case-specific fiscal rules after years of suspension will probably be the most consequential version of this new feature of resilience.

These new rules have emerged from a very different context than their predecessors. Previously, there was a sharp divide existed between frugal nations and those with a more relaxed approach to fiscal and debt issues. This divide was particularly pronounced in the aftermath of the Great Recession and during the European debt crisis. Now, there’s a potential shift in this dynamic. The **newly agreed fiscal framework** is more context-specific, driven by the need to finance initiatives to achieve autonomy

⁴⁹ The Sound of Economics. (2023, July 5). *The triple purpose of EU industrial policy* [Audio podcast episode]. Bruegel. <https://www.bruegel.org/podcast/triple-purpose-eu-industrial-policy>

⁵⁰ Aghion, P. (2023). An innovation-driven industrial policy for Europe. In Bruegel (Ed.), *Sparking Europe’s New Industrial Revolution: Policy for Net-Zero Growth and Resilience* (pp. 29-41). Retrieved from <https://www.bruegel.org/book/sparking-europes-new-industrial-revolution-policy-net-zero-growth-and-resilience>

⁵¹ Peñasco, C., Kolesnikov, A., & Anadón, L. D. (2021). *Underestimation of the Impacts of Decarbonisation Policies on Innovation to Create Domestic Growth Opportunities*. C-EENRG Working Papers, 2021-6. Retrieved from https://www.ceenrg.landecon.cam.ac.uk/system/files/ceenrg_wp_2021_06_penasco_kolesnikov_anadon.pdf

and decarbonization. This rationale is increasingly appealing to traditionally frugal countries, especially those with larger domestic markets relative to their operations outside Europe. A prime example is Germany, which faces the challenge of reconciling its long-standing commitment to fiscal prudence with new strategic and economic priorities, as evidenced by its recent budget crisis and the inadequacy of its traditional spending limits.

However, this shift doesn't equate to a collective fiscal capacity, and it is uncertain whether it will sufficiently ease the constraints on targeted investments. Two alternative, more pragmatist strategies are worth considering:

- **The exceptions approach**, as suggested by Zettlemeyer⁵² and others⁵³, involves selecting specific debts or investments that do not count towards consolidation requirements. Its drawback is similar to the NZIA challenge referred above: maintaining technological neutrality will be challenging, and each country's path dependencies and national interests are likely to influence these decisions.
- **Improving existing mechanisms** such as the Next Generation EU Funds. Capitalizing on the current momentum, these funds should be subject to stricter conditions to prevent indiscriminate spending. However, this approach would require intense negotiations, which are almost certain to be challenging.

Whatever the instrument, it seems clear that, in addition to public goods conditions, spending should be directed towards maximizing political viability by investing in skills and regions. One possible, and probably unavoidable, approach is to **compensate areas** (both regional and sectoral) **that lose out from the transition**. The €17.5 billion European Just Transition Fund⁵⁴ is a step in this direction. But a market that aspires to be single, competitive, and resilient should have more tools at its disposal: not just to absorb the shock, but to help economic actors to make the most of it. And that means addressing what is already becoming apparent: the skills shortage for the new economy, partly derived from the rapid technological changes that workers and businesses are struggling to keep up with⁵⁵.

A much larger share of the resources will have to be devoted to **renewing our human capital infrastructures**, especially in those countries where their shortcomings are most evident. In the south of the Union, in particular, there is still structural unemployment, which is inevitably linked to the lack of opportunities and effective systems for upgrad-

⁵² Zettlemeyer, J. (2023) Are the emerging EU fiscal rules green enough?. Bruegel. Retrieved from <https://www.bruegel.org/first-glance/are-emerging-eu-fiscal-rules-green-enough>

⁵³ Blanchard, O., Sapir, A., & Zettlemeyer, J. (2022, Nov 30). *The European Commission's fiscal rules proposal: a bold plan with flaws that can be fixed*. Bruegel. Retrieved from <https://www.bruegel.org/blog-post/european-commissions-fiscal-rules-proposal-bold-plan-flaws-can-be-fixed>

⁵⁴ European Commission. (n.d.). Just Transition Funding Sources. Retrieved from https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/finance-and-green-deal/just-transition-mechanism/just-transition-funding-sources_en

⁵⁵ EurActiv. (2023, Apr 10). *Nobel economist: Rapid technological changes drive EU skills shortages*. EurActiv. Retrieved from <https://www.euractiv.com/section/economy-jobs/interview/nobel-economist-rapid-technological-changes-drive-eu-skills-shortages/>

ing the skills of the least qualified workers. Given that this is one of the main bottlenecks in these economies, affecting not only growth but also equality, it is striking how little of Next Generation EU has been devoted to human capital infrastructure⁵⁶. This would be one of the elements of increased conditionality desirable in any new future financing drive that has the unusual and desirable feature of contributing to **aggregate growth** at the same time.

3.4. WHO'S IN, WHO'S OUT

As we stated in Section 2, on top of the twin decarbonization-sovereignty question there remains the overarching, ever-standing issue of who this Union is for. The question of the external borders delimiting a political entity is a permanent feature of the construction of any new polity, especially when, as in the case of Europe, it is made up of the aggregation of pre-existing polities. The moment marked by the first major war on European territory in decades is no exception.

This question is always divided into two parts: who is included *ex ante* (new countries admitted) and who is included *ex post* (**migration**). Regarding the latter, recent changes point to a further tightening at the margins, without really addressing the declining demographic dynamic, which is the real long-term factor behind the skills shortage. On the former, the context described so far, as well as the path that could be followed, seems to suggest an inertia of **enlargement**. Indeed, the EU has agreed in December 2023 to start accession talks with EU candidates Ukraine and Moldova, while granting formal candidate status to Georgia. It has also promised to open negotiations with Bosnia and Herzegovina (candidate since 2022) in March 2024 if the country meets the fourteen priorities set by the Commission in 2019, focusing on democratic governance and legal reforms. Turkey (candidate since 1999) had its accession talks frozen many years ago, largely over human rights and governance concerns, and its accession is not currently part of the political debate. North Macedonia (candidate since 2005) has yet to begin substantive talks due to Bulgarian objections over historical and linguistic issues, and Albania (candidate since 2014) formally began accession talks in 2022 after meeting critical reform benchmarks, but its progress is also being hampered by Bulgaria's stance. Montenegro (candidate since 2010) and Serbia (candidate since 2012) have been engaged in negotiations since 2012 and 2014 respectively and have made progress in several areas. Kosovo is still awaiting candidate country status, which is difficult to achieve as not all EU countries recognize it as an independent state⁵⁷.

⁵⁶ Roldán, A., Hidalgo, M., Suárez-Varela, M., Gortazar, L., Mateo, R., Victoria, C., Collado, N. y Martínez, Á. (2021, Apr 27). *Reformas, gobernanza y capital humano: las grandes debilidades del plan de recuperación*. Policy Brief #9. EsadeEcPol. Retrieved from <https://www.esade.edu/ecpol/es/publicaciones/reformas-gobernanza-capital-humano/>

⁵⁷ Reuters. (2023, December 14). Candidates to join the European Union. Retrieved from <https://www.reuters.com/world/candidates-join-european-union-2023-12-14/>

The apparent paradox is explained by the **trade-off between cohesion** (greater with a more homogeneous Union) **and inclusion**. To manage this trade-off effectively, it is important to identify the cases in which the cost in terms of cohesion is acceptable in exchange for a significant benefit in terms of inclusion, both for the Union and for those who are included. Within this framework, it is possible to point to high-skilled migrants as a distinctly positive contribution to increasingly tight European labor markets. A more open and ambitious migration policy towards this group could also work politically, if not to strengthen the current coalition, then to reduce the arguments of the more identitarian-nativist positions without buying into them.

In the same vein, most of the candidate countries do not seem to be able to pass this simple test in the coming years, something that is already built into the process itself, especially after the strengthening of the process by the current Commission. The **enlargement agenda** is therefore likely to be occupied during this period not only with monitoring the process, but also with issuing cautionary notes to protect the progress towards coordination and coherence that has been achieved, to the surprise of many, in recent years.

4. CONCLUSION

Trying to outline the political agenda of one of the most ambitious institutional, economic and social projects that Western modernity has ever known, at a decisive moment such as the present, is an extremely ambitious task in itself. Here we have tried to do justice to that task by focusing on what we see as the backbone of that agenda for the months and years ahead, on the basis of the existing political cleavages that represent the fundamental challenges and strategic choices facing the EU today.

Indeed, the Union is at a crossroads where the need for strategic autonomy is increasingly evident, leading to a crucial choice between a multilateral approach to avoid strategic vulnerability and a protectionist stance that focuses on self-sufficiency. The quest for decarbonization illustrates this challenge, underlining the need for an effective balance between both. At the same time, however, the environmental transition also raises important distributional issues that will require policy choices about its pace and scope. Furthermore, the solutions to these dilemmas will have to be articulated institutionally, but the EU's institutional future is marked by a third dilemma, which has been a perennial question since its founding, between further unification and the ceding of sovereignty, and a more flexible and state-centered structure.

Our core argument here has been that the political offer of a Union with a more autonomous voice, but open to the outside world within a framework of strategic relations, has found its relevance over the last four years in the wake of the unexpected challenges facing the EU. It has also proved to be fit for the much more anticipated challenge of decarbonizing our economies. In the next few years, the focal point of this search of meaning for what having an open and strategically autonomous Union mean will be on sustaining the syncing between autonomy and decarbonization goals through a much greater effort in multilateral diversification accompanied by lowest-common-denomi-

nator, single market-leveraged, and competition-enhancing industrial policies. This will come along with greater foreign policy and defense cohesion accompanied by free but powerful markets abroad demonstrating not only internal, but external muscle through unified demand and trade bargaining.

But neither utility nor fit is a done deal, far from it: 2024 will be a crucial political moment, a mid-decade turning point, that calls for an extension of the current political platform, articulated from the center towards the mainstream left and right but precisely excluding the new challenges from the extremes, and its policy framework. To find a political way forward, in our view the outgoing coalition will have to update its up to date improvised but - when compared with the counterfactual - relatively successful responses. It will be, however, threatened both by its left flank and, especially, by the right, as we will probably see confirmed in the upcoming European elections, in which the until now (and not so much now) small groups will once again enjoy an unusual power of influence before 2014.

All the above will be less viable in practice if new forms of joint financing and redistributive investment are not added to the toolbox, something that remains to be seen. This would imply taking advantage of the change in incentives across the Union that lessens previous veto points to deepen, even timidly, this joint capacity so that the Union has an economic firepower adequate to the voice it intends to develop. And all this will have to be accompanied by much more complex, and unavoidably half-baked decisions on the borders of the Union: which countries it includes (where caution will be a default), and which other countries are allowed to enter (where the reality of our labor markets and demographic outlook may end up overcoming that same caution).

There will, of course, be many other elements of this agenda that are known knowns: from defining the regulation of the digital environment to managing change in welfare and care models in an even closer, but also even older, Union. There will also be unknown unknowns: one thing that the last few decades have shown is the extreme volatility of the times, leading to unpredictability. We cannot take our eyes off the Middle East, or the South China Sea, or the challenges closer to home in Europe's heartland. Our outlook does not deny any of this: on the contrary, we understand that the political backbone of the Union must be prepared to face all these developments. In a sense, the coming times will be a test of whether the Union and its members are able to overcome their reactive condition, focused on emergency response rather than structural changes, to consolidate a more resilient structure to the new normal⁵⁸. That is why we believe that the focus of the decision-makers should remain precisely on having an assertive but at the same time strategically open autonomy to be able to do so under the right conditions.

⁵⁸ Fernández, F. (2023). *Executive summary*. In EURO IN 2023 (pp. 11-50). Fundación ICO. Retrieved from https://www.fundacionico.es/documents/137403/0/EURO_IN_2023.pdf/fd1c0f8a-f568-764d-be91-25b0c3b8dcf3?t=1677673961961

MONETARY POLICY AND ITS INTERACTION WITH OTHER ECONOMIC POLICIES*

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1. INTRODUCTION: THE EURO AREA CONTEXT AND THE ECB'S MONETARY POLICY DECISIONS

At the end of 2021, in response to a context of high and rising inflation in the euro area, the Governing Council of the European Central Bank (ECB) embarked upon a rapid cycle of normalisation and subsequent tightening of monetary policy. In particular, the policy rate rise has been unprecedented in the history of the euro area. Since July 2022, the cumulative increase amounts to 450 bp, taking the deposit facility rate from a negative value of -0.5% to a positive rate of 4%.

In addition to raising our policy rates, we have also tightened our monetary policy by reducing the size of the Eurosystem balance sheet. Indeed, the speed of reduction of the balance sheet has so far been extraordinary, with its size shrinking by more than €2 tn since the end of 2021, largely due to the repayments of our targeted longer-term refinancing operations (TLTRO).

Our monetary policy tightening is currently being transmitted forcefully to the euro area economy. Tighter financing conditions are dampening demand, and this is helping to bring down inflation. Moreover, a significant part of the pass-through of monetary policy tightening is still pending. Ultimately, however, the effectiveness of monetary policy in achieving its goal depends on how other policies are being implemented at the same time. Indeed, policies are more effective when their stances are mutually sup-

* The views expressed in this article are those of the author and do not necessarily represent the views of the European Central Bank or the Eurosystem. The latest data available for this article refer to November 2023.

portive. In this regard, macropudential policies that support a resilient banking sector create the conditions for a smooth transmission of monetary policy actions. Likewise, fiscal actions that adopt a medium-run perspective not only reinforce euro area governments' commitment to public debt sustainability, but also help avoid additional inflationary pressures. In addition, the challenges posed by the low potential growth of the euro area economy and by the energy and digital transitions and geopolitical tensions call for a medium to long-run approach to policymaking, including policies aimed at completing the Economic and Monetary Union (EMU), and an ambitious programme of structural reforms to strengthen the supply side of the economy.

In the rest of this article I will discuss in detail the interactions between monetary and other policies, both from a short and medium-run perspective. In Section 2, I focus on the interaction with fiscal policy. In Section 3, I turn to the interaction with financial stability. Finally, in Section 4, I deal with the relationship between monetary policy and structural and longer-term policies.

2. INTERACTION WITH FISCAL POLICY

When analysing the interaction between fiscal and monetary policy, it is useful to distinguish between the optimal combination of fiscal and monetary policies in the current context and the governance framework that maximises the likelihood of having an optimal policy mix in all circumstances.

THE OPTIMAL POLICY MIX IN THE CURRENT CONTEXT

The interaction between monetary and fiscal policy has undergone significant changes in recent years. Before the pandemic, monetary policy faced the challenge of persistently low inflation, while being constrained by the effective lower bound of nominal interest rates. In this context, an expansionary fiscal policy would have helped to stimulate aggregate demand and inflation. However, as a result of the lack of coordination among euro area governments the appropriate aggregate fiscal stimulus to complement monetary policy action was not provided. More broadly, since the creation of the euro area, fiscal policy has tended to be pro-cyclical, both in times of economic booms and downturns.

The pandemic was a severe, albeit temporary, exogenous shock, probably the largest supply and demand shock we had faced in decades. In that context, a coordinated fiscal and monetary policy response was absolutely necessary to support the incomes of both households and firms, and to minimise the potential structural damage to employment, productive capacity and economic growth caused by the crisis, while avoiding deflationary pressures. In particular, the fiscal response had to rely on both national and supra-national policy actions (mainly through the Next Generation EU (NGEU) funds) of significant magnitude. The decisions taken to address such an exceptional situation

were appropriate and helped to counteract the lack of a complete institutional architecture in the euro area, allowing monetary and fiscal policies to work together without overburdening each other.

Since then, the situation has been characterised by high inflation (mainly stemming from negative supply disturbances), subdued activity and high uncertainty. In this context, the priority of monetary policy has been, and should continue to be, to bring inflation back to its medium-term target. The decisive action of the ECB has been crucial in keeping inflation expectations anchored.

For its part, fiscal policy responded to the start of the war in Ukraine with measures to mitigate the impact of the energy and food price shock on households and businesses. These measures helped contain inflationary pressures in the initial phase, although their progressive withdrawal is having and will continue to have counteracting effects. However, many of these measures have not been sufficiently selective or targeted at the most vulnerable groups, resulting in an expansionary impulse that was broader than necessary, thus adding to inflationary pressures and further complicating the task of fulfilling the central bank's mandate. Accordingly, it is vital that governments continue to withdraw these measures in line with falling energy and food prices. This would alleviate demand-driven inflationary pressures and avoid a more forceful monetary policy response. In the event of a new energy crisis, given the limited fiscal space available, the measures to be adopted should be more selective (targeted only at the most affected groups) and temporary.

Going forward, it should be taken into account that the fiscal support undertaken since the start of the pandemic has led to a significant increase in public debt levels and a reduction in fiscal space in many euro area member countries, precisely at a time when public investment needs in areas such as climate change, digitalisation and defence are significant. And the shift towards a restrictive monetary policy may prompt financial markets to pay more attention to debt sustainability concerns.

In this context, a more prudent fiscal policy would alleviate demand-driven inflationary pressures and make eventual additional interest rate increases less likely, thus helping to contain the impact of higher interest rates on the economy. A coherent policy mix would also provide a clear signal to all economic agents and improve the credibility of both policies, which in turn would help keep inflation expectations anchored and contain risks to debt sustainability and more generally to financial stability.

Consequently, a shift in fiscal policy is required this year, to a restrictive stance, in line with the Eurogroup statement of July 2023.¹ The degree of consolidation should depend on the fiscal soundness of each country and incorporate the European Commission's country-specific recommendations. Moreover, structural reforms and an improvement in the quality of public finances should be key factors in increasing potential output and mitigating the impact of negative supply-side disturbances (see Section 4).

¹ <https://www.consilium.europa.eu/en/press/press-releases/2023/07/13/eurogroup-statement-on-the-euro-area-fiscal-stance-for-2024/>

The funds from the Recovery and Resilience Facility should play an essential part in achieving these objectives.

THE OPTIMAL GOVERNANCE FRAMEWORK

Apart from cyclical considerations, from a longer-term perspective an appropriate framework to achieve an optimal combination of macroeconomic policies in the euro area needs to be established.² The current framework, originally set up by the Maastricht Treaty, had two central elements: a single and independent central bank (the ECB), responsible for conducting monetary policy for the euro area as a whole with the main objective of price stability, and a framework for the coordination of national fiscal policies.

These institutional arrangements assigned the responsibility for fiscal policies to national governments. However, it was recognised that, within a monetary union, the fiscal policy of one member affects the rest and the functioning of the union as a whole. Therefore, the Treaty introduced a series of mechanisms taking into account such considerations. First, the prohibition of monetary financing and the "no bailout" clause. In addition, it stipulated that member countries should avoid excessive deficits and debt levels, requirements that were operationalised through two quantitative reference values: 60% for the public debt/GDP ratio and 3% for the budget deficit/GDP ratio.³ The European Commission was tasked with monitoring public finances to identify significant deviations that could endanger the macroeconomic and financial stability of the union. And countries that violated these rules would be subject to the corrective arm of the Stability and Growth Pact, to ensure that excessive deficits are addressed within a specified time frame.

These supranational mechanisms were expected to result in national fiscal policies that were consistent with the smooth functioning of the monetary union. However, over the years and as the euro area experienced various crises, particularly the global financial crisis and the European sovereign debt crisis, several shortcomings became evident.⁴

First, the original rules did not take into account the impact of the cyclical situation on the observed deficit, leading to pro-cyclical fiscal policies. In particular, the fiscal framework did not encourage the accumulation of buffers during boom times and induced unnecessary tightening during recessions. Subsequent reforms increased the complexity of the rules, but did not manage to solve the problem adequately.

Second, the framework did not prevent a general increase in public debt levels

² For more details, see Hernández de Cos (2023a).

³ These quantitative limits were set based on the economic developments at the end of the 1990s.

⁴ See Alloza et al (2021).

among euro area member countries. Indeed, this has been a common trend in most advanced economies worldwide.

Third, focusing on fiscal imbalances made it difficult to detect other imbalances, such as financial and current account imbalances, which ended up having a strong destabilising effect on the euro area. The European Semester and the Macroeconomic Imbalance Procedure were introduced to solve this problem by providing a framework to coordinate national economic policies and detect the accumulation of imbalances. However, so far, this framework has been used with limited success.

Lastly, no supranational fiscal elements were considered to provide an aggregate fiscal stance at the union level as a counterpart to the single monetary policy, which has made it difficult to achieve the adequate policy mix.

All this generated a broad consensus on the need for a thorough reform of the euro area's fiscal governance framework, which led the European Commission to present a legislative initiative in April 2023 and the ECOFIN to reach an agreement on a new set of fiscal rules in December 2023. This reform seeks to improve the involvement of national governments and ensure a differentiated treatment of national fiscal efforts according to each country's level of debt and fiscal risks. Its main goal is to ensure that the public debt/GDP ratio of each country follows a downward trajectory or remains at prudent levels, maintaining 60% of GDP as a reference value, as well as the 3% rule for budget deficits. To this end, member countries will be asked to present medium-term fiscal-structural plans ensuring that debt ratios remain below 60% of GDP over the medium term or, in the case of high debt levels, are gradually brought onto a sustainable path. Crucially, these medium-term plans will incorporate commitments to public investment and reforms aimed at improving growth potential and long-term fiscal sustainability, or addressing the EU's common strategic priorities, which could justify a more gradual fiscal adjustment.

The new agreement contains some important new elements. In particular, it recognises that structural reforms, growth-enhancing public investment, and fiscal sustainability mutually reinforce each other and must be promoted through an integrated approach. Second, it anchors debt sustainability at the centre of the debate. Third, the use of an expenditure rule as an intermediate target is welcome since this is the one variable under the control of the fiscal authorities, allowing the extraordinary revenues that sometimes materialise, for reasons beyond their control, to be saved. Fourth, the focus on debt sustainability also makes it possible to include previously missing elements (specifically the macroeconomic environment, in addition to potential growth and the natural interest rate) that could encourage structural reforms. Finally, it allows for greater cross-country heterogeneity in the targets and the design of fiscal consolidation. At the same time, the new framework imposes a number of minimum consolidation requirements (safeguards) for countries with debt or deficits above the reference values, and seeks to avoid the backloading of the fiscal effort by ensuring a linear adjustment pace over the medium-term plan.

The success of the new framework will depend on its effective implementation by countries. In this regard, it will be crucial that the new rules are able to avoid the tra-

ditional pro-cyclical behaviour of public finances and, in particular, encourage a sufficient degree of fiscal consolidation during economic expansions. A key aspect is how the deadlines for the necessary fiscal adjustment will be calibrated. In particular, the credibility of the fiscal framework could be endangered if the deadlines are too lengthy or if exceptions from the no-backloading safeguard are frequently sought. The structural reforms and investment commitments that would justify the use of an extended period of adjustment should be strictly analysed *ex ante* and closely monitored *ex post*. Greater compliance will also require a more automatic application of the rules.

In any event, as I have already mentioned, it is very important that this new framework should result in a restrictive fiscal policy in the euro area in 2024, without delay, to be followed by a gradual fiscal adjustment in subsequent years, in particular in countries with significant fiscal imbalances, such as Spain. Effective and transparent implementation of the new framework is now of the essence.

Finally, it is worth mentioning some elements that have not been included in the reform, but which are, in my view, important to ensure a proper functioning of the policy mix in the euro area.

First, it is crucial to recognise that the choice of the optimal fiscal policy stance by each country does not necessarily guarantee an optimal stance at the aggregate level. To achieve this objective, it would be essential to have a central fiscal capacity, with an adequate size and sufficient and reliable funding, to allow for effective macroeconomic stabilisation at the union level.

Second, the fiscal efforts required to meet upcoming public investment needs are considerable and will be very difficult to achieve with the scarce fiscal space available at the national level in many member countries, even if the reform of the Stability and Growth Pact attempts to preserve national public investment. Consequently, a common, permanent, European financing instrument needs to be introduced, applying the lessons learned from the NGEU initiative. This instrument would allow the financing of large-scale projects that provide public goods at a European level, while avoiding any excessive or uneven impact on national public finances and disruptions of the single market.

But these efforts will also require a significant contribution from private investment, for which purpose it is crucial to first reduce the fragmentation of capital markets and improve the limited degree of risk-sharing that still characterises the monetary union. Thus, to ensure that the governance framework mitigates cross-border fragmentation it is crucial to complete the banking union and to press ahead with the capital markets union. A fundamental element of this framework would be the issuance of benchmark pan-European safe assets. This would allow the prices of equity and fixed-income instruments across the euro area to reflect their fundamental risk more clearly and thus limit flight-to-quality capital flows towards core countries. This would be especially relevant in times of market tensions and would help to ensure a smooth transmission of monetary policy in a context of market fragmentation. In this regard, the experience with the EU bond issues used to finance the SURE and NGEU programs can serve as a prototype for this European safe asset. Although relatively small in size, they have been successful

in terms of market appetite and have helped the majority of member countries reduce costs thanks to joint financing.⁵

3. INTERACTION WITH FINANCIAL STABILITY

Interactions between monetary and macroprudential policies are potentially significant. In particular, given that their transmission channels are similar, by pursuing their own objectives such policies can have an impact on each other's goals. For instance, monetary policy has the capacity to alter the course of the credit cycle, indirectly increasing or reducing systemic financial vulnerabilities. In turn, macroprudential policy can modify banks' incentives to provide credit to the real economy, indirectly affecting demand and inflation.

One key conclusion from the ECB's 2021 monetary policy strategy review was that financial stability is a pre-condition for price stability and vice versa.⁶ Ensuring confidence in the value of our currency (i. e. guaranteeing price stability) is necessary for a stable and well-functioning financial system. An environment with stable prices also provides better conditions, particularly in terms of bank profitability, for the pre-emptive build-up of macroprudential buffers, while at the same time meaning they are less likely to be needed. Likewise, financial stability is required for price stability, given the role of financial intermediaries in the transmission of monetary policy and the potential for deflationary pressures caused by severe financial distress. Thus, a sound financial system is key to enabling monetary authorities to pursue price stability.

Furthermore, the ECB monetary policy strategy review identified macroprudential policy, together with microprudential supervision, as the first line of defence against financial instability. The goal of macroprudential policy is specifically to improve the resilience of the financial system against the materialisation of systemic risk, to curb the build-up of systemic risk and, ultimately, to smooth financial cycles. The macroprudential toolkit has been designed to meet these objectives, particularly in the form of capital buffer requirements and borrower-based measures in the banking sector, which can be defined with sufficient granularity to address specific risks and vulnerabilities. This is especially relevant in the euro area, where financial cycles are not fully synchronised across countries and financial imbalances can emerge at the national level.

The pursuit of price stability through monetary policy, and of financial stability through macroprudential policy, are very often complementary.⁷ In normal times, the

⁵ Burriel, Kataryniuk and Pérez (2022).

⁶ See section 3.3 of ECB (2021a). For a more detailed discussion of the role of financial stability considerations in the ECB's monetary policy, see ECB (2021b).

⁷ The interplay between monetary and macroprudential policies can vary depending on different structural and cyclical factors in the banking sector. For example, some research shows that the transmission of monetary policy tends to be slower in better capitalised banks, which react more calmly to increases in interest rates in terms of the amount and quality of the credit they provide. However, this apparent dampening effect of higher bank capital on the effects of monetary policy can be overcome by adjusting monetary policy

separation principle, whereby monetary and macroprudential policies can each focus on their own objectives, generally holds true. If, for example, financial stability and inflationary risks emerge in parallel, a tightening of monetary policy can supplement the activation of macroprudential tools. The aggregate negative effect of monetary policy tightening on demand through the various channels (income, wealth, etc.) will generally reinforce the incentives of economic agents to deleverage and reduce risk-taking, beyond the initial effects through the banking channel.

In stressed conditions in which a deflationary demand shock is present, financial stability risks might also materialise in a manner that does not create a trade-off with monetary policy. A case in point is the monetary policy response during the COVID-19 pandemic, when financial stability and deflationary risks were high. In this context, the pandemic emergency purchase programme (PEPP) was the right tool both to reach an expansionary monetary policy stance in the face of a deflationary shock and, in parallel, to provide liquidity, avoid fragmentation and guarantee financial stability. The transmission of monetary policy was also aided by the release of certain bank capital buffers by a number of macroprudential authorities.

But even if liquidity crises occur in high-inflation periods, tools can be skilfully designed to ensure separation. To this end, the tools must be targeted and temporary, and the underlying financial stability challenge must truly be one of liquidity rather than solvency. For instance, the intervention by the Bank of England in Autumn 2022 to stabilise the gilt market can be regarded as one instance in which monetary policy had to be applied to directly address a financial stability problem.

The announcement of the transmission protection mechanism (TPI) in July 2022 also took place in an environment of mounting inflationary pressures and a tightening monetary policy stance. At a time of rapidly rising interest rates, heightened concerns over sovereign debt dynamics led to sharp increases in sovereign bond yields that could have triggered severe financial distress and market fragmentation. Thanks to the decisive action of the ECB, the markets settled, helping to ensure the smooth functioning of financial markets needed to transmit the tighter monetary policy stance. Since its announcement, sovereign bond yields have broadly stabilised, despite the unprecedented sharp increase in monetary policy rates. The TPI has thus been crucial in allowing for a forceful monetary policy response to tackle inflation.

But there may be cases in which there is a trade-off between the two objectives. For instance, when solvency issues emerge in the banking sector in a high inflation environment. These solvency issues can be mitigated by a proper supervision and resolution framework and by the action of fiscal authorities. Nonetheless, monetary policy will have to react taking into account that a financial crisis is likely to lead to the emergence

to a level that is suitably restrictive, given the capitalisation of the banking sector. A better capitalised banking system is also less sensitive to interest rate cuts and, over the long run, the associated probability of systemic crises will be smaller. Thus, a better capitalised banking system can reduce the amplitude of financial cycles in line with one of the goals of macroprudential policy, without necessarily worsening the inflation-growth trade-off.

of disinflationary forces that should ease this trade-off between monetary and financial stability over time, albeit at a potentially high cost in terms of output loss. There is indeed a consensus on the need for aggressive monetary actions to restore financial stability and the functioning of the monetary policy transmission mechanism in the midst of a financial crisis, with possible distortions to ex ante incentives to be addressed by an effective macro- and micro-prudential framework.

Another instance in which such a trade-off may emerge is when a build-up of systemic risk occurs in a situation of subdued inflation. In such a context, a prolonged loosening of monetary policy could exacerbate financial stability risks, and the activation of macroprudential policy tools may not be enough to prevent the emergence of systemic risk. The prolonged low interest rate environment prevalent before the pandemic is often cited as a case in point, since it created incentives to engage in risk-taking, which may have become excessive and may in some cases have led to the build-up of systemic risk. In a low interest rate environment, the low returns on safe assets push banks into searching for yield and reinforce these risk-taking dynamics. In such a context, monetary policy could be designed to minimise the potential negative impact on financial stability. For example, the ECB's targeted longer-term refinancing operations (TLTROs), which set a lending target that excludes housing loans, were designed specifically so as not to contribute to the formation of real estate bubbles.

FINANCIAL STABILITY IN THE ECB'S MONETARY POLICY STRATEGY

Given all of the above considerations, in its monetary strategy the ECB explicitly decided to take financial stability considerations into account in monetary policy deliberations. Under this framework, any monetary policy response to financial stability concerns will depend on prevailing circumstances and will be guided by the implications for price stability. In this regard, the medium-term horizon of the ECB's monetary policy objective could be used to cater for financial stability considerations. These considerations can also be part of the regular proportionality assessment that is made on any monetary policy decision taken by the ECB.

In practical terms, this means that an integrated framework of economic and monetary and financial analysis must be used to measure the evolution of financial vulnerabilities and their impact on output and inflation, including in the long-run, and the impact of macroprudential measures to mitigate financial vulnerabilities and, therefore, their implications for output and inflation.

Taking financial stability considerations into account in our monetary policy deliberations does not mean that monetary policy will consist of systematic policies of "leaning against the wind" (whereby monetary policy is systematically tightened when systemic risk builds up) or of "cleaning" (whereby monetary policy is systematically loosened when systemic risk materialises). It is rather a flexible approach.

REINFORCING THE ROLE OF MACROPRUDENTIAL POLICY AS A STABILISING TOOL

In terms of macroprudential policy, a more active stance to foster the accumulation of sufficient releasable macroprudential buffers in non-crisis periods could make it more consistent with monetary policy and reduce the need to resort to monetary policy measures during crises.

Thus, macroprudential policy can be seen as a complement to monetary and fiscal policies with regard to their macroeconomic stability objective.⁸ Moreover, the role of macroprudential policies in stabilising the economy may be particularly relevant in the euro area, where a common monetary policy is shared by countries whose economic and financial cycles are still heterogeneous and where, in the absence of a common permanent fiscal capacity, national fiscal policy is left alone to counteract the negative consequences of idiosyncratic shocks or common shocks that generate heterogeneous effects across member countries.

Looking ahead, this potential stabilisation role of macroprudential policy could be particularly relevant given the high levels of structural public deficit and debt in many countries, which have significantly reduced the space available for fiscal policy to play a stabilising role, as noted in section 2.

The outbreak of the COVID-19 pandemic, when fiscal, monetary and macroprudential policies acted jointly to support the real economy, illustrates this role. However, macroprudential policy was constrained by the fact that the accumulated macroprudential buffers existing at its onset were small or non-existent in many jurisdictions, given the pre-crisis context in which there were very few signs of any build-up of financial systemic risk.

A bigger role for macroprudential policy to effectively address adverse shocks that occur independently of the financial cycle (such as the COVID crisis) will therefore require expanding the policy space generated by macroprudential buffers. And, given the signs of a positive correlation between lending and the capital headroom of banks (i.e. the surplus of a bank's capital over and above all of the minimum regulatory requirements and buffers), there may be a case for increasing releasable buffers, particularly the countercyclical capital buffer (CCyB), and for taking a more flexible approach to this tool, considering its potential for helping other policies in macroeconomic stabilisation.

In this regard, an increasing number of jurisdictions have chosen to implement positive cycle-neutral CCyB rates. Under this approach, authorities aim for a positive CCyB rate when risks are judged to be neither subdued nor elevated. Authorities that have introduced positive cycle-neutral CCyB rates have found it helpful for banks in their jurisdictions to have capital buffers in place that can be released in the event of sudden shocks, including those unrelated to the credit cycle, such as the impact of the COVID-19 pandemic. This approach can help address concerns that banks in some ju-

⁸ See Hernández de Cos (2023b).

risdictions may be reluctant to cross regulatory buffer thresholds in times of stress, but may be more willing to use their capital to support lending when buffers are explicitly released by authorities. In any event a decision on introducing a positive neutral CCyB should weigh up the different pros and cons of such an approach.

Regarding the costs and benefits, the estimations of the elasticity of credit and GDP to changes in capital requirements during recessions and expansions could be useful. In the Spanish case, for example, the available evidence shows that an increase in an expansionary period of 1 percentage point (pp) in the capital-to-risk-weighted assets ratio, consistent with a tightening of credit requirements, would not have negative effects on total credit to the corporate sector, while it would lead to a reduction of 0.5 pp in credit to households and of 0.2 pp in GDP.⁹ By contrast, the same amount of capital being released during a crisis would lead to an increase of up to 3.5 pp in credit to households and the corporate sector and of 1.6 pp in GDP.¹⁰

This evidence supports the existence of an asymmetry between the costs of activating the CCyB in normal times, even in the absence of significant systemic imbalances, and the benefits of its release during downturns. The gradual activation of the buffer at an early stage makes capital planning easier for banks when conditions are good, reducing potential negative credit supply effects of the activation. It allows also to take into account uncertainty in the identification of risks, which can result in a delay and a more rapid activation later in the cycle thus reducing the inaction bias.

But the analysis of the pros and cons is more complex. In this regard, a key problem for a macroprudential policymaker is to decide whether we are in “normal times” at a particular time. In this regard, authorities can employ a broad range of indicators, including the credit-to-GDP gap and other financial and macroeconomic metrics, such as the output gap.

Furthermore, it is also necessary to assess the appropriate neutral level of the CCyB in normal times. This may depend on:

- The (cyclical and structural) characteristics of the domestic economy that can affect the estimated intensity of systemic crises.
- The desired level of macroeconomic stabilisation capacity afforded to national macroprudential policies in light of the available buffers in other policy instruments.
- The (cyclical and structural) characteristics of the banking system, such as the intensity of competition and sectoral composition of assets and liabilities, which can affect the capacity to withstand potential shocks, under both baseline and adverse scenarios.
- Other factors, such as the degree of domestic and cross-border interconnected-

⁹ Broto and Galán (2021).

¹⁰ These results are consistent with previous empirical estimations studying the impact of dynamic provisions during the global financial crisis, which besides the benefits in terms of provision of credit, suggest that a 1 pp increase in capital in good times would increase firm employment by 6 pp and the probability of survival of firms by 1 pp. See Jiménez, Ongena, Peydró and Saurina (2017).

ness of the financial system and the overall economy, also need to be considered. These factors have a significant impact on the vulnerability of the economy to internal and external shocks.

Authorities that have moved to a positive neutral CCyB have used different approaches to calibrate the positive neutral rate, including analyses of historical losses, stress test models, assessments of the impact of buffer releases during the pandemic and expert judgement¹¹.

All these considerations, which may vary among jurisdictions and therefore could condition the desirability of moving to a positive neutral CCyB, justify the position of the BCBS, which supports and sees the benefits of the authorities' ability to set a positive cycle-neutral CCyB rate voluntarily.

Finally, the effective transmission of both monetary and macroprudential policies can be significantly enhanced by deepening integration within the EU banking union. Specifically, the completion of the banking union with the creation of a fully mutualised European Deposit Insurance Scheme (EDIS), together with the development of a European public budget with the capacity to accommodate asymmetric shocks across regions and countries, would allow for more macroprudential policy responsibilities to be assumed at the European level.

4. MONETARY POLICY AND STRUCTURAL POLICIES

Structural and (monetary and fiscal) stabilisation policies are closely interrelated.¹² In particular, structural reforms have the capacity to increase potential output growth, while, in parallel, making the economy more resilient to shocks, which could be particularly key for the smooth functioning of monetary policy.

A flexible and more resilient economy is more likely to adjust to shocks through changes in prices, which are also expected to fade quickly, keeping inflation expectations anchored and thus facilitating the work of monetary policy. In a context of flexible markets and a high degree of competition, monetary policy actions will also be more effective, feeding through the economy more quickly. And these benefits are particularly relevant in a monetary union, since structural reforms can reduce cross-country economic divergence, making a single monetary policy more appropriate for all countries. By making national economies more flexible, structural reforms can also reduce the likelihood of macroeconomic imbalances, such as financial or current account imbalances, which is also key to the correct functioning of the euro area.

From the perspective of monetary policy, structural reforms that foster potential output would also involve the output gap (i.e. the gap between actual and potential output) closing at a higher level of output, at which point monetary policy would have to

¹¹ See Behn, Pereira, Pirovano and Testa (2023),

¹² Draghi (2015).

return to a neutral stance. This would make debt levels (both public and private) more sustainable at any given level of interest rate, ensuring that governments, households and firms have less need to make adjustments. It would also increase the equilibrium real interest rate, meaning that monetary policy is less likely to be constrained by the effective lower bound for interest rates and, by extension, reducing the likelihood of having to resort to unconventional policies.

Some of the interactions between monetary policy and structural reforms can be illustrated through the concept of the *natural interest rate*, or r^* , which is the short-term real interest rate at which investment fully absorbs saving at full employment.¹³ Alternatively, it can be defined as the real rate at which output equals its natural level and inflation is stabilized at its target. Therefore, it provides a benchmark for measuring the stance of monetary policy, with policy being expansionary (contractionary) if the short-term real interest rate lies below (above) the natural rate.¹⁴

This rate cannot be observed directly and can only be estimated, with some degree of uncertainty, using econometric techniques. According to the available estimates, the natural interest rate has been in progressive decline over recent decades in advanced economies, at least until the COVID-19 pandemic.¹⁵ Since then, estimates of r^* point to a certain increase, albeit still to relatively low levels.¹⁶

A natural rate standing at low levels, poses notable challenges for monetary policy. To achieve sufficiently low real interest rates, a combination of sufficiently high inflation expectations and low nominal interest rates is needed. The monetary authorities may find it hard to strike this balance in certain situations, such as a recession or a low inflation environment, as was the case during the years prior to the pandemic. This is because of the existence of a lower bound on nominal interest rates. The recent worldwide surge in inflation has eased these limitations somewhat, as monetary policy has raised nominal interest rates sharply and inflation expectations have increased. But the resulting uptick in real interest rates remains modest compared with the late 1970s.

Empirical studies attribute this secular drop in r^* mainly to the decline in trend productivity growth and demographic developments, but also find a role for other factors which affect the balance between the supply of savings and the demand for investment, such as fiscal policy or capital flows.¹⁷

Going forward, new factors (e.g. the green transition or a slowdown in the globalisation process) are likely to also play a role, since they have the potential to reduce the long-run level of output and income and hence the supply of savings, but also to mobilise a larger amount of investment.

¹³ Rachel and Summers (2019).

¹⁴ See Galesi, Nuño and Thomas (2017) or IMF (2023) for a thorough discussion of the concept, its determinants and its implications for monetary policy.

¹⁵ See the pre-pandemic evidence provided by Holston, Laubach and Williams (2017).

¹⁶ Armstrong and Wu (2023).

¹⁷ See IMF, 2023; Cesa-Bianchi, Harrison and Sajedi, 2023; Mankiw, 2022.

In this context, structural reform policies that can raise potential output growth and the equilibrium real interest rates may play a crucial role in providing monetary policy with more room for manoeuvre.

The channels through which these factors affect r^* and the structural reforms that may help to reverse their trends are discussed in more detail below.

PRODUCTIVITY GROWTH:

Since the seminal work by Solow, macroeconomic theory has taught us that the real interest rate increases with aggregate productivity growth. The idea is that the rate of interest paid by a borrower must compensate the lender for forgoing the alternative use of those funds. Higher productivity growth increases the marginal product of capital and drives up savers' opportunity cost, so a higher interest rate is required in order to induce them to lend.¹⁸

Productivity growth has been falling globally since the 1960s, while remaining relatively stagnant over the decade prior to the COVID-19 pandemic, explaining a large share of the decline in r^* over this period.

In addition to the general policy advice to increase the share of public and private spending on education and R&D, there is a wide range of structural reforms that may help improve this margin. A large number of regulations, as well as various regulatory thresholds in labour markets and taxation, associated with arbitrary levels of company size that negatively influence business growth, reduce aggregate productivity by distorting the allocation of capital among firms.¹⁹ In particular, regulations may unduly prevent capital from flowing to other more productive firms. There is also scope to review and improve the design of tax incentives and direct subsidies for R&D and innovation projects.²⁰ Furthermore, the uncertainty of the innovation process, together with the significant information asymmetries between innovator and financier, complicates the financing of this type of activity. In this respect, reducing the dependence on bank credit would help, as would, promoting pan-European initiatives to finance large investments in this area. With respect to investment in human capital, it is essential to adapt the educational and vocational training system to the new technological and demographic environment to ensure the complementarity of human capital with the profound structural changes under way.²¹

Finally, and even though much uncertainty surrounds the future course of artificial intelligence and big data, a potential surge in their use could reverse this global trend in productivity growth, leading to more demand for funding and, thus, a higher r^* .

¹⁸ See Mankiw, 2022; Solow, 1956.

¹⁹ Mora-Sanguinetti and Pérez-Valls (2020), Almunia and López-Rodríguez (2018) and Almunia, Jimeno, López-Rodríguez and Petit (2024).

²⁰ Almunia and López-Rodríguez (2024).

²¹ Auciello, Lacuesta and Segú (2021).

DEMOGRAPHIC TRENDS:

The world is undergoing a dramatic demographic transition that can affect r^* through various channels.^{22, 23} In most advanced economies people tend to live longer. At the same time, population growth rates are decreasing at a fast pace, and in some cases (e.g. Japan) they are becoming negative. The combination of these two forces entails a notable increase in the dependency ratio (the ratio of retirees to workers).

Demographic transition is a complex secular phenomenon which requires action on many fronts. First, measures aimed at fostering greater job stability, such as reducing the unemployment rate and temporary employment, or facilitating parental tasks (e.g. by subsidising nurseries) may help to stop birth rates from falling. Second, health is a key determinant of labour supply, especially at ages close to retirement. Given its importance, it is crucial to evaluate the efficiency of public health expenditure. In a similar vein, it is essential to strengthen training policies that allow these older workers to remain up to date and keep up with the development of new technologies. Both policies would alleviate the future increase in the capital-labour ratio by increasing the return on capital. The latter would also occur with a migration policy that achieves the goal of addressing the observed and expected shortage of labour in some productive sectors. Finally, it is crucial to evaluate and guarantee the sustainability of public pension systems to address the future challenges posed by population ageing, since it is key to reducing the need to accumulate savings for precautionary reasons and, thus, to mitigating further reductions in r^* .

GLOBAL SAVINGS:

Global drivers have also been a factor behind the drop in the natural rate. As global capital markets opened up and fast-growing emerging market economies entered the scene in the 1980s and 1990s, external factors increasingly shaped long-term trends in interest rates in advanced economies. Two counteracting mechanisms are at work. On the one hand, high-growth emerging markets provide alternative investment opportunities, resulting in capital outflows and raising the natural rate in advanced economies.²⁴ On the other, the supply of safe and liquid assets, primarily US government bonds, has not kept pace with fast-rising demand, especially from emerging markets. Their ensuing scarcity may have driven up their price and lowered their return.²⁵ However, these forces seem to have had broadly offsetting effects on capital flows and a moderate impact on natural rates over the past half-century.

²² Carvalho, Ferrero and Nechio, 2023.

²³ Goodhart and Pradhan (2020) argue that the demographic reversal and the very expansionary monetary and fiscal policies put in place to combat COVID-19 will lead – sooner rather than later – to less saving and more investment, which will push the natural rate up.

²⁴ Obstfeld (2021).

²⁵ Caballero, Farhi, and Gourinchas (2016, 2017) and Krishnamurthy and Vissing-Jorgensen (2012).

From the perspective of the euro area, there are two ways to contribute to the expansion of the supply of (euro-denominated) safe assets. Euro area countries with a less sound fiscal position should focus on reducing their idiosyncratic sovereign risk, in particular by implementing credible medium-term fiscal consolidation plans (see Section 2 above). However, this strategy may not be enough to ensure a sufficiently stable and ample supply of safe assets. Its success depends on the capacity of the less safe countries to become safer. This has become even harder after the general increase in debt levels as a consequence of the fiscal policy response to the COVID-19 pandemic and the recent inflation surge. Moreover, this strategy will not suffice to disentangle financing conditions for firms and households in a given country from the status of its sovereign. This is why we need a pan-European safe asset.

As noted in Section 2, two recent examples of this are the common EU debt issuances used to finance the SURE and NGEU programmes in the context of the pandemic. These euro-denominated safe assets can buttress financial stability and European integration. Moreover, as common EU debt is considered safe and, therefore, attracts favourable financing conditions, it boosts the provision of public goods related to the green and digital transitions and European defence policy, which are likely to involve large-scale investments.

However, these financial integration trends observed over the last few decades may be threatened by the increase in geopolitical tensions and the potential emergence of international trade and financial fragmentation. The effect of financial fragmentation on real interest rates will depend on countries' initial external position – deficit countries will find it more difficult to finance their current accounts, while surplus countries will repatriate excess savings – with an uncertain overall effect on the natural rate.

CLIMATE CHANGE:

Finally, climate change may also affect the natural interest rate. More generally, it may potentially affect monetary policy through its effect on the level and volatility of inflation, and on the financial institutions that transmit monetary policy.

First, climate change and transition policies to mitigate it may affect r^* , but the overall effect is uncertain. The materialisation of physical risks would push the level of r^* down, as a result of capital destruction,²⁶ lower labour productivity and greater mortality, as well as a possible increase in precautionary saving. However, increased investment for reconstruction or to mitigate the impact of climate change would increase the demand for loanable funds, pushing r^* up.

Second, according to existing empirical evidence, physical risks linked to climate change tend to be inflationary, especially in developing economies, given the weight of

²⁶ Extreme temperatures may have important effects on mortality, health and, in turn, labour supply and productivity. Day, Fankhauser, Kingsmill, Costa and Mavrogiani (2019) find substantial reductions in productivity for temperature increases above certain thresholds.

food in the consumption basket.²⁷ Furthermore, inflation volatility and heterogeneity may increase as a result of more frequent and severe climatic shocks.²⁸ In addition, carbon pricing, the main climate-change mitigation policy, increases the relative prices of greenhouse gas-intensive goods and services and thus temporarily affects the level of inflation and its volatility,²⁹ especially under emission trading systems.³⁰

Finally, physical and transition risks could lead to credit losses that would deteriorate credit institutions' balance sheets, affecting the bank-based transmission of monetary policy decisions. These adverse effects would be even greater if there were also sudden increases in credit risk premia, which, among other implications, would negatively affect the collateral provided by institutions in monetary policy operations.

All in all, these factors justify the need to put more emphasis on structural policies in the coming years to facilitate resilience and increase the growth potential of our economies.³¹ Indeed, in a context in which several supply factors might head in the direction of reducing the growth capacity, aggregate demand policies could result in higher inflation. Instead, structural reforms and investments to enhance the euro area's supply capacity can help reduce price pressures in the medium term, while supporting the green and digital transitions and allowing our economies to better face the challenges posed by the ageing of our societies and potential deglobalisation trends.

5. CONCLUSIONS

Economic policies are more effective when they are complementary and create room for manoeuvre for one another. This is even more important in a monetary union like the euro area, where a common inflation goal is shared by countries with heterogeneous public debt levels, fiscal space and financial cycles.

To achieve the optimal policy mix at the current juncture, the ECB's efforts to bring down inflation would greatly benefit from a fiscal policy with a medium-term orientation. This would not only make further interest rate increases less likely, but also help boost credibility, keep inflation expectations anchored and alleviate concerns about debt sustainability. In turn, macroprudential policies that support a resilient banking sector can create room for the transmission of monetary policy and smooth the impact of the tightening cycle on financial stability and on the supply of credit to the real econ-

²⁷ Parker, 2018; Faccia, Parker and Stracca, 2021.

²⁸ Cicarelli, Kuik and Martínez Hernández, 2023; Kotz, Kuik, Lis and Nickel, 2023.

²⁹ McKibbin, Konradt and Weder di Mauro (2021), Drudi et al. (2021), Känzig (2021) and Moessner (2022).

³⁰ Santabárbara and Suárez-Varela, 2022.

³¹ Carstens (2022).

omy. The policy mix would also greatly benefit from an ambitious plan of structural reforms to strengthen the supply side of the economy.

From a European perspective, it is also necessary to make headway in the completion of the EMU on several fronts. First, supranational fiscal elements would help provide an aggregate fiscal stance at the euro area level as a counterpart to the single monetary policy. Second, deepening the banking union could significantly enhance the effective transmission of both monetary and macroprudential policy. Third, the completion of the capital markets union would help to mitigate cross-border fragmentation. A fundamental element of this framework would be the issuance of benchmark pan-European safe assets.

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**MONETARY POLICY, COMBINING DISINFLATION
WITH QUANTITATIVE TIGHTENING**

THE NATURE OF THE INFLATIONARY SURPRISE IN EUROPE AND THE USA

PAULA BEJARANO CARBÓ*

ABSTRACT

This paper leverages insights from data and economic theory in order to construct a narrative account of how the nature of inflation has evolved over time in the Euro Area, United Kingdom and United States since the onset of the Covid-19 pandemic. To this end, I decompose the recent ‘inflationary surge period’ into four phases: Phase I (2020 Q1 - 2020 Q2), or the Covid shock phase, characterized by joint a negative demand and supply shock; Phase II (2020 Q3 - 2021 Q4), or the reopening phase, characterized by conflicting positive demand and negative supply shocks; Phase III (2022 Q1 - 2023 Q1), or the post-reopening phase, also characterized by conflicting positive demand and negative supply shocks, where the latter is driven by an exogenous increase in energy prices; and Phase IV (2023 Q2 - present), the post-energy-shock phase, characterized by falling consumer price index (CPI) inflation alongside still-elevated and broad-based underlying inflationary pressures. Having established this ‘inflation story’, I conclude with some brief comments on the European Central Bank, Bank of England and Federal Reserve monetary policy responses during this time.

* National Institute of Economic and Social Research. I would like to thank Fernando Fernández Méndez de Andés, Stephen Millard and Barry Naisbitt for useful comments and insightful discussion, from which this paper has benefitted greatly. Unless otherwise stated, data in this paper come from the National Institute Global Econometric Model (NiGEM) database.

1. INTRODUCTION

In the decade prior to the Covid-19 pandemic, consumer price index (CPI) inflation in the Euro Area (EA), United Kingdom (UK) and United States (US) averaged between 1-2% while central bank policy rates were, for the most part, close to or below zero. As a result, the policy debates in this decade often centered around the ‘new normal’ of near-zero interest rates. At the time of writing, inflation has been above central banks’ typical 2% target in all three economies for over two years, and the European Central Bank (ECB), Bank of England (BoE) and Federal Reserve (Fed) have embarked on the most aggressive global monetary policy tightening cycle recorded in these independent central banks’ histories. Making sense of where inflation and monetary policy might be heading in the medium-term firstly requires a careful analysis of the nature of the inflationary surprise that changed our post-pandemic economic landscape.

The nature of inflation in the past three years has not been homogeneous, neither within economies nor between economies. For instance, the extent to which inflation has been demand-driven or supply-driven has varied across time and space. Additionally, there have been multiple inflationary surprises in Europe and the USA within the last four years. Despite this, the various inflationary surges that have taken place since the onset of the pandemic have marked a significant departure from the previous ‘new normal’, and so have naturally been characterized as one monolithic inflationary surprise. Clarifying how the nature of each of the inflationary phases in the EA, UK, and US has evolved since the Covid-19 pandemic is therefore of central importance.

This article proceeds as follows: section 2 combines insights from data and economic theory to describe the post-Covid ‘inflation story’, beginning with the impact of national lockdowns and finishing with the latest data available at the time of writing. With the obvious benefit of hindsight, section 3 uses the story established in section 2 to broadly comment on central banks’ actions in this post-Covid inflationary era. Section 4 concludes.

2. THE POST-COVID INFLATION STORY

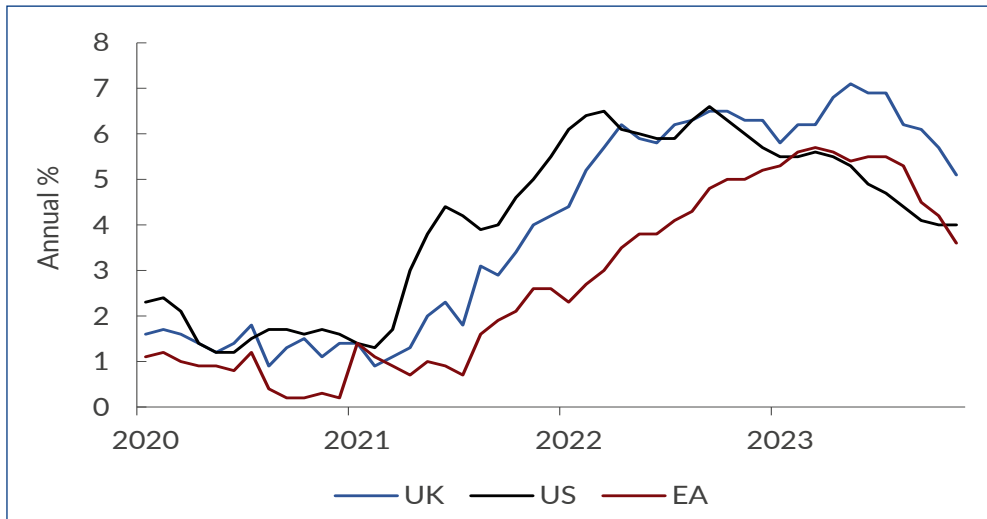
There have been a variety of sources of economic disruption that have stoked inflationary pressures since the onset of the Covid-19 pandemic. On the demand side, the main drivers of inflation have been generous fiscal stimulus packages, expansionary monetary policy, and shifts in consumer preferences/behavior. On the supply-side, the main drivers have been supply chain bottlenecks, goods and labor shortages, and energy and food price increases following Russia’s invasion of Ukraine. Of course, ‘second-round’ inflationary effects, such as increases in wages and profits in response to elevated inflation, must also be taken into account. Understanding how the nature of inflationary pressures has changed over time and affected the wider macroeconomy is crucial for assessing the monetary policy response to high inflation.

To this end, I decompose the recent ‘inflationary surge period’ into four phases, where the first three are as identified via sign restrictions¹ in the vector autoregressive model in Ascari et al. (2023): Phase I (2020 Q1 - 2020 Q2), or the Covid shock phase, characterized by a joint negative demand and supply shock; Phase II (2020 Q3 - 2021 Q4), or the reopening phase, characterized by conflicting positive demand and negative supply shocks; and Phase III (2022 Q1 - 2023 Q1), or the post-reopening phase, which also contains positive demand and negative supply shocks, but the latter is driven by an exogenous increase in energy prices resulting from the Russian invasion of Ukraine. The latest data at the time of writing suggest that a fourth phase has since materialized (2023 Q2 - present), denoted here as the post-energy-shock phase, characterized by falling CPI inflation alongside still-elevated and broad-based underlying inflationary pressures. The effect of these shock phases on core CPI inflation and real GDP can be seen in figure 1.

One caveat to bear in mind is that the foundations for high inflation were laid well before the pandemic. For example, accommodative monetary policies since the global financial crisis alongside factors such as an increased importance in global commodity prices in determining domestic inflation altogether facilitated this inflationary surge (Forbes 2019). However, these considerations exceed the scope of this analysis, which focuses solely on describing the post-Covid inflation story.

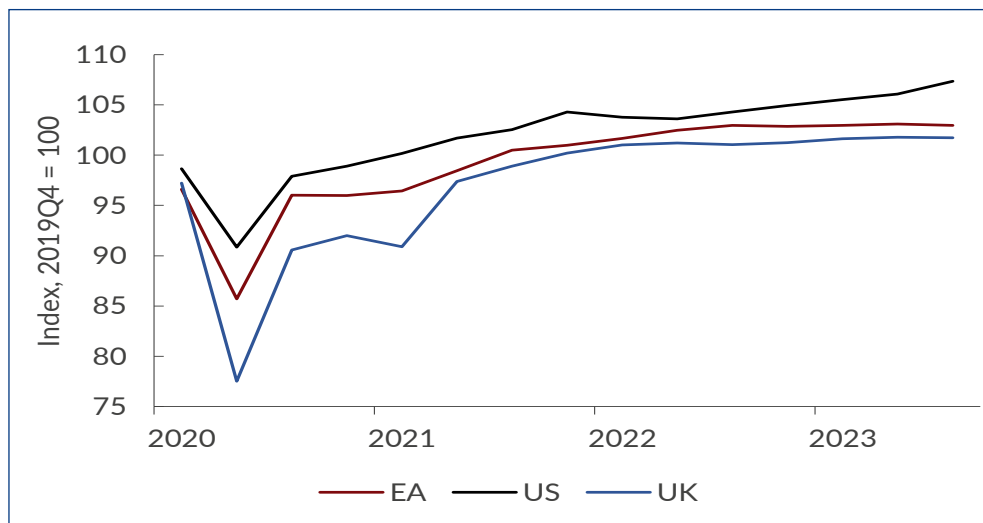
Figure 1: Core CPI inflation and real GDP in the EA, UK and US

a) Core CPI inflation



¹ Sign restrictions can help inform whether a shock is demand or supply-driven: for example, if an identified shock has a negative effect on both output and inflation then this is typically understood as a negative demand shock, in contrast to a negative supply shock which would generally involve a negative sign on output and a positive sign on inflation.

b) Real GDP



Sources: NiGEM database, FRED, ONS, Eurostat, Datastream

Notes: In the UK and EA, core CPI inflation refers to CPI inflation excluding food, energy, alcohol and tobacco. In the US, the calculation only excludes food and energy.

2.1. THE COVID SHOCK PHASE (2020 Q1 - 2020 Q2)

The economic disruption caused by national lockdowns occurring in the first half of 2020 was evidently of secondary consequence to the large loss of life caused by the Covid-19 pandemic, but the lockdowns nonetheless had significant immediate ramifications for economic activity and consumer/firm behavior. Figure 2 illustrates how the implementation of ‘stringent’ government policies, such as stay-at-home requirements and workplace closures, coincided with a sharp decline in real economic activity from March 2020 onwards.

The partial economic shutdown in the first half of 2020 caused an abrupt and steep fall in real GDP in all three economies and simultaneously generated disinflation (Figure 1). Ascari et al. (2023) take the joint falls in GDP and inflation to mean that, on aggregate, the effects of the deep negative demand shock dominated those of the negative supply shock. Intuitively, this can be thought of as the disinflationary effects of negative preference shock to contact-intensive goods and services, and the subsequent output constraint on affected sectors, overtaking the inflationary effects of a cut in the supply of these goods and services.

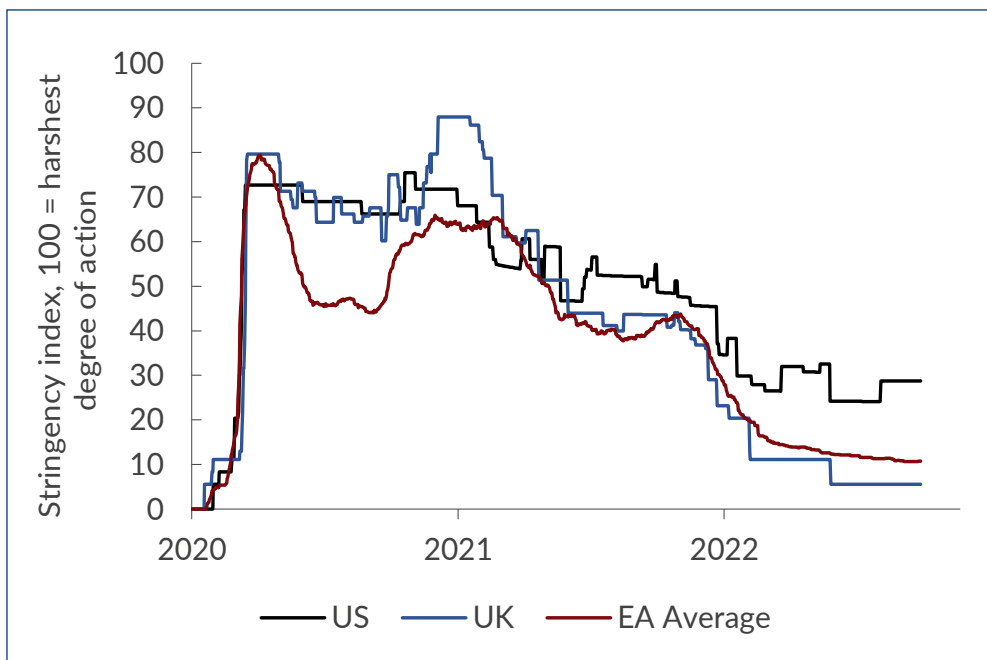
Guerrieri et al. (2022) suggest that this Covid shock can also be thought of as a ‘Keynesian supply shock,’ in which an asymmetric and transitory supply shock can induce a large negative demand shock. The intuition is as follows: a shutdown of the con-

tact-intensive portion of the economy (hence, asymmetric) lowers the potential output of this sector, which reduces the overall set of goods available to consumers as well as the need for labor in this sector. This has two counteracting corollary consequences: firstly, it becomes less attractive to spend overall, inducing consumers to delay spending; and secondly, it incentivizes a reallocation of spending into the active non-contact-intensive sector. The decreased need for labor in the contact-intensive sector causes a reduction in its workers' incomes, which, paired with delayed spending, can be sufficiently large to drive an aggregate demand deficit despite some reallocation of spending. So, this type of supply shock can induce a recession and disinflation.

Ultimately, the Covid shock is likely to have been a combination of negative demand and supply shocks². Importantly, this explains the need for fiscal stimulus in this time (as a response to the supply shock to the contact-intensive sector) and indicates that the demand deficit was always going to be as transitory as the pandemic itself. Both elements would prove to be important drivers of inflation during Phase II.

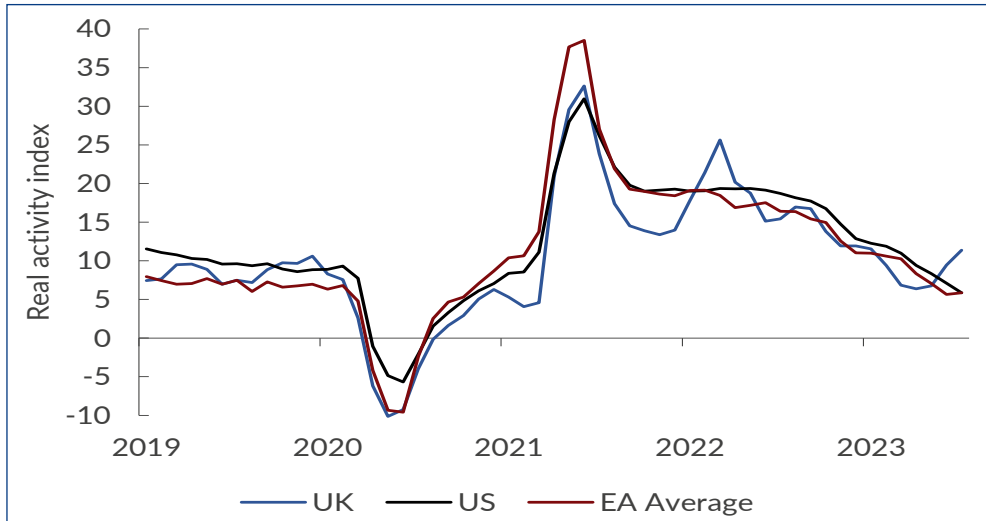
Figure 2: Covid shock indicators

a) Stringency index



² Several other papers provide alternative, though complementary, ways of thinking of the Covid shock. See, for instance, del Rio-Chanona et al. (2020); Inoue and Todo (2020); Fornaro and Wolf (2023).

b) Real activity index



Sources: Hale et al. (2023), Brookings Institution (2023).

Notes: The Stringency index, part of the wider Oxford Covid-19 Government Response Tracker, captures the degree to which government policies employed during the pandemic were stringent, including variables such as stay-at-home requirements and workplace closures. The Brookings real activity index compiles 9 indicators, such as retail sales and capacity utilization.

Fiscal stimulus during the initial Covid shock phase - necessary to protect households and reduce the overall output loss in this time- was generous in all three economies and targeted similar programs³. For example, direct grants to firms in affected sectors, increased healthcare spending, self-employed income support and furlough/unemployment benefit schemes were common insurance policies implemented in the UK, US and across EA countries in this time. That said, there were large differences in countries' abilities to provide stimulus during this period. Fiscal support was the largest in the US relative to other countries, not just in cash terms, but also in terms of deviations from pre-Covid projected spending (de Soyres et al. 2023). The initial US government fiscal stimulus, via the \$2.2 trillion CARES act, went as far as providing an unconditional cash transfer to all taxpayers. This contrasts to Spain, for example, where fiscal stimulus often took the form of public guarantee schemes, or contingent liabilities, resulting from limited fiscal space (EBA 2020). Using NiGEM data, I estimate that government transfers accounted for 15, 57, 17, and 8 per cent of growth in aggregate real personal disposable income in the second quarter of 2020 in the UK, US, Germany and Spain, respectively.

³ Bayer et al. (2023) estimate that fiscal transfers reduced pandemic-related output loss by 2 percentage points at its trough. Though fiscal support measures were broadly similar in this time, key differences in fiscal policy among countries would generate diverging macroeconomic dynamics between them, including differences in the nature of inflation, as is described in further detail in the sections below.

The fiscal stimulus, paired with inability to spend due to lockdowns and increased intertemporal substitution, led to an overall rise in savings. In the UK, US, Germany and Spain, quarterly gross household savings as a percentage of personal disposable income reached 27, 25, 21 and 13 per cent in 2020 Q2, respectively, compared to their 1997-2019 quarterly averages of 8, 5, 10 and 4 per cent. That said, the possible inflationary effect of aggregate augmented savings is dependent on who holds these savings and the reason why they've increased. To explain: households at the lower-end of the income distribution are usually credit constrained, and therefore have high marginal propensities to spend windfall increases in income (which is why targeting fiscal stimulus at this demographic is seen as a good automatic stabilization mechanism). Separately, whether savings have risen because households are forced to save (e.g., because desired service sector spending has been shut-down) or because of a precautionary motive (e.g., fear of expected recession) matters.

Several papers have sought to decompose pandemic-related 'excess' savings (savings that exceeded their level as implied by the pre-pandemic trend) by motivating force. Empirical modelling for the UK and EA suggests that an inability to spend, rather than precautionary or intertemporal substitution motives, drove the increase in savings in the second quarter of 2022 (See, for instance: Dey-Chowdhury et al., 2022; Dossche and Zlatanov, 2020; Alcidi and Shamsfakhr, 2022). Turning to the US context, research by the Fed suggests that the bottom quartile of the US income distribution held around \$116 billion in excess savings in 2022 Q2, representing a 1,023% change on the quarter (Aladangady et al., 2022). These findings suggest that credit-constrained households or agents viewing savings as 'forced' represented a significant portion of holders of total excess savings, feeding the positive demand shock that ensued in Phase II.

During this initial Covid shock phase, monetary policy was just as accommodative as fiscal policy. Not only did central banks loosen interest rates back to near-zero territory, but they also conducted quantitative easing (QE) at an unprecedented scale. Between March and June 2020, the Fed balance sheet expanded by some \$3 trillion, surpassing the expansion witnessed in the aftermath of the global Financial Crisis. BoE and ECB asset purchase announcements totaled around £300 billion and €1.8 trillion, respectively. Though there is significant debate in the literature on the overall effectiveness of QE, estimates by Delgado and Gravelle (2023) suggest that 10-year government bond yields declined by 19, 16 and 24 basis points in the EA, UK and US, respectively, within one day of initial asset purchase program announcements in March 2020. Jointly, aggressive QE and fiscal stimulus at the onset of the pandemic were needed to stabilize welfare and prevent illiquidity (and indeed there has been almost an absence of expected adverse macro-financial feedback effects given how aggressive the current monetary tightening cycle has been). This stability, however, was achieved at the expense of large fiscal deficits and expanded balance sheets, and the initial stoking of inflationary pressures.

2.2. THE ECONOMIC REOPENING PHASE (2020 Q3 - 2021 Q4)

As economies began to re-open during summer 2020, aggregate demand increased sharply, driving a quick recovery in GDP (Figure 1). This was partly caused by pent-up or delayed spending, alongside loose fiscal and monetary policies providing further cushions to households, firms and the macroeconomy. Moreover, a shift in consumer preferences that occurred during lockdowns, alongside still-stringent government policies in this time led to a mis-match in supply and demand which, jointly with the excess aggregate demand, led to the first signs of an inflationary surge as early as the second half of 2020, particularly in the US. Throughout 2021, this mismatch would be exacerbated by supply chain disruptions.

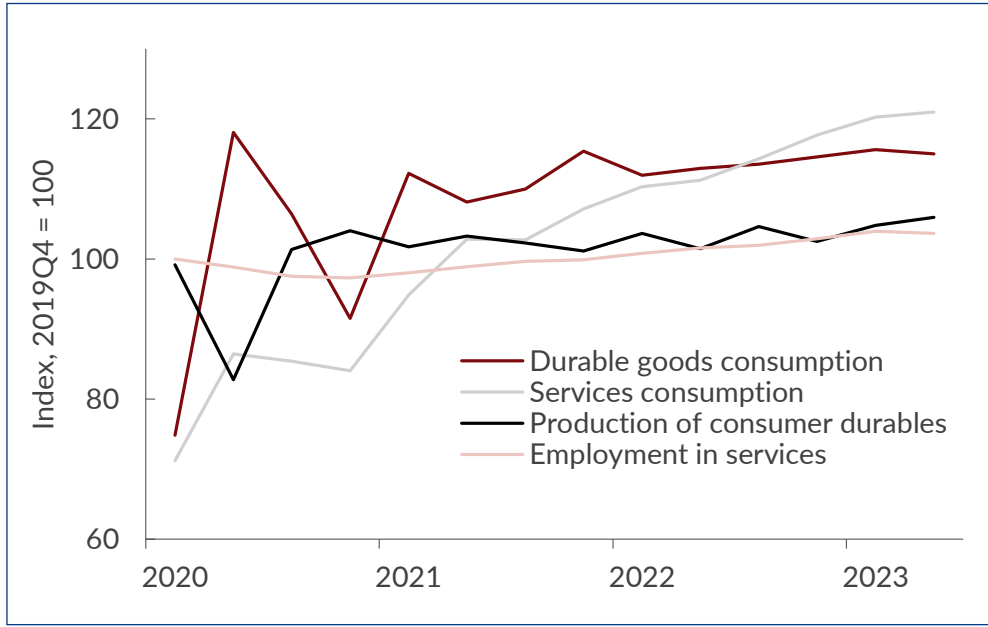
As established above, households – on aggregate – accumulated a significant amount of excess savings during Phase I. Credit and debit card data indicate that, as restrictions began to be lifted in the second half of 2020, spending rose accordingly, in line with the theory that these accumulated savings had been ‘forced’ and that this behavior could be characterized as ‘pent-up’ or delayed spending (See, for instance: BEA 2023, Byrne et al. 2020; ONS 2023). In addition, the continuation of accommodative fiscal and monetary policy during Phase II throughout all three economies, most notably in the form of ongoing QE, the \$1.9 trillion American Rescue Plan, the €750 billion Next Generation EU Fund and the suspension of EU fiscal rules, further improved household and firm balance sheets from Phase II. Meanwhile, housing and stock market revivals increased wealth for some. Altogether, these conditions drove an initial ‘overheating’ of the three economies, in which aggregate demand could not be met by supply.

One important consequence of this excess demand was a rise in commodity prices. Bernanke and Blanchard (2023) calculate the first principal component of the 19 commodity price series included in the Commodity Research Bureau (CRB) commodity price index. Essentially, this component can be thought of as a common trend shared by all 19 commodities, which the authors find explains two-thirds of the overall series’ variance since 1990. The common trend component in these price series steepened between 2020 Q2 and 2021 Q2, most probably resulting from the large increase in demand following the Phase II economic reopening⁴. The resulting increase in commodity prices was significant. For example, by 2021Q3, energy prices were 50% above their 2019 level (Celasun et al. 2022) and already contributing a significant amount to CPI inflation (Figure 6).

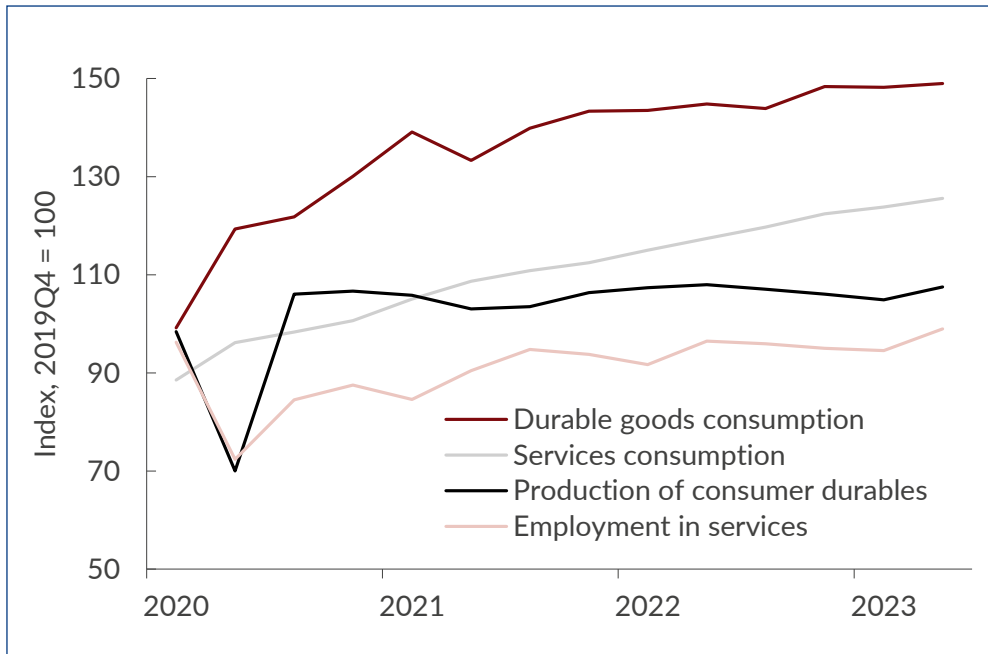
⁴ Given that the CRB index spans commodities ranging from metals to food, changes in their supply between 2020 Q2 and 2021 Q2 were most likely idiosyncratic. Bernanke and Blanchard (2023) therefore interpret the increased common trend as reflecting a global aggregate demand shock in this time.

Figure 3. Some supply and demand indicators

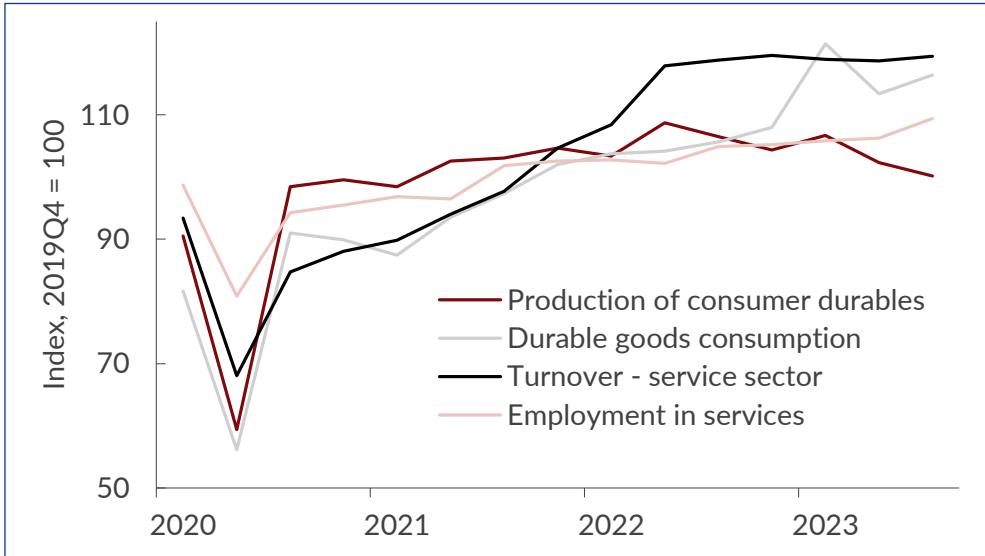
a) UK



b) US



c) Spain



Source: Datastream, OECD

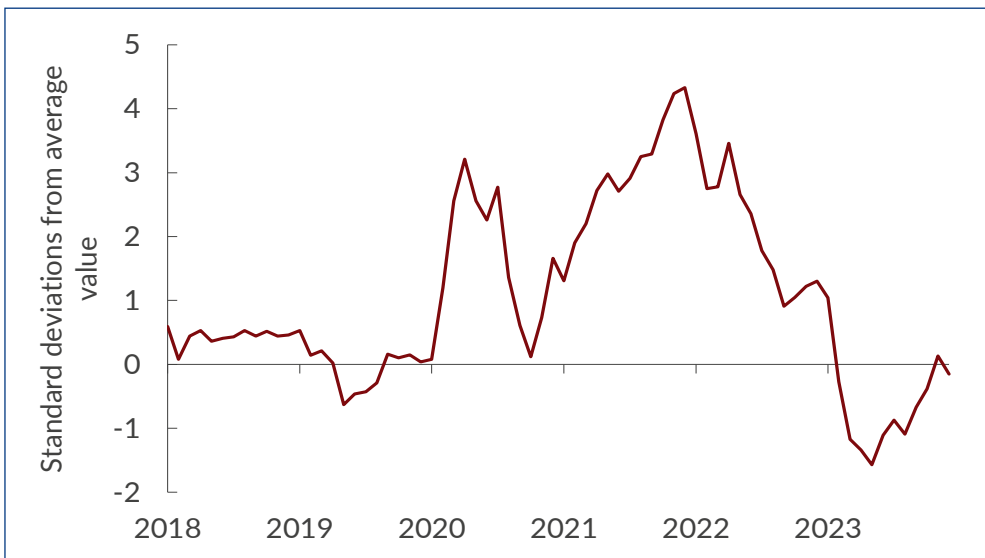
Notes: 'Durable goods consumption' in all three charts refers to household final consumption of durable goods; the same applies to 'services consumption' for the UK and US. In the absence of EA data, I use Spain as an example. Due to missing Spanish data on final household consumption of services, I use an index of total turnover in the services sector.

Demand dynamics during the economic re-opening phase were further complicated by sectoral demand shifts. Consumer behavior changed during the first half of 2020 in response to the pandemic-related economic shutdown, and some of these behavioral changes – such as increased remote working or decreased spending in services – may have proven persistent. Spending data from Phase II suggest that stay-at-home restrictions induced lifestyle changes, such as an increased preference for lockdown-friendly hobbies like gardening or contact-non-intensive travel (cars), as seen by increased spending in related goods alongside decreased spending in similar contact-intensive industries (ONS 2022; Bernanke and Blanchard 2023). This type of sectoral demand concentration induced inflation because there was not a corresponding decrease in prices in the sectors experiencing decreased demand due to supply constraints facing both sectors. Figure 3 illustrates (in a simplified way) how a sharp rebound in durable goods consumption from the second half of 2020 onwards outpaced domestic production capacity as well as supply and demand for services (which was partially, if not fully, restricted during this phase). Once production capacity had been reached and inventories began to dwindle, goods shortages propelled price rises further.

Supply chain disruptions – or the hindering of a business' ability to receive, produce, ship, and sell their products – occurred during Phase I as a result of the partial economic shutdown, and re-emerged in Phase II, further aggravating supply and de-

mand mis-matches (Adriantomanga et al. 2023). As shown in figure 4, in late 2021, global supply chain disruptions were over 4 standard deviations above their historical average. These bottlenecks, such as increased shipping costs, delivery backlogs and reduced inventories, all contributed to rising prices in this period, even in industries that did not face huge demand increases or reduced labour supply. At their peak, supply chain issues may have contributed around 50% of the increase in manufacturing producer price inflation and some 2 percentage points to CPI inflation in 2021 in all three economies (Celasun et al. 2022; Gordon and Clark 2023; Haskel et al. 2023). Bernanke and Blanchard’s (2023) decomposition of the CRB price indices’ principal component suggests that the common trend in commodity prices steepened once again in the fourth quarter of 2021, likely due to this global negative supply shock.

Figure 4. Global supply chain pressure index



Source: Federal Reserve Bank of New York in National Institute Global Economic Outlook

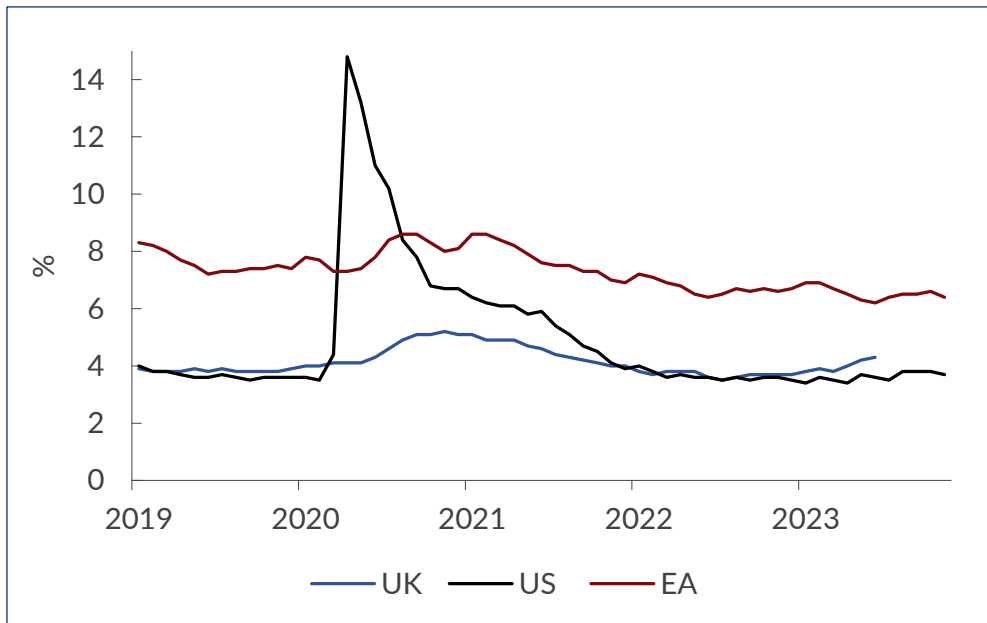
In the case of the semiconductor industry, for example, a large increase in demand for electronics during 2020 alongside work restrictions led to a scarcity of this input, which has no substitutes and a lengthy production process largely concentrated in Asia (LaBelle and Santacreu 2022). As a result of an inability to increase production capacity, supply chain disruptions emerged in industries that use semiconductors as a direct input in 2021. For instance, the demand increase for new cars (possibly driven by a newfound anti-contagion preference) could not be met due to the automobile industry’s reliance on semiconductors, leading inventories to fall to record lows and prices to spike, contributing significantly to inflation in the US in particular (Bernanke and Blanchard 2023). Dunn and Leibovici (2021) estimate that disruptions caused a 4 percentage point gap in the average price change between semiconductor-dependent

and non-dependent industries by September 2021 – where the former is calculated to account for 39% of total US manufacturing output. This semiconductor shortage had similar effects in the UK and EA, though at a smaller scale: the manufacturing component of producer price index (PPI) inflation were 6 and 10 percentage points higher in 2021Q2 than their 2017-2019 averages, in the UK and EA respectively, compared to 14 percentage points higher in the US (Celasun et al. 2022). All three economies have since announced policies in the form of the National Semiconductor Strategy (UK), European CHIPS Act and US CHIPS Act in a partial attempt to reduce domestic reliance on global supply chains in this industry. However, these types of policies, if successful, take some time to implement, indicating how difficult it can be for policymakers to ease such supply shocks in the medium-term.

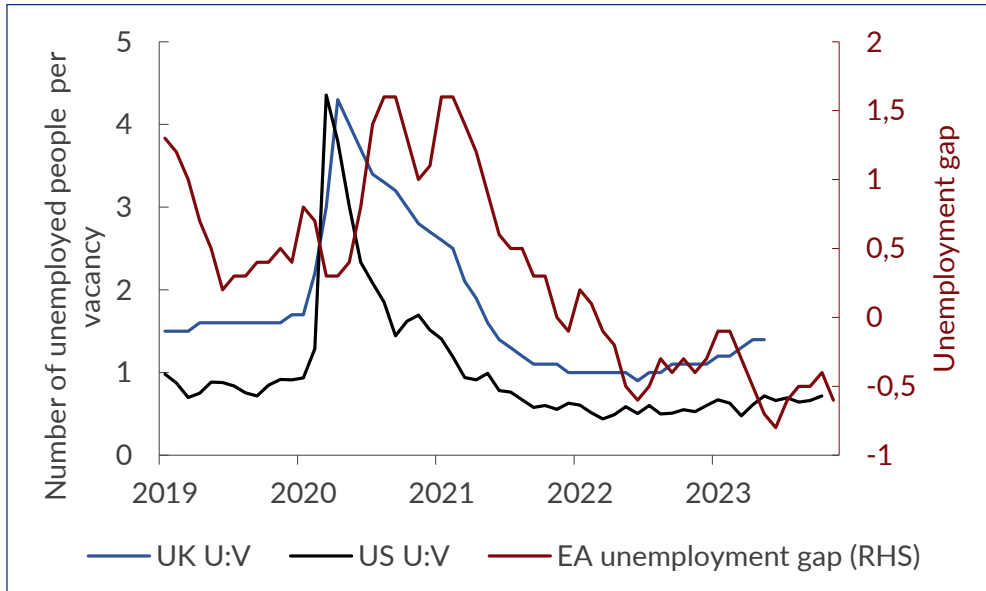
Labor markets also experienced demand and supply mis-matches in this period. Figure 5a illustrates how, during Phase II, unemployment rates fell back towards pre-Covid levels, most notably in the US, which had a very different labor market experience during Phase I relative to Europe. Nonetheless, weakened labor force participation - which may have resulted from factors such as anti-contagion preferences, an increase in long-term sickness, and discouragement following unemployment or furlough - decreased labor supply relative to labor demand, particularly in services industries (Celasun et al. 2022). Labor shortages were worst in the US, where around 40% of producers were reporting labor shortages in late 2021, compared to around 20% for the EA-19 in and 15% in the UK (Celasun et al. 2022; ONS 2021).

Figure 5. Labor market indicators

a) Unemployment rates



b) Tightness indicators



Sources: ONS, FRED, Eurostat, IMF, Author's calculations.

Notes: Due to data collection issues with the Labour Force Survey, the ONS has not published updated UK unemployment data since July. However, ONS experimental estimates of the unemployment rate suggest that it has not moved much since summer, and NIESR calculations also indicate that U:V has not moved much in this time (Bejarano Carbo 2024).

Unemployment rates alone do not convey the full post-Covid labor market story; however, measures such as the unemployment-to-vacancy ratio (U:V) in the US and UK, and the gap between the unemployment rate and its natural rate⁵ (U-U*) in the EA illustrate the extent to which labor market tightness increased, particularly during Phase II (Figure 5b). In the EA, unemployment has remained below the IMF's estimate of its natural level since 2022. In the UK and US, U:V fell below their respective 2017-2019 averages of 1.69 and 0.98 by June 2021, and have yet to recover. Figures 5a and 5b plot significant falls in U:V during the first half of 2021, despite unemployment rates not moving much during this time; we can therefore infer that the sudden increase in labor market tightness was driven by an increase in vacancies, possibly signalling that a higher search effort became required to fill positions⁶. Bernanke and Blanchard (2023) take this as a sign of a material deterioration of the efficiency of the employee-worker matching process. An intuitive way to think about this friction might be, for instance,

⁵ Following from Dao et al. (2023), I use the IMF's 2022 estimate of the natural rate of unemployment in the EA of 7.0 per cent to construct this 'unemployment gap' measure.

⁶ An equivalent way to conceptualise this is by noticing the upwards shift in the Beveridge curve, which plots the relationship between vacancy and unemployment rates, that has occurred since 2020 (Dao et al. 2023).

a substantial number of workers seeking to move away from a contact-intensive sector following furlough/unemployment due to an anti-contagion preference, requiring employers in this sector to increase their search intensity. Alternative interpretations include, for instance, digitalization reducing the cost of job search (enabling companies to maintain unfilled vacancies for extended periods), and economic uncertainty hindering employers' ability to identify a decrease in search-and-matching efficiency (See, e.g. Hensvik et al. 2021). Ultimately, a tightening in all three labor markets would amplify the external, energy-driven, inflationary shocks that occurred in Phase III in the form of 'second-round' effects.

While these goods and labor market mis-matches, exacerbated by supply chain disruptions, occurred in parallel across the three economies, from Phase II onwards we begin to see differences in these economies' dynamics, partly due to idiosyncrasies in policies implemented during Phase I. For instance, figure 3 depicts a notable difference between UK and US employment in services— most probably explained by the former's implementation of a generous furlough scheme to avoid the rise in unemployment seen in the latter. Most notably, the demand shock in the US in this phase was much larger than in the UK or EA. De Soyres et al. (2023) find that pandemic-related fiscal support boosted goods consumption during times of increased mobility but had no effect on the supply of goods, explaining why the US economy overheated more in this time compared to Europe. It is not just the case that fiscal packages were larger in the US, but also that they were targeted as demand stimuli rather than insurance mechanisms, as in Europe. At the same time, labor shortages in the US, which figure 3 depicts did not recover to pre-pandemic levels during Phase II despite a recovery in demand, generated significant inflation in the services sector. As shown in figure 6, inflation rose substantially more in the US during Phase II than in the Europe, with strong contributions from services.

Non-policy developments also caused divergences in these economies' macroeconomic dynamics during Phase II. For instance, the UK was hit strongly by Covid-19 variants towards the end of 2020, prompting a rise in stringency policies (Figure 2). Unlike the US and EA, in March 2021, mobility levels in the UK were comparable to those in March 2020 and nearly one in five private sector workers remained furloughed (Haskel et al. 2023), explaining the marked difference in real GDP trends between the UK, and the US and EA in this period (Figure 1b). This touches on a wider point that emerges from this paper's simplification of decomposing the post-Covid period into four phases: there was not just one lockdown period, but several, which were implemented distinctly over time in the three economies. However, in order to present a cross-country comparative analysis in a coherent way, this four-phase simplification is necessary. Indeed, despite many differences and nuances, overall, demand and supply shocks had counteracting effects on the recovery in real GDP during Phase II but moved inflation in the same direction for all three economies.

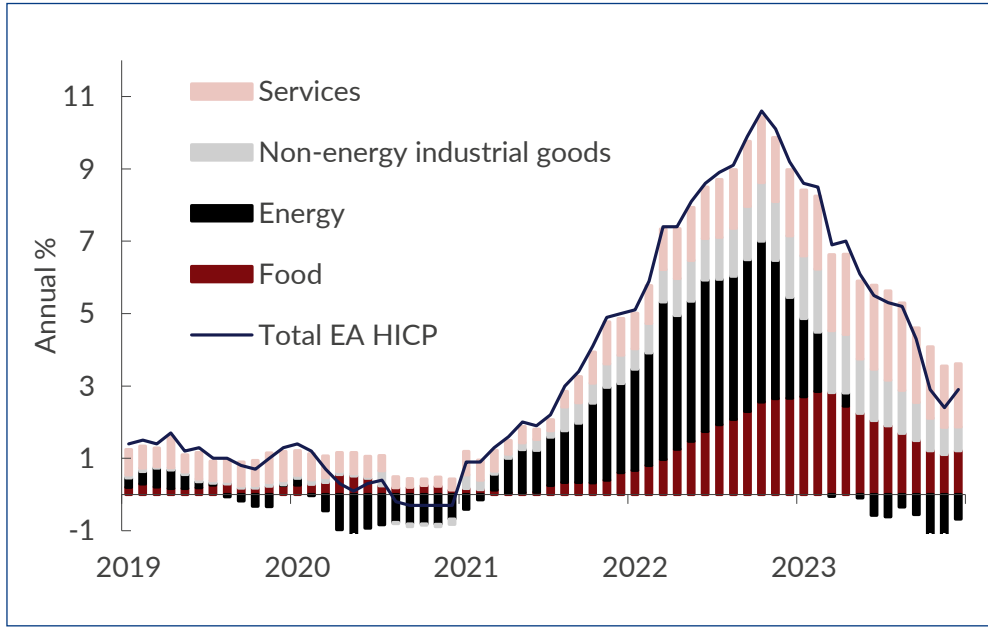
2.3. THE POST-REOPENING PHASE (2022 Q1 - 2023 Q1)

The economic effects of Russia's invasion of Ukraine in February 2022 were immediate. Following the implementation of sanctions on Russian gas and oil supplies, and given Ukraine's role as a key exporter of certain foods, energy and food prices skyrocketed from February onwards. Gas prices rose by 43% between February and March, peaking in August 2022 at over 14 times their March 2020 level; oil prices rose by 20% between February and March, peaking in June 2022 at nearly 3 times their March 2020 level (IMF 2023). At the same time, price rises in categories such as bread and cereals, and meat became noticeable contributors to CPI inflation within months. Figure 6 decomposes the contributions of different aggregates to monthly CPI inflation, illustrating the significant role of energy and food inflation during Phase III in the EA, UK and US. However, figure 6 also shows a large variance in the compositions of monthly CPI inflation among these economies. At their 2022 peak, energy and food price inflation explain about one third, one half, and two thirds of US, UK and EA CPI inflation, respectively. This variance is partly reflective of differences in items weightings in countries' CPI calculations and heterogeneous abilities to substitute away from Russian energy and Ukrainian food, but also partly a story of distinct shock compositions during this period.

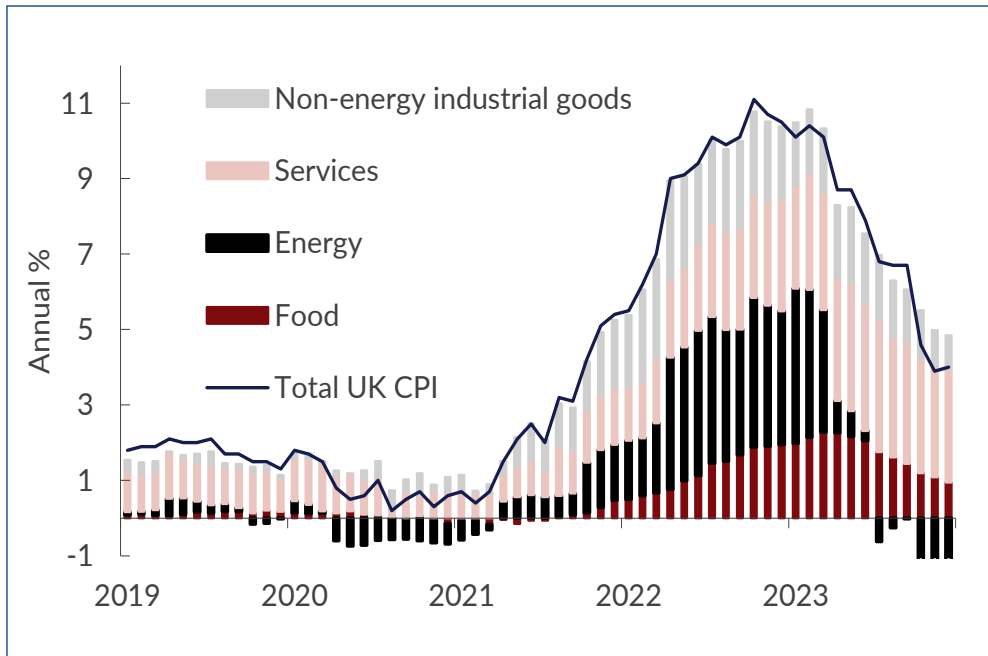
Bernanke and Blanchard (2023) build a model of wages, prices and inflation expectations to understand the drivers of inflation in the US. In their model, a temporary, but persistent, shock to food and energy prices leads to a rise in inflation as workers bargain for higher nominal wages to offset real income losses, firms increase prices to protect real margins, and inflation expectations rise. Separately, a shock to labor market tightness causes long-term inflationary pressure following an initial increase in inflation. The extent to which inflationary pressures are raised following these two types of shocks depends most importantly on the degree of labor market tightness, how well inflation expectations are anchored (determining whether a wage-price spiral ensues) and how rigid wages are (determining how prolonged the wage 'catch-up' episode becomes). They estimate their model based on US data to show that, while energy and food prices drove an inflationary impulse at the start of Phase III, from 2022Q3 a 'labor market tightness shock' largely explains US inflation (See: their figure 12). Haskel et al. (2023) replicate the Bernanke and Blanchard model in the UK context, also finding that the effect of energy price increases faded rather quickly and were replaced by food inflation, goods shortages and a labour market tightness shock as the key drivers of inflation from 2022Q2 onwards (See: their figure 14). Lastly, Dao et al. (2023) build a similar model to account for differences in EA and US inflation, finding that energy and food price shocks, and their pass-through to wages and profits ('second round effects'), can account for the bulk of CPI inflation in the EA during Phase III (See: their figure 14).

Figure 6: Contributions of components to monthly CPI inflation

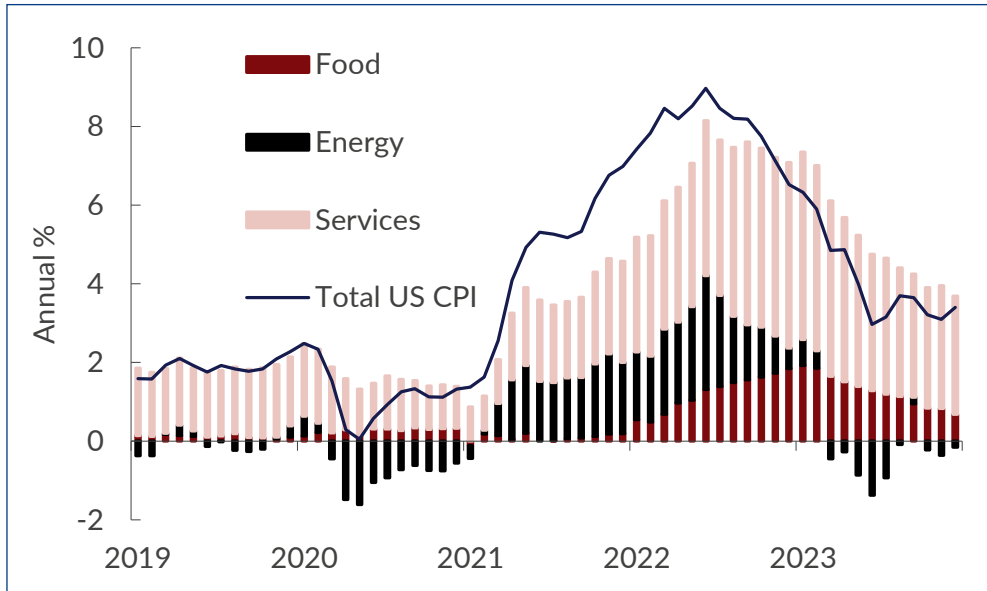
a) EA



b) UK



c) US



Sources: Eurostat, ONS, OECD, Author's calculations

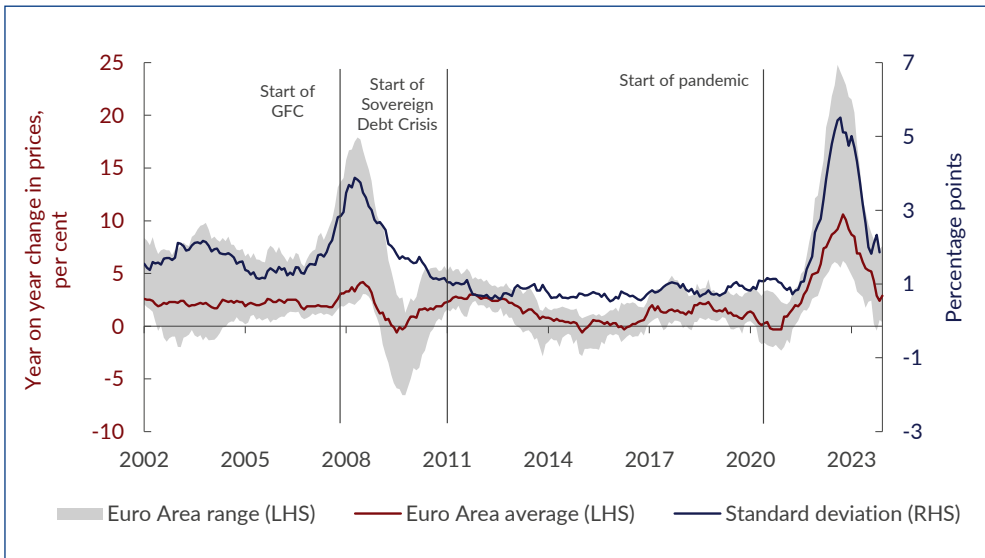
Notes: In all three charts, 'Food' refers to food and non-alcoholic beverages. The OECD does not publish the data on contributions of non-energy industrial goods to overall US CPI. For the EA, the harmonized index of consumer prices (HICP) is used.

Not only do the above papers provide insights into differences in the nature of inflation in these three economies during Phase III, they also help explain two common talking points that emerged in this time: fears of a wage-price spiral, and 'greedflation'. On the former, Bernanke and Blanchard provides a simple explanation as to why worries that a vicious cycle where wage rises would lead to price rises, and vice-versa, never materialised: inflation expectations have remained remarkably well-anchored throughout this inflationary shock. The greedflation story, or the notion that inflation has been driven by an increase in firms' profit, is shown by the above papers to partially explain 'second-round' inflation as one of several contributors to overall inflationary dynamics. It is true that the combination of a steep recovery in demand, supply and demand mismatches, and labor market tightening facilitated workers' bargaining power while simultaneously increasing firms' ability to pass on higher input costs during this post-reopening phase. Indeed, a theory by Weber and Wasner (2023) postulates that firms with market power experience temporary monopoly power following supply shocks, which can drive a 'seller's inflation'. That said, data on profit as a share of GDP, alongside evidence on the contributions of other factors, indicate that greedflation alone cannot explain inflationary dynamics during Phase III.

Finally, expansionary fiscal policies were implemented to mute the impacts of energy price increases, helping to dampen European households' experienced inflation.

Dao et al. (2023) estimate that in the EA, policies such as the EU Market Correction Mechanism gas price cap reduced CPI inflation by 2.2 percentage points in 2022, while in the UK, the similar Energy Price Guarantee reduced CPI inflation by some 2-3 percentage points over its lifetime (Dixon 2023). That said, fiscal support was often not sufficiently targeted to those who needed it the most - households at the bottom tail of the income distribution who spend a higher proportion of their budgets on energy. Idiosyncratic fiscal policies throughout Phases I-III alongside structural differences across countries generated an increased variance in CPI inflation rates within the EA, rendering the ECB's job even more difficult during this post-reopening phase (Figure 7). That said, it is encouraging that this dispersion narrowed during Phase IV.

Figure 7. Euro area inflation dispersion



Source: OECD and NIESR Calculations in National Institute Global Economic Outlook.

2.4. THE POST-ENERGY-SHOCK PHASE (2023 Q2 - PRESENT)

With the steep energy price increases ‘dropping out’ of the CPI inflation calculation in all three major economies in the first half of 2023, we have now entered a post-energy-shock phase (Figure 6). In December 2023, the annual rate of CPI inflation stood at 4.0%, 2.9% and 3.4%, in the UK, EA and US, respectively. Given that the recent downward trend in the headline rate of CPI inflation has been driven by volatile price movements, I turn to examining a variety of measures of underlying inflation. Indicators of underlying inflation help separate the signal (the ‘true’ underlying trend rate

of inflation) from the noise (volatile price movements). Understanding the underlying trend of inflation is essential for monetary policymakers, who typically do not respond to transient changes when setting interest rates.

It is important to analyze a variety of measures of underlying inflation as each gives you a distinct insight into inflationary dynamics. Two common statistical approaches for measuring underlying inflation are exclusion-based and trimming-based measures. Exclusion-based measures omit certain items from the price index when performing the CPI inflation calculation; for example, core CPI inflation excludes items such as food, energy, alcohol and tobacco because these components often face volatile price movements that might not cause a sustained change in the general price level. Equally, the services CPI inflation measure omits all goods from the basket. Trimming-based measures eliminate a percentage of items on both ends of the distribution of price changes in order to disregard outliers from the CPI inflation calculation. Another common indicator is the GDP deflator, which gives us a good sense of domestically-generated inflation.

Despite significant falls in the headline rate of CPI inflation, underlying inflationary pressures remain elevated. In December 2023, core CPI inflation was 5.1%, 3.4% and 3.9% in the UK, EA and US, respectively (Figure 1a). Core inflation being higher than the headline figure aligns with the story told in figure 6 that recent falls in CPI inflation have been partially driven by downward movements in energy prices, alongside an easing in food price inflation. Further, this measure indicates that the underlying inflationary pressures that central banks target are higher than those indicated by the headline CPI figures. To elaborate, the UK and EA in particular import a substantial amount of their food and energy, but monetary policy can really only influence domestically-generated inflation. In fact, the latest data indicate that in the third quarter of 2023, the GDP deflator grew on the year by 8.4%, 5.8% and 3.3% in the UK, EA and US, respectively. Additionally, the annual rate of services inflation – which is most heavily influenced by labor costs - was 6.4%, 4.0% and 5.3% in December 2023 in the UK, EA, and US, respectively. Given that labor markets remain tight by historical standards, it is possible that we will continue to see elevated services inflation drive the headline CPI rate in the coming months (Figure 6). Altogether, these measures indicate that the underlying inflationary trend that central banks target is higher than that suggested by the headline rate of CPI, and that inflationary pressures remain embedded in domestic economies.

These elevated inflationary pressures are also broad-based. For instance, the Federal Reserve Bank of Cleveland's trimmed-mean CPI inflation rate omits the 8% most volatile price increases and decreases in the distribution of price changes, finding that in December 2023, this figure was 3.9% in the US. Trimming all price changes except for at the 50th percentile yields the median CPI, which in the US was at 5.1% in December. NIESR's measure of trimmed-mean inflation (omitting the 5% largest price increases and decreases) in the UK was 5.5% in December. In the EA, 51.3% of CPI basket components had an inflation rate above 4% in November (Baudchon et al. 2023). Thus, while the supply and demand shocks that drove inflationary impulses during Phases I-III have largely faded out, their pass-through or permeation into the general price lev-

el, both through goods and services, may continue to generate persistence in inflation (e.g., it may take longer than generally expected to stabilize fully at the conventional 2% target).

The post-energy shock phase is also characterized by the observed transmission of monetary tightening throughout the macroeconomy. In the EA and UK, subdued economic growth and tightened financial conditions are particularly reflective of the cumulative effects of monetary policy. Annual GDP growth in both economies will no doubt have been lackluster by historical standards in 2023, while survey data such as Purchasing Manager's Indices indicate that their manufacturing sectors have been declining since 2021 Q3 and their services sectors have not sustained growth since 2022 Q2. The TIGER Financial Activity Indicator - which covers a range of variables such as equity market, credit growth and volatility indices - indicates that financial activity in the UK, US and EA has been subdued throughout 2022 and 2023 following significant growth during 2021 (Brookings Institution 2023). Despite similar signs of financial tightening in the US, American economic growth surprised forecasters in 2023, proving to be rather strong; in fact, the December 2023 Blue Chip forecast for annual US GDP growth in 2023 was 2.6%, revised upwards from a previous forecast of -0.1% in December 2022 (CEA 2023). However, the effects of monetary tightening will take longer to manifest themselves in the still-tight labor markets in the US and UK, so we will likely see more policy impact throughout 2024.

Therefore, while it is positive that headline CPI has seen significant falls over the course of Phase IV and most measures of underlying inflation have already peaked, it remains the case that inflationary pressures remain elevated relative to target, domestically embedded and broad-based. That said, there is plenty of evidence that monetary policy tightening has propagated through the macroeconomy. Taken together, these characteristics suggest that we still have some way to go before inflationary pressures are fully tamed, but we can expect to return to target in the medium-term.

3. THE POST-COVID MONETARY POLICY RESPONSE

The BoE, Fed and ECB have embarked on the most aggressive global monetary tightening cycle since the early 1990s. Having established the nature of different inflationary surges since the onset of the Covid-19 pandemic, we can now attempt a broad assessment of central banks' monetary policy response.

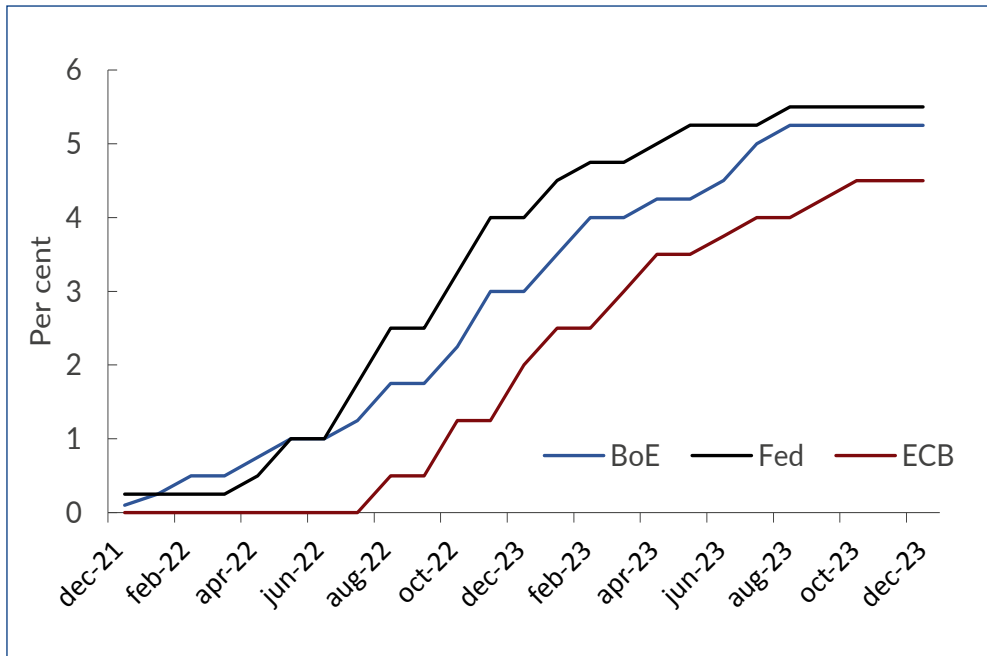
Given that inflationary pressures in this episode have been at least partially demand-driven in all three economies, the monetary tightening cycle can be safely assumed necessary - an evaluation which has been contested by some authors in the US context in particular, arguing that inflation has instead been supply-driven or microeconomic in origins (See e.g., Stiglitz and Regmi 2022). However, the composition of demand-side inflationary pressures has been distinct across the three economies, requiring slight differences in monetary policy responses and timing among their central banks (though overall, monetary tightening has occurred in concert, which is to some

degree reflective of spillovers). In the US, for instance, demand-side inflation in Phase II was far more characteristic of a general overheating, requiring the Fed to conduct more aggressive hikes than its counterparts at the start of its cycle (Figure 8a). On the other hand, in the EA, core CPI did not rise much past historical levels until Phase III, partly explaining why the ECB's tightening cycle began later than its counterparts' (Figures 1a, 8a).

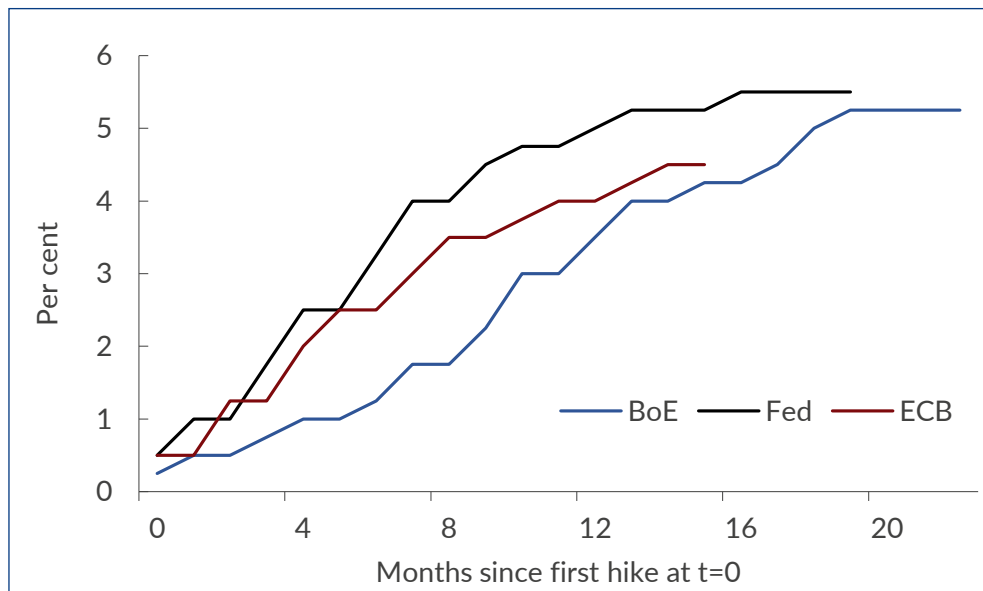
With the obvious benefit of hindsight, it is possible that central banks were 'behind the curve,' or arriving late to tighten monetary policy during the post-Covid inflationary surge. As shown in figure 8a, the BoE, Fed and ECB did not begin their interest rate hikes until December 2021, March 2022, and July 2022, respectively, when their CPI inflation rates stood at 5.4%, 8.5%, 8.9% and their core CPI inflation rates at 3.8%, 6.5%, and 5.1%. Evidently, central banks would not have been expected to start tightening policy when the first inflationary surge signs emerged: the starting conditions (i.e., emerging from a deep, unprecedented recession) alongside central banks' remits (e.g., dual mandates and secondary objectives), and governance and decision-making processes need to be considered. Additionally, it is true that fiscal policy was at times better placed to offset certain price rises in this episode, such as in the form of energy price caps in Europe. Still, a more decisive monetary policy response to early signs of general economic overheating and of distorted price/wage setting could have made taming inflation less costly.

Figure 8. Central banks' post-Covid monetary tightening

a) Interest rate comparison



b) Speed of monetary tightening cycle



Sources: BoE, Fed, ECB, Author's calculations.

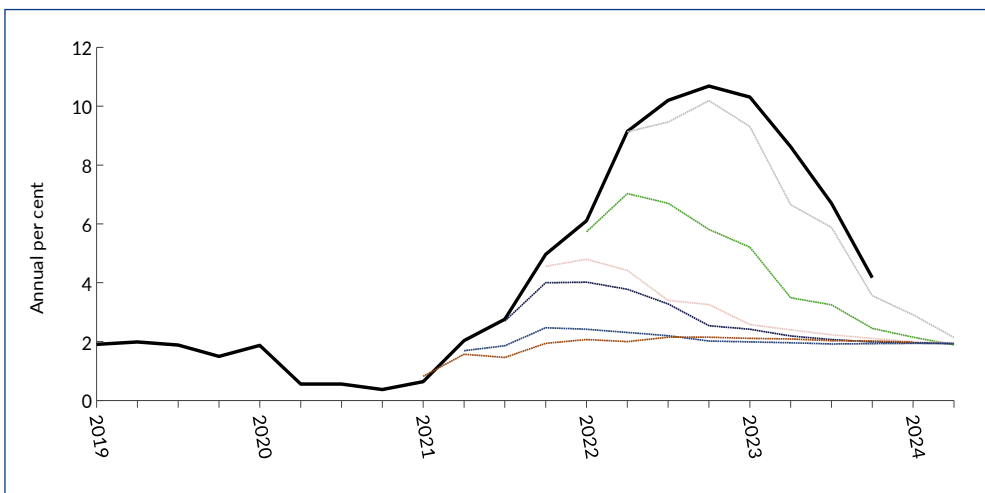
To illustrate this point on decisive action in a very simplified way, one can observe the correlation between the speed of monetary tightening (figure 8b), and CPI inflation as well as underlying inflation rates (Figures 1a, 6). Though the BoE was the first central bank to begin its interest rate cycle (figure 8a), when we plot rate hikes by months since the start of the tightening cycle (figure 8b), the BoE appears to have conducted the slowest monetary tightening cycle of our three central banks. As we stand, UK headline CPI inflation and all measures of underlying inflation are above those of the US and EA. On the other hand, the ECB's very late but decisive tightening cycle may have contributed to decreased persistence in headline CPI inflation. Of course, these are two very different economies which have experienced different inflationary surges: as noted above, for instance, UK inflation during Phase III was partially driven by a labor market tightness shock, while in Europe, volatile but transitory energy and food price shocks were the biggest contributors. Moreover, the cost for the BoE to raise interest rates to the level needed to bring inflation down to target by 2023 would have been incredibly high; Tenreiro (2023) estimates that this would have implied interest rates peaking at around 9.5% in 2022. Additionally, earlier rate rises in the UK might have meant earlier rises in mortgage rates, which would have aggravated the negative effects of steep energy and food price increases on households. However, whether central banks were too slow to react in this time remains an open and contested question even when taking these nuances into account.

It must be acknowledged that the need to react earlier to inflationary impulses was

not clear in real-time, especially under the conditions of radical uncertainty in which policymakers found themselves. Nevertheless, central banks starting their tightening cycles behind the curve is partially a story of forecast failure, as defined by Clements and Hendry to occur when a forecast is “significantly less accurate than expected given how well the model explains the data over the past, or compared to an earlier forecast record” (2008, pg. 2). Figure 9 illustrates the ECB, BoE and Fed’s inflation forecasts compared against the data outturn. These charts are sometimes called ‘hedgehog’ charts because of their resemblance to the spikes protruding from a hedgehog’s back; such charts are indicative of a failure to update information, causing the same type of error in consecutive forecasts. It is clear that we cannot blame forecasts for not foreseeing unpredictable events, from the Covid shock to Russia’s invasion of Ukraine. That said, economists often refer to the famous saying by George E.P Box that “all [economic] models are wrong, but some are useful” to remind us that forecasts are only as good as their ability to inform forecasters or fulfill other explicit objectives (such as central bank forecasts’ role as vehicles for communicating monetary policy to the public). By this metric, it can be argued that central bankers did not have the adequate tools to react in time to inflationary developments during Phases II and III. While this can be partially attributed to other factors, namely high uncertainty, it remains the case that forecasts consistently under-predicted inflationary dynamics during this episode. Consequently, an important takeaway for central bankers emerging from this inflationary period has been the re-assessment of how best to utilize modelling capabilities during times of such deep uncertainty – as seen for instance by the commissioning of the Bernanke Review at the BoE and the announced monetary policy strategy review by the ECB expected in 2025.

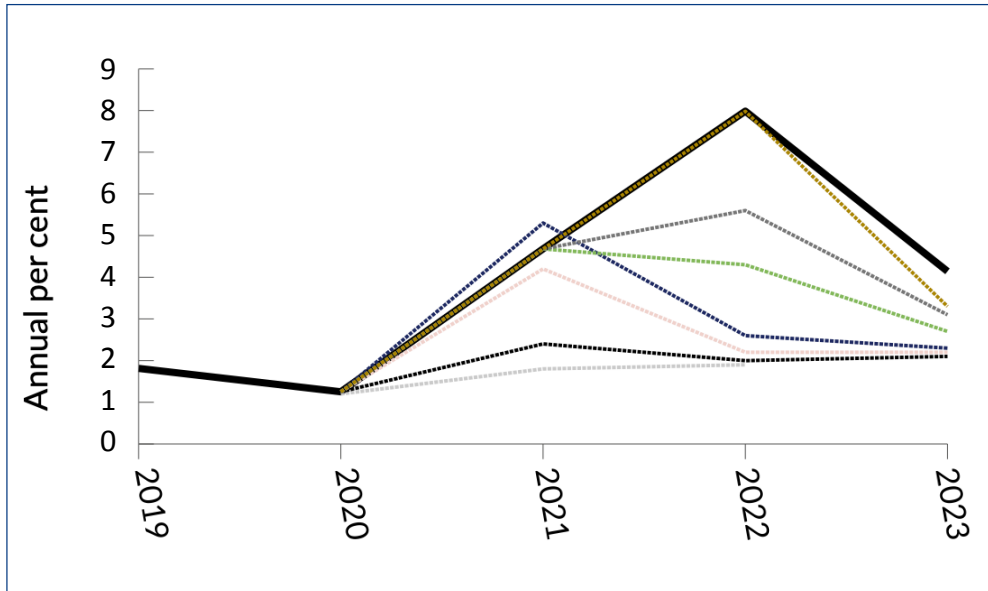
Figure 9. Central banks’ inflation forecasts (dotted) compared against data outturns (solid).

a) UK Monetary Policy Committee CPI forecasts

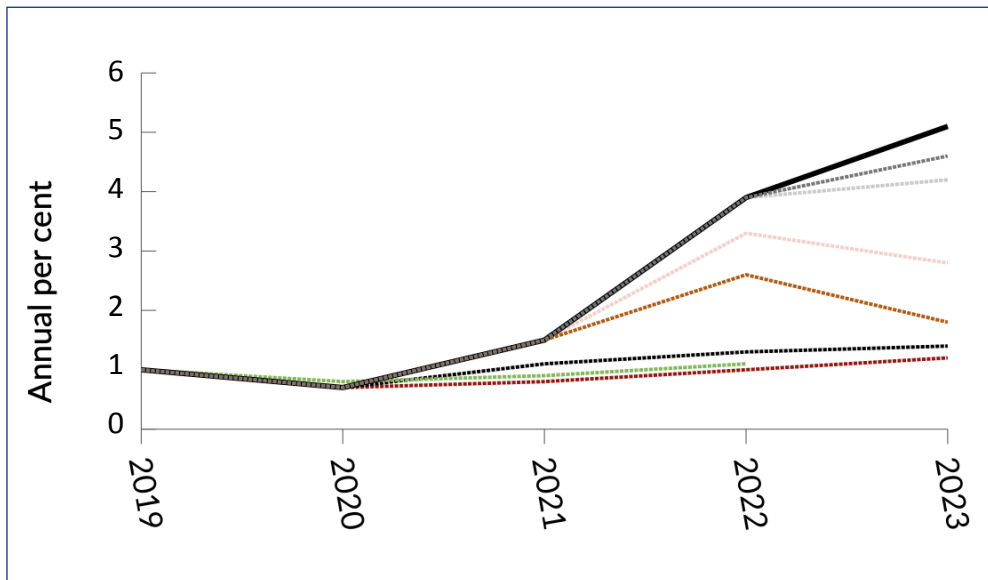


Notes: MPC modal CPI forecast conditioned on market-implied path of interest rates (rather than constant-interest rate path)

b) FOMC PCE forecasts



c) ECB staff CPI excl. food and energy forecasts



Sources: NiGEM database, BoE, Fed, ECB.

Notes: The MPC forecasts represent select quarterly modal CPI forecasts conditioned on the market-implied path of interest rates. The FOMC Personal Consumer Expenditures (PCE) inflation forecasts represent select median forecasts reported in Summary of Economic Projections. The ECB staff projections are only available for median forecasts of CPI inflation excluding food and energy.

4. CONCLUSIONS

The nature of the various post-Covid inflationary surprises has evolved over time, and differently in the three economies considered in this paper. The UK, US, and EA all experienced a partial economic shutdown and a correspondingly steep loss in GDP at the onset of the Covid-19 pandemic. However, divergent contagion rates, differences in the breadth, magnitude and composition of fiscal and monetary policy support, and, ultimately, structural differences in their economies, led to vastly different starting conditions for the inflationary impulses that would emerge from the second half of 2020 onwards. During this first phase, negative supply and demand shocks were jointly disinflationary. From 2020 Q3 to 2021 Q4, general overheating associated with economic reopening and fiscal stimuli, supply and demand mismatches, and supply chain disruptions all drove inflationary surges, particularly in the US. From 2022 Q1 to 2023 Q1, energy and food price increases following Russia's invasion of Ukraine led to large increases in inflation in all three economies, particularly in Europe, while labor market tightness shocks generated significant wage and price pressure in the US and UK. During Phases II and III, these conflicting positive demand and negative supply shocks were jointly inflationary. Since 2023 Q1, energy price decreases have facilitated significant falls in headline CPI inflation rates in the three economies while the cumulative effects of the global monetary tightening cycle have materialized.

We have now likely reached the end of this post-Covid global monetary policy tightening cycle. As we stand, underlying inflationary pressures remain elevated, domestically embedded and broad-based by historical standards; however, there is clear evidence that monetary tightening has propagated throughout the macroeconomy and inflation can be expected to return to target in the medium-term. In that sense, central banks have done enough to control inflation, though with the benefit of hindsight, earlier action might have reduced the costs of achieving price stability.

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ECB MONETARY POLICY IN 2023 AND BEYOND: MUCH MORE THAN INTEREST RATES

SOFÍA RODRÍGUEZ RICO^{1,2}

ABSTRACT

In 2023, the ECB has been able to implement a substantial increase in its key interest rates, a reduction in the size of its balance sheet and a change in the remuneration of minimum reserve requirements without major shocks in terms of economic growth and financial stability. However, it is reasonable to think that the full impact of these measures has not yet been observed and that it is too early to assess the plethora of interactions between variables triggered by these decisions. In particular, QT is a complex process, not only because of the interactions between monetary policy and fiscal policy in a context of reduced fiscal space in the eurozone and fragmentation. It is also because of the difficulties of estimating what the structural demand for liquidity by credit institutions is and how it will evolve. These are not minor issues and will need to be taken into account when deciding on the size of the balance sheet in 2024 and what the ECB's new operational framework will be.

Going forward, the banking sector will have to operate in an environment with less liquidity and smaller excess reserves. However, QT does not operate as an inverse phenomenon to QE as credit institutions have a limited capacity to hold risk in their balance sheet and it is difficult to estimate their structural demand for high-quality liquid assets and how it is likely to evolve and their preference for holding reserves at the central bank.

Banks have greater liquidity needs than they did in the past due to regulatory requirements implemented over the past decade. In addition, the environment of economic and regulatory uncertainty has contributed to an increase in banks' risk aversion and to their preference for the accumulation of reserves. Moreover, banks' liquidity needs have become more unpredictable. The functioning of alternative

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sources of liquidity to the ECB is not appropriate, the stability of banking deposits is more doubtful in digital environments, and liquidity is unevenly distributed at the regional level. In terms of tail risk scenarios, an overly tight level of reserves could cause problems in individual institutions that the system is not prepared to digest, since regulatory liquidity ratios present design problems and the institutional architecture for resolution of financial institutions in the eurozone is incomplete.

KEY WORDS: Liquidity, quantitative tightening (QT), minimum reserve requirement (MRR), excess reserves, financial dominance, monetary policy, liquidity regulation, HQLA.

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ECB monetary policy in 2023 and beyond: much more than interest rates

Despite the importance of the ECB's recent increases its key interest rates³ – outstanding both in terms of their size and speed – the decisions taken in 2023 on the size of its balance sheet and the minimum reserve requirements, and the discussions on the ECB's new operational framework are no less relevant to the future of the economy and financial stability, nor are they, in essence, of a different nature.

On March 1st 2023, the ECB began a reduction in its asset holdings, quantitative tightening (QT), after eight years of balance sheet expansion. This article aims to reflect on what has happened over the past year in terms of the ECB's balance sheet policy and the outlook ahead, with an emphasis on the implications of QT for bank liquidity. The latter in a context in which the structural demand for high-quality liquid assets and the preference of credit institutions to hold reserves at the central bank is greater and more unpredictable than before the ECB began expanding its balance sheet.

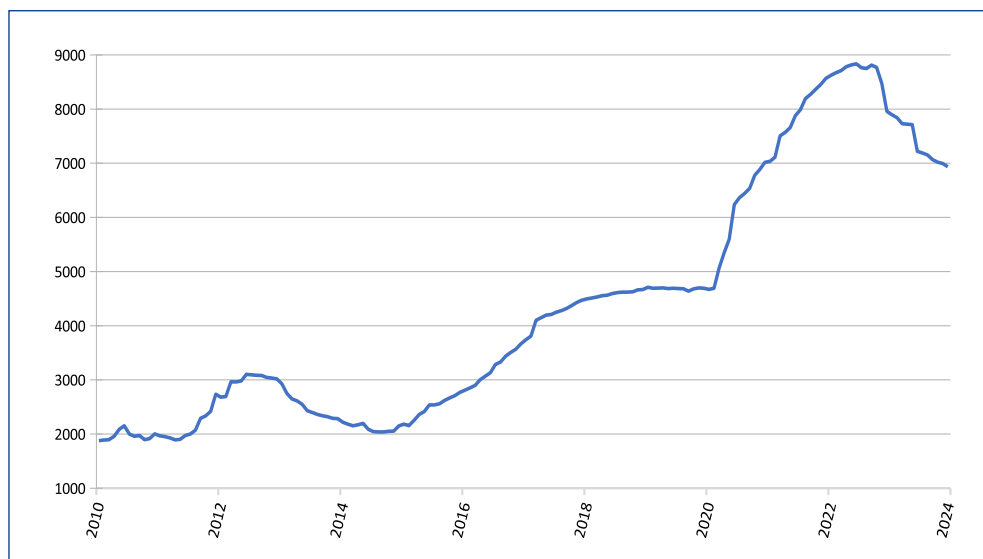
Section 1 reviews the ECB's monetary policy decisions in 2023. Section 2 then analyses the liquidity needs of credit institutions, the difficulties surrounding their correct estimation and the role of a large base of excess reserves as guarantor of financial stability. The next section, Section 3, sets out some general reflections on the optimal size of the ECB's balance sheet and the ECB's new operational framework. Section 4 reviews the discussion on the minimum reserve requirements. Section 5 then discusses the interactions of QT with fiscal policy. Finally, Section 6 concludes with a reflection on the future trend for QT and some structural problems that need to be addressed as the reduction of the ECB's balance sheet proceeds.

³ For the sake of simplicity in this article we use the term ECB to refer to the Eurosystem. The Eurosystem comprises the ECB and the national central banks of all eurozone countries.

1. THE ECB'S MONETARY POLICY IN 2023: RECORD HIGH KEY RATES, BALANCE SHEET REDUCTION, AND CHANGES IN RESERVE REMUNERATION.

In the wake of the global financial crisis, the European Central Bank (ECB) faced an economic environment dominated by a contraction of credit and deflationary risks. In this context, the central bank began to carry out its fixed-rate and full allotment refinancing operations, reduced the interest rate of the marginal deposit facility to negative levels in 2014, for the first time in history, implemented special long-term refinancing operations linked to bank lending to the real economy (TLTROs) and initiated a financial asset purchase programme, which – with the pandemic – was accompanied by another one (PEPP). As a result, the size of the ECB's balance sheet increased to record highs.

Graph 1. ECB balance sheet (Billion euros)



Source: Refinitiv.

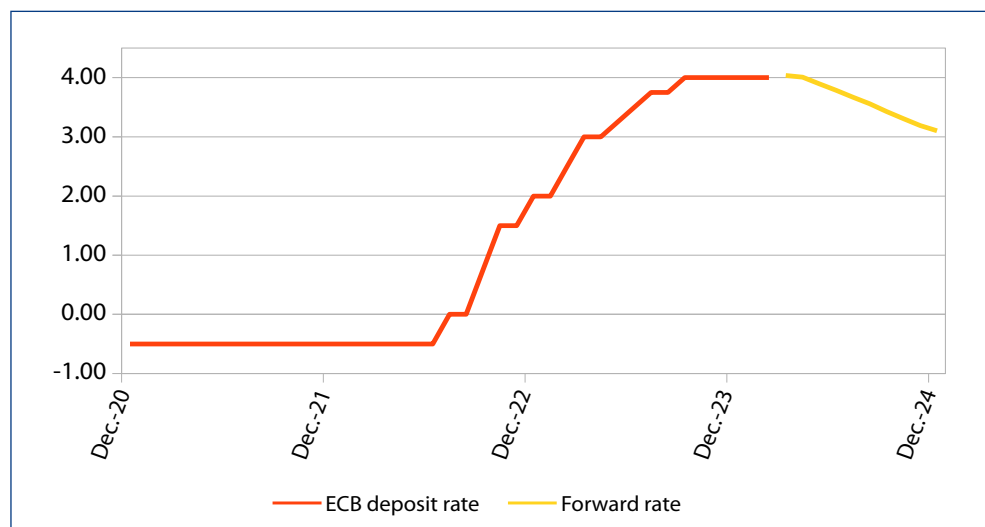
Inflation acquired increasing prominence in 2021 and became one of the main topics of discussion globally. A range of price indicators from consumer prices to production and import prices rose sharply. Inflation clearly surprised consensus expectations to the upside, reaching extremely high rates in some cases. In addition, the pick-up in inflation was also more permanent than had been expected after the pandemic, influenced, among other factors, by problems in global production chains and the energy crisis, following Russia's invasion of Ukraine.

Over the past two years, the ECB has made a sharp shift in monetary policy, and in 2023 monetary tightening was very substantial, both due to rate hikes and as well as

balance sheet reduction by the ECB. This had a strong impact on credit conditions in the eurozone, according to the ECB's bank lending survey.

In terms of key interest rates, the ECB started the cycle of interest rate hikes in July 2022 and increased the marginal deposit facility rate by 450 basis points (bps) to an all-time high in September 2023 (4.00%). Never before has the central bank raised rates so much in such a short time. Since September 2023, the ECB has kept interest rates unchanged, against a backdrop of economic fragility and inflation moderation. In relation to a potential future u-turn in key interest rates, following the ECB's monetary policy meeting in December 2023, the argument by C. Lagarde, president of the ECB, and of other members of the governing board continued to be focused on not letting their guard down against inflation and on waiting to see how indicators evolve in the coming months, especially those related to domestic inflation. However, at the end of 2023, market forward rates were factoring in that the ECB will implement a change of cycle in key rates in 2024 and cut the marginal deposit facility rate, starting in April, by just over 150 bps in 2024. In fact, the market sees some likelihood that the cutback cycle will start as early as March 2024.

Graph 2. ECB deposit rate and forward rates (%)

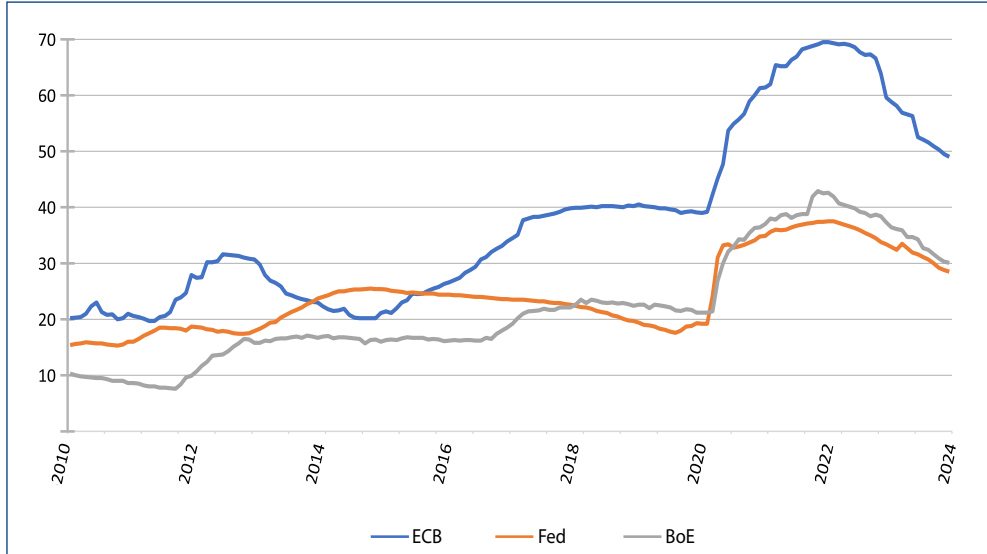


Source: Refinitiv.

The ECB's balance sheet reached an all-time high in June 2022 (€8.836 trillion). Since then, it has fallen by almost 21%, although it remains at historically high levels. Even if the comparison is not homogeneous, this balance sheet reduction is, proportionally, somewhat more aggressive than the ones carried out by other central banks. Thus, for example, the Bank of England (BoE), which started this process earlier, has so far reduced its balance sheet by 15% from its peak, while the US Federal Reserve

has reduced its balance sheet by 14%, due to the emergency measures it had to implement in the face of liquidity problems of domestic regional banks in March 2023.

Graph 3. ECB, Fed and BoE balance sheets (% of GDP)



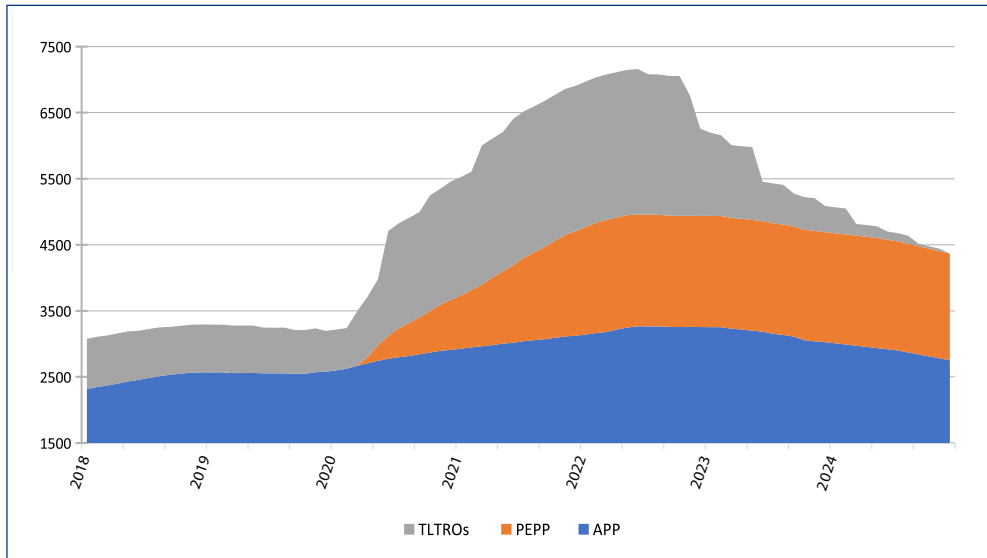
Source: Refinitiv.

The main driver of the ECB's balance sheet reduction so far has been the repayment of liquidity that was injected through Targeted Longer-Term Refinancing Operations (TLTROs III) as these have come to maturity. Through these operations, €2.34 trillion were injected, of which only about €454 billion remain to be repaid, half of which falls due in March 2024. The last tranche will mature at the end of 2024.

Another aspect that has influenced the fall of the ECB's balance sheet is the start of the QT of the main asset purchase programme (APP). The ECB started QT in March 2023, ceasing to reinvest part of the maturities of the assets of this programme. From July 2023, the ECB accelerated QT, ceasing to reinvest all maturities. This way, up to November 2023, the central bank reduced its bond portfolio by €214 billion. As for the Asset Purchase Programme implemented during the pandemic (PEPP), the ECB indicated in December 2023 its intention to stop reinvesting almost half of the maturities of this programme in the second half of 2024. In addition, the central bank signalled that it would stop fully reinvesting PEPP maturities by the end of 2024.

Looking ahead to 2024, the decline in the ECB's balance sheet is expected to continue to be led by TLTRO III maturities (€454 billion), followed by the APP QT (which will drain around €345 billion) and the PEPP QT (around €45 billion). To date, no member of the central bank has been in favour of actively selling the assets purchased to accelerate the process of reducing the balance sheet.

Graph 4. TLTROs and asset purchase programs (APP and PEPP) of the ECB (Billion euros).



Source: Refinitiv.

As part of its monetary policy normalisation, the ECB has also been introducing changes to the remuneration of certain items of its liabilities in order to ensure the effective conveying of its decisions on key interest rates to the money markets.

In July 2023, the ECB announced that it was no longer remunerating Minimum Reserve Requirements (MRR), which are funds that credit institutions must hold with the central bank on a mandatory basis and is liquidity that cannot be used for any other purpose. Between the end of 2022 and July 2023, minimum reserve requirements were remunerated at the marginal deposit rate, but historically they had been remunerated at the rate of the ECB's main refinancing operations. In the same decision in July 2023, the ECB decided to maintain the minimum reserve requirements at 1%. This percentage is calculated on a series of liabilities of banks, mainly customer deposits.

The impact of the ECB's monetary policy decisions is already being felt. Inflation has been surprising to the downside in the latter part of 2023, in a context of falling bank credit and fragile economic growth. In fact, the euro area will likely be teetering on the brink of a technical recession by the fourth quarter of 2023. In terms of financial stability, and despite the major shift in its monetary policy and the episodes surrounding regional banks in the US in March, capital markets in 2023 have not been involved in any systemic turmoil. Furthermore, to date, country risk premiums in the euro area have remained contained and the risks of capital market fragmentation appear limited, in line with what Lagarde stated at the press conference of the ECB meeting in December 2023.

In any case, one of the key questions remains how far the ECB can go in reducing its balance sheet. There is a high level of uncertainty regarding the impacts of balance sheet policies on the banking system's room for manoeuvre and liquidity management and, among other issues, its ability to continue to comply with regulatory requirements. The impacts on the sovereign debt market are also very significant. As the PEPP QT progresses in the second half of 2024, the pressure on sovereigns to redirect their public accounts will increase and then the Transmission Protection Instrument (TPI) of monetary policy will become a priori the only available emergency instrument in the face of unwanted or disorderly market dynamics that may affect public debt. Ultimately, the ECB's balance sheet policy is particularly determined by the ability to reconcile the objective of price stability with that of financial stability and the need to pay attention to interdependencies with fiscal policy.

2. THE IMPLICATIONS OF THE REDUCTION IN THE ECB'S BALANCE SHEET FOR BANKING LIQUIDITY

The balances that credit institutions hold with the central bank are often referred to as “reserves at the central bank”.

Some of these balances are mandatory in nature. Credit institutions in the euro area are required to hold a certain amount of funds in their current accounts at the central bank. These funds are called “minimum reserve requirements” and is liquidity that institutions cannot use to meet regulatory ratios, nor for other purposes. These minimum reserve requirements are calculated as 1% of specific liabilities on their balance sheets, mainly customer deposits and debt securities with maturities of up to two years.

The balances that credit institutions hold deposited with the central bank in excess of the required reserves are known as “excess reserves”⁴. These excess reserves are usually deposited in the ECB's balance sheet item called the marginal deposit facility⁵, which is remunerated at a specific interest rate (the interest rate of the marginal deposit facility in December 2023 was 4.00%).

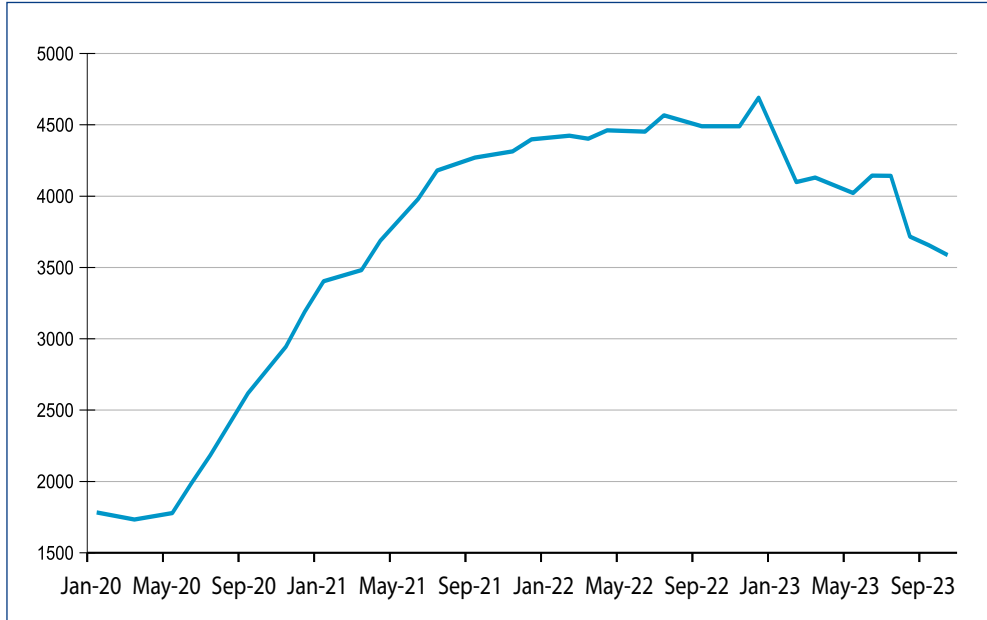
Currently, minimum reserve requirements account for 4% of total Eurosystem reserves, while excess reserves account for 96%. Excess reserves expansion stopped in September 2023, when they reached an all-time high of €4.807 billion.

The current large amount of excess reserves of credit institutions in the euro area mainly comprises the counterparty on the central bank's balance sheet to the asset purchase programmes and to the long-term refinancing operations with banks – (T) LTROS – carried out by the ECB with its balance sheet expansion in the past decade.

⁴ The ECB refers to excess reserves as “excess liquidity”, although the name should not lead one to assume that it is necessarily liquidity that the system can do without.

⁵ In fact, the account is located in the corresponding national central bank of the Eurosystem.

Graph 5. Excess reserves and deposit facility (Billion euros)



Source: ECB.

Looking ahead, one must remember that QT does not operate as a strictly inverse phenomenon to QE as credit institutions are constrained in their ability to hold risk in their balance sheet and it is difficult to estimate what their structural demand for high-quality liquid assets and their preference for holding reserves at the central bank is and how it will evolve in the future. In any case, it seems clear that the structural demand for liquidity and reserves from credit institutions is greater and more unpredictable than it was before the ECB's balance sheet expansion began, and not only due to regulatory issues.

Banks need more room for manoeuvre in liquidity management than they did in the past for a number of reasons, and excess reserves play an essential role in managing this. It is true that, after operating in the opposite direction for many years, the remuneration of excess reserves has been a source of income for credit institutions in recent quarters. However, the preference shown by banks for excess reserves over other high-quality and liquid assets (HQLAs) is not driven by the search for yield, but is largely driven by risk tolerance issues. Contrary to what happens with the rest of the assets that make up the HQLAs, reserves do not experience variations in their valuation and, ultimately, involve less risk. The rest of HQLAs – government bonds, covered bonds, corporate debt, loan securitisations (ABS) and shares listed on whole-sale stock indices – are all subject to volatility and valuation adjustments. In fact, in the last two years, and coupled with the shift in central banks' monetary policies, among other factors, these financial assets have undergone significant price adjustments. For

instance, 10y German public debt yield has increased 250 bps since December 2021 (resulting in a fall in the price of the bond).

The need for credit institutions to hold a higher level of liquidity than they did in the past has several underlying causes, the most prominent being economic uncertainty, the need for reserves given the problems in the other mechanisms to obtain liquidity as an alternative to the ECB and in longer-term funding sources, the fact that the stability of deposits is more dubious in digital environments and regulatory motivations. The problems in the euro area interbank market and the fragmentation of liquidity in the region are issues that need to be addressed before substantially cutting the buffer of excess reserves, as a layer of macroprudential safety will be needed until these problems are resolved. It is also worth bearing in mind that liquidity regulation does not prevent tail risk events and that, although liquidity is critical to successful crisis management, the Single Resolution Board (SRB) toolkit is incomplete and lacks effective liquidity provisions. The following paragraphs address these issues.

On the one hand, the economic environment is subject to high levels of uncertainty. The economic shocks of recent years, which have been severe, high-frequency and diverse in nature, have influenced banks' greater preference for liquidity. This cannot be expected to change in the future, given that economic uncertainty will persist in the face of a turbulent geopolitical environment, major technological transformations, environmental threats, and social and demographic challenges. In addition, banks face unpredictable economic policy measures, especially those related to the sector itself, which diminish the valuation of their shares and compel credit institutions to hold a cautionary layer of liquidity.

On the other hand, alternative sources of funds for banks – those that do not depend of the ECB – present problems that also result in demand for excess reserves being greater and more unpredictable than in the past. The unsecured interbank market has been quite inoperative since the global financial crisis. Although it has shown some signs of revival following the return of ECB interest rates to positive territory, this activity has been largely driven by transfers from non-bank financial institutions to banks, which then place the funds in the ECB's deposit facility. In fact, unsecured money market activity continues to be dominated by non-bank financial institutions and by companies that place their liquidity in credit institutions which have access to the ECB⁶, in a way that is not a genuine interbank operation. Market players, academ-

⁶ The Eurosystem only allows to participate in its monetary policy operations institutions which fulfil the following three criteria:

(a) they shall be subject to the Eurosystem's minimum reserve system pursuant to Article 19.1 of the Statute of the ESCB and shall not have been granted an exemption from their obligations under the Eurosystem's minimum reserve system pursuant to Regulation (EC) No 2531/98 and Regulation (EU) 2021/378 (ECB/2021/1);

(b) they shall be one of the following: (i) subject to at least one form of harmonised Union/EEA supervision by competent authorities in accordance with Directive 2013/36/EU and Regulation (EU) No 575/2013; (ii) publicly owned credit institutions, within the meaning of Article 123(2) of the Treaty, subject to supervision of a standard comparable to supervision by competent authorities under Directive 2013/36/

ics and the ECB itself have expressed doubts as to whether the unsecured interbank market will recover once excess reserves become scarcer.

In addition, access to funding via wholesale markets is unstable, especially in times of high economic and financial uncertainty. In recent years, there have been several events that have highlighted liquidity and depth problems in capital markets and vulnerabilities in the structure of financial markets. Liquidity transmission and financial assets' trading channels have been clogged by tensions that, in the past, were easily absorbed. This has happened even in those markets that are considered more liquid and deeper (i.e. the episode of market stress in US Treasuries in March 2020 or in UK gilts in September 2022). Therefore, credit institutions, regardless of their solvency, are not assured of being able to access capital markets in a stable and undisrupted manner. Moreover, the possible solutions to this issue are neither simple nor quick. The market-based funding vulnerabilities are not only substantial, but also concern its architecture. In this regard, those that stand out include the impact that banking regulation has had on financial intermediation and the functioning of markets, the increasingly key role of non-bank financial institutions, the procyclicality of margin calls in the use of central counterparties (CCPs), etc.

In terms of deposits, the episode of banking stress unleashed by the collapse of Silicon Valley Bank (SVB) in March 2023 showed that, with the current degree of digitalisation, deposit runs can occur much faster than in the past. This is true not only because of the digitalisation of banking services, but also because social networks can act as an amplifier of crises of confidence. In 2008, it took 9 days for the U.S. bank Washington Mutual to lose 9% of its deposits. In 2023, SVB lost 23% of its deposits in barely 24 hours and up to 85% in two days. Although the deposit base in eurozone banks is very different to that of troubled banks in the United States, especially due to the lower concentration and higher volume of insured deposits, these episodes do beg the question of how the nature of deposits changes as digitalisation progresses and lead to a reassessment of the stability of deposits as a source of bank funding.

Another reason why banks need to have a higher level of reserves than in the past is regulatory in nature. Liquidity has come increasingly into focus in the regulation and supervision of credit institutions in recent years. The regulatory liquidity ratios

EU and Regulation (EU) No 575/2013; (iii) institutions subject to non-harmonised supervision by competent authorities of a standard comparable to harmonised Union/EEA supervision by competent authorities under Directive 2013/36/EU and Regulation (EU) No 575/2013, e.g. branches established in Member States whose currency is the euro of institutions incorporated outside the EEA. For the purpose of assessing an institution's eligibility to participate in Eurosystem monetary policy operations, as a rule, non-harmonised supervision shall be considered to be of a standard comparable to harmonised Union/EEA supervision by competent authorities under Directive 2013/36/EU and Regulation (EU) No 575/2013, if the relevant Basel III standards adopted by the Basel Committee on Banking Supervision are considered to have been implemented in the supervisory regime of a given jurisdiction;

(c) they must be financially sound;

(d) they shall fulfil all operational requirements specified in the contractual or regulatory arrangements applied by the home NCB or ECB with respect to the specific instrument or operation.

introduced by the Basel regulation (Liquidity Coverage Ratio, or LCR, and Net Stable Funding Ratio, or NSFR⁷) have remained comfortably above the regulatory minimum of 100% since their entry into force (LCR in 2015 and NSFR in 2021) supported by the fact that excess reserves are counted in the calculation. These regulatory ratios have never been required in an environment of less than ample excess reserves and, in fact, the market has traditionally demanded higher levels of around 140-160%.

The process of reducing the ECB's balance sheet will lead banks to operate with lower LCR and NSFR levels than in recent years, given the fall in HQLAs.

In some euro area countries, excess reserves account for 73% of the total HQLAs held by banks, and the average for the region is 58%. In short, more than half of total high-quality liquid assets today are excess reserves. As they shrink, banks will find it increasingly difficult to find an alternative within the universe of HQLAs. Public debt held by credit institutions accounted for 25% of the average HQLAs in the system as of the second quarter of 2023. Banks could increase their public debt holdings to replace reserves, but it remains to be seen how the new Credit Spread Risk in the Banking Book (CSRBB) regulation plays out. On the other hand, although the exchange of covered bonds between banks generates HQLAs, the ability to use this approach is limited by the size of the credit institutions' loan portfolio. In addition, covered bonds account for only 3% of HQLAs, a far cry from the 58% of excess reserves. Moreover, returning TLTROs destroys HQLAs because part of the collateral that institutions recover when they return them was initially a certain type of credit claim that, with the reversal of the ECB's collateral policy towards the previous one (more restrictive), can no longer be used in operations with the ECB to obtain liquidity.

Table 1. Excess reserves as a share of HQLAs by country (%)

	Mar-21	Dec-21	Dec-22	Sep-23
Austria	66	61	43	50
Germany	76	74	70	71
Spain	58	64	31	51
France	71	76	63	69
Italy	62	65	48	44
Luxembourg	66	64	72	66
Netherlands	71	68	64	68
Portugal	40	51	42	37

Source: EBA

⁷ The LCR aims to prevent the short-term liquidity risk (30 days). It was implemented gradually between 2015 and 2018 and it is calculated as (HQLA/net outflows 30 days). The NSFR aims to promote long-term liquidity resilience (1 year). It was implemented in 2021 and it is calculated as (Available Stable Funding/Required Stable Funding).

Apart from this, leaving aside for a moment the individual liquidity needs of banks and taking an aggregate approach instead, it is important to look at market fragmentation and tail risks. While it is clear that the ECB's role is to manage liquidity in the aggregate, there are a number of financial stability issues that are relevant towards determining the optimal level of excess reserves and/or the need for a broad level of reserves that acts as an insurance against systemic risks.

There is evidence that reserves are very unevenly distributed across geographic regions. Excess reserves have traditionally been concentrated in countries with major financial centres, such as Germany, Luxembourg, the Netherlands and France. The ECB's asset purchases and the inoperability of the interbank market have amplified these geographical differences, as well as the differences between individual banks. Going forward, as the reduction of the ECB's balance sheet and the disappearance of excess reserves as part of HQLAs progress, credit institutions will be affected asymmetrically depending on the country in which they are located, regardless of the caution and good practice they apply in liquidity management. There are banking sectors that show a more vulnerable starting point, such as Italy and Greece.

In terms of tail risks, a level of reserves that is too tight could cause problems in individual institutions that the system is not prepared to digest, as regulatory liquidity ratios present design problems (covered in the following paragraphs) and the institutional architecture for resolution of credit institutions is incomplete.

Regulatory liquidity ratios (LCR and NSFR) lack usability, as HQLAs committed to these ratios cannot be used for other purposes in times of stress, nor do they have the ability to alert or identify liquidity stress: they are not calibrated based on whether customer deposits are insured or not, nor are they calculated taking into account retail deposit bank-runs such as those that took place in the most recent cases where social media and digital banking services have been a determining factor.

With regard to the instruments currently in place in the EU to manage banks in resolution, the Single Resolution Mechanism (SRM) has a toolkit that is incomplete. To date, the resolution cases that have occurred have been resolved with the purchase of the troubled bank by another bank. However, this solution is not always possible; moreover, it entails fragmentation within the Banking Union, it may increase concentration in the banking sector and affect the sovereign-bank risk loop because the solution ends up being eminently national. Not only is there not yet an agreement for the European Stability Mechanism (ESM) to act as a backstop to the Single Resolution Fund (SRF)⁸, but in addition, there is currently no framework in the eurozone that provides liquidity to a bank in resolution without sufficient collateral. Unlike the tools available to financial authorities in other jurisdictions, the ECB does not have the power to provide liquidity in these circumstances. In fact, the eurozone only has the ECB's Emergency Liquidity Assistance (ELA) facility, which aims to provide credit to banks facing temporary liquidity problems, but on the condition that they are solvent.

A final consideration regarding other types of factors that come into play when de-

⁸ For several years Italy has been blocking this reform of the European Stability Mechanism.

fining the demand of credit institutions for HQLAs and reserves and predicting their future evolution, has to do with the introduction of the digital euro and the move towards financial infrastructures based on Distributed Ledger Technology (DLT) and the tokenisation of traditional financial assets that are being driven, especially, by the Bank for International Settlements (BIS) and the International Monetary Fund (IMF), among others. It is conceivable that liquidity management may become more complex for banks, as these developments streamline financial transactions. Also, depending on how limits are set on digital euro holdings and transaction volume, the demand for bank liquidity of excess reserves will be altered and potentially become more uncertain.

In short, estimating the minimum level of excess reserves required in the system is complicated and requires, among other things, knowing the structural demand on the part of credit institutions, which is far from stable and predictable. The environment of economic and regulatory uncertainty, the problems in alternative sources of funding for credit institutions – those that do not depend of the ECB – and the difficulty of successfully facing macro-financial tail risk events raise the optimal supply of reserves⁹. To quote J. Nagel, governor of the Bundesbank: “After many years where [sic] the banking system has been amply supplied with central bank liquidity, concerns exist. How might the financial system cope if excess liquidity were to be rapidly brought back down to far lower levels?”¹⁰.

A number of recent statements by ECB members seem to lean in the direction of maintaining an “ample” volume of excess reserves to provide the banking system with a liquidity buffer with which to cope with shocks. P. Lane, the ECB’s chief economist and member of the Executive Board, noted that “the appropriate level of central bank reserves in the new normal should avoid the risks associated with excessively scarce or excessively abundant reserves”¹¹. Lane argues that the size of these reserves will depend on a number of factors, including the size of the banking system, the financial system, and the economy; the likelihood and severity of macro-financial tail risk events; the scarcity of safe assets; the effectiveness of micro- and macroprudential regulations in curbing credit booms; mobility of deposits; and the central bank’s prioritisation associated with minimising the risk of returning to the effective lower bound in interest rates. In addition, I. Schnable, a German member of the ECB’s Executive Board, has also taken a position in favour of a system in which excess reserves are not scarce¹², given the uneven distribution of reserves in the system, together with the great uncertainty regarding bank’s preference for liquidity¹³.

⁹ This is in line with the findings of “The Optimal Supply of Central Bank Reserves under Uncertainty” published in November 2023 by the Federal Reserve of San Francisco.

¹⁰ Nagel added: “With this in mind, there is no reason to rush into a decision and, say, necessarily head back to an old-style corridor system.” See <https://www.bis.org/review/r230711f.htm>. For more information on the review of the ECB’s operational framework, see the next section.

¹¹ See <https://www.ecb.europa.eu/press/inter/date/2023/html/ecb.in231205-3ba2bbfcfc.en.html>

¹² See <https://www.ecb.europa.eu/press/inter/date/2023/html/ecb.in231205-3ba2bbfcfc.en.html>

¹³ See https://www.ecb.europa.eu/press/key/date/2023/html/ecb.sp230327_1-fe4adb3e9b.en.html

This extra liquidity buffer to deal with shocks does not have to rely solely on ordinary refinancing operations. In fact, the discussion goes far beyond how to remove the stigma that could be observed in these operations after several years of being in disuse. These operations can serve to absorb more frequent liquidity shocks, but they are not necessarily the ideal mechanism to meet all the demand for reserves of the banking system in the long-term. It is arguable that for banks to properly provide credit in an environment of extreme uncertainty, it may be necessary for the ECB to provide excess reserves beyond those strictly necessary for operational reasons and to do so through structural asset holdings and/or recurrent long-term refinancing operations with banks.

On the other hand, whatever the size of the excess reserves that ultimately prevails and whatever mechanism the ECB chooses for their provision, it is important to move ahead in solving the structural problems, such as the absence of a well-functioning euro area interbank market, the stigma of ordinary financing operations, the deficiencies of the liquidity regulations, the problems of institutional architecture and the fragmentation in the banking and capital market in the eurozone, since the demand for liquidity by credit institutions depends on all these issues and is closely related to their evolution.

3. ESTIMATING THE OPTIMAL SIZE OF THE ECB'S BALANCE SHEET AND THE NEW OPERATIONAL FRAMEWORK.

The wide range of estimates of the optimal level of bank reserves by several experts shows the difficulty of estimating them. For example, Annette Vissing-Jørgensen¹⁴ estimates that optimal bank reserves are between €521 billion and €1,416 billion, compared to the current €3,486 billion in excess reserves. This study calculates the optimal size of excess reserves by trying to maximise the amount of safe and liquid assets that a central bank provides to the economy. Grégory Claerys¹⁵, on the other hand, estimates that this level of excess reserves could be reduced to €2,200 billion (assuming a safety buffer of about €1,000 billion).

The ECB is in the midst of reviewing its operational framework and is expected to announce the new framework in spring 2024. With this review, the central bank must decide which instruments it uses and how it uses them to control money market interest rates. Currently, the central bank operates with a set of instruments: open market operations (such as refinancing operations to the banking system or asset purchases), standing facilities (such as the marginal deposit and credit facility, which absorb or inject liquidity overnight), the minimum reserve requirements and forward

¹⁴ Annette Vissing-Jørgensen works for the Federal Reserve Board and presented the findings of this paper during the ECB Forum on Central Banking in June 2023.

¹⁵ This document was prepared, along with four additional documents, for the European Parliament, analysing the rationality, risks and benefits of a QT in the eurozone.

guidance. In addition, the central bank directly controls its three official rates: the marginal lending facility rate (currently at 4.75%), the marginal deposit facility rate (that sits at 4.00%) and the rate for main refinancing weekly operations (which stands at 4.50%¹⁶).

One of the key issues that the ECB will have to decide in this review of the operational framework will be the volume of excess reserves with which it operates (and which is determined by the use of some of the instruments mentioned above), as this level influences where monetary rates will sit.

From the founding of the ECB up to the global financial crisis, the central bank operated with a low level of excess reserves (virtually zero). This way, the ECB provided the necessary liquidity to the banking system through refinancing operations¹⁷ and credit institutions distributed it via the interbank market. Under this system, known as the corridor system, monetary rates stood around the rate of the main refinancing operations (around the midpoint of the rate corridor).

Following the outbreak of the global financial crisis and the malfunctioning of the interbank market, the ECB began to carry out fixed-rate full allotment refinancing operations, which led to an increase in excess reserves. The subsequent implementation of various asset purchase programmes and the implementation of TLTROs reinforced this increase in excess reserves. This meant that money rates sat around the marginal deposit facility rate (the bottom of the corridor) and that, de facto, the ECB operates under a floor system, which is a excess reserves abundant system.

The discussion of how far the ECB's balance sheet can be reduced and what is the optimal level of excess reserves in the system is closely linked to that of the ECB's own operational framework.

The ECB is not the only central bank that has considered a review of its operational framework. Major central banks, such as the Fed in 2019, and the BoE in 2022, have also carried out a review. In both cases, despite the fact that they are reducing their balance sheets, they have decided to maintain abundant excess reserves, that is, to operate under a floor system. However, there are some differences between these two central banks. The Fed has chosen to provide these excess reserves mainly through a large structural bond portfolio¹⁸. The BoE, for its part, has decided to provide these excess reserves through refinancing operations with banks while also reducing its holdings of public debt. The volume of liquidity offered in these operations is unlimited¹⁹. The Fed's scheme is "supply-driven" as it is the Fed itself that decides the volume

¹⁶ If the rate corridor is symmetrical, the rate of the main refinancing operations is in the middle of the corridor. Currently, in the case of the ECB, this corridor is not symmetrical, and the rate of the main refinancing operations is closer to the marginal lending facility rate than to the deposit facility.

¹⁷ The ECB estimated the liquidity demand of the banking system and injected the liquidity needed to meet this demand through refinancing operations in the auction format.

¹⁸ In addition, from 2021, and with the aim of tackling unexpected liquidity shocks, the Fed began to offer liquidity through daily repo operations (to complement the discount window). These operations have an overnight maturity, are carried out through an auction procedure and the total volume offered is limited.

¹⁹ These operations are made weekly and have a maturity of seven days.

of excess reserves. The model used by the BoE, however, is “demand-driven” since it is banks themselves that directly influence the volume of excess reserves through their participation in refinancing operations.

Several statements by ECB members suggest that the central bank could opt for a system of ample reserves, although it is not yet clear how the central bank will provide them. Lane considers it appropriate that the ECB uses various instruments to achieve the optimal level of excess reserves. Thus, he points out that the combination of a bond portfolio and long-term refinancing operations would provide longer term liquidity to the banking system, while short-term refinancing operations are suitable to absorb more frequent liquidity shocks.

The choice of instruments to provide excess reserves will not be neutral for the European banking system in terms of HQLAs. Thus, for example, through refinancing operations, the ECB can increase the HQLA assets in the banking system, since credit institutions could use non-HQLA assets as collateral in these operations. Conversely, maintaining a structural portfolio of government bonds (which constitute an HQLA asset) would not increase the volume of HQLA assets in the economy.

4. THE REQUIRED RESERVES OF THE EUROZONE CREDIT INSTITUTIONS AT THE ECB

Part of the balances that credit institutions hold with the central bank (“reserves at the central bank”) are of a mandatory nature. These funds are called “Minimum Reserve Requirements” (MRR) and are liquidity that institutions cannot use for any other purpose. These reserves are calculated as a percentage of a series of liabilities of banking institutions, mainly customer deposits and assets issued with maturities up to two years. This percentage has stood at 1% since 2012, when it was reduced from 2%.

The MRR is one of the instruments that the ECB has to control money market interest rates and the level of excess reserves (the other component of “reserves at the central bank”). The ECB could take advantage of this operational framework review to discuss the future of this tool.

This instrument has become more important throughout 2023 after the ECB decided, in July 2023, to stop remunerating minimum reserve requirements, which were previously remunerated at the marginal deposit rate (the same as the excess reserves). Minimum reserve requirements had started to be remunerated at this rate at the end of 2022, after having historically been remunerated at the ECB’s main refinancing operations rate. The decision was framed in the discussion concerning the losses that some of the national central banks are experiencing due to the combination of a high level of excess reserves, major hikes in official interest rates and a low profitability of the bond portfolio acquired as part of the purchase schemes. These losses will affect more the central banks of the core countries, because the profitability of their government bonds is lower than that of the periphery countries and due to the greater accumulation of excess reserves.

In this way, the governors of the Bundesbank and the Bank of Austria have expressed their support for adjusting this instrument (the governor of the Bank of Austria went so far as to suggest raising it from the current 1% to 5%-10%, with 10% being the maximum stipulated by the statutes of the ECB). However, there is no unified opinion within the ECB²⁰.

Academics in favour of a rise in the MRR point out that the impact of this measure on credit institutions would be manageable and that, at the same time, it would have several benefits for central banks. One of the most oft-repeated arguments is that it would allow the ECB to limit its losses, because given that minimum reserve requirements are not remunerated, it would reduce payments to banks. At the same time, it would help to improve the effectiveness of monetary policy, through a more effective transmission of interest rate hikes to lending and/or deposits and a faster reduction in excess liquidity than with QT alone.

On the contrary, there are several reasons for not increasing the MRR, and in fact most of the academic literature defends this position. The measure could be taken as the equivalent of a tax on banks, just at a time when the tax burden on the sector is increasing and when profitability remains below the cost of capital in the case of some banks, and bank's share prices are around 30% below their book value. The measure would not help provisioning nor would it improve bank's buffers towards future economic events either and is not a good measure in terms of financial stability. In addition to all this, it would damage the ability to extend credit at a time of economic weakness. Moreover, the fragmentation of liquidity would lead to banks or jurisdictions with scarcer liquidity being the most affected by the increase in the MRR, which would result in an asymmetric effect on the transmission of monetary policy and contradict the existence of a single monetary policy in the euro area.

Besides that, the move would also have regulatory implications for banks by tying up an additional portion of their excess reserves. Those reserves would become ineligible for the calculation of the LCR, and therefore banks would lose part of the most valuable HQLAs (because reserves do not have valuation changes). This would have a direct impact on its liquidity management and would occur at the same time as a significant fall in excess reserves is already taking place through the repayment of TLTROs and the reduction of debt holdings by the ECB. According to some estimates, an increase in the minimum reserve requirements to 10% would render 30% of the banking system's HQLAs non-usable. Various estimates suggest that for every additional percentage point (p.p.) of the minimum reserve requirements, the LCR

²⁰ Thus, for example, Schnable pointed out in a recent interview that "The minimum reserve requirements is not an effective way of compensating the remuneration of excess liquidity". F. Villeroy, governor of the Bank of France, noted that "There's no monetary justification for increasing reserve requirements. The stability of the current regime should remain in place". Finally, P. Hernández de Cos, governor of the Bank of Spain, pointed out that "it is not obvious" that the central bank will adopt more measures related to required reserves. Lagarde stressed that: "we have one mission and that is price stability and we do not have as a purpose to show profits or to cover losses, and it would be actually wrong if our decisions were guided by our P&L accounts rather than for pure monetary policy purposes in order to bring inflation back to 2% in the medium term."

would be reduced by 4.5 p.p. Therefore, a 4 p.p. increase in the minimum reserve requirements (to 5%) would place the LCR of many banks in compromised territory.

If the MRR was increased significantly, the implications would also end up affecting bank funding in financial markets. In jurisdictions with greater liquidity shortages, money market funding conditions could tighten more significantly. A shortage of reserves in the banking system would emerge sooner than expected and this could put upward pressure on the €STR and other money market interest rates and thus likely increase volatility in short-term markets. The lack of a well-functioning interbank market would hinder its role in resolving the problems of reserve shortages, which could make some banks sell part of their public debt portfolios to satisfy the MRR if excess reserves were insufficient. This could not only increase country risk premiums, but also end up having an impact on PEPP reinvestment decisions or the use of the TPI. Another consequence could be greater use of the Eurosystem refinancing operations. If the ECB fails to ensure that such operations are used again without stigma, it could complicate the liquidity management of some banks and jurisdictions and further increase the fragmentation of the banking system.

In short, the uncertainty about the impact of the measure calls for caution. It seems to be a clear mistake that monetary policy can deal with issues related to the profit and loss account of national central banks and not be governed exclusively by issues related to inflation control and financial stability. Moreover, the increase in reserve requirements is not the most operationally efficient option within the ECB's set of options and artificially alters credit institutions' deposit preferences. The heterogeneity in the distribution of excess reserves in the region and the absence of a well-functioning interbank operation also discourage its use. The regulatory angle is not a minor issue either because the increase in MRR destroys HQLAs at a time of uncertainty regarding credit institutions' demand for liquidity, and uncertainty regarding the effects of the monetary tightening measures adopted in 2023, including the credit tightening that already seems sufficiently pronounced.

5. INTERACTIONS BETWEEN MONETARY POLICY AND FISCAL POLICY

The euro is built on the principle of monetary dominance and the ECB must be able to pursue price stability without being constrained by any other considerations, in particular of a fiscal nature.

The ECB does not appear to have compromised its monetary dominance, and ultimately its independence, with the purchases of public debt carried out over the last few years, while the policies of balance sheet expansion have had a positive impact on growth and employment (in line with the objective of price stability), and they have not simply reduced the burden of interest payments for governments. In addition, the level of public debt has not conditioned monetary policy rules, medium-term inflation expectations have been anchored and market discipline on the prices of public debt instruments has been preserved.

However, the fiscal interventions carried out with the pandemic and the invasion of Ukraine have placed public debt in the eurozone at historically high levels. In addition, the fiscal framework of the European Union, which was meant to shield the ECB from fiscal dominance and protect its independence, has been suspended in recent years. On the other hand, the ECB has a different status than the other central banks, as it operates without a central fiscal capacity at the EU level and faces the risk of fragmentation in the transmission of monetary policy. In short, once inflation has returned to the scene and given that the adverse effects of heterodox policies become more acute the longer they are in force, it is entirely desirable that the ECB reduces its exposure to public debt and recovers policy space to react to future crisis, as it has been doing since March 2023.

Beyond the discussion of fiscal dominance, monetary and fiscal policy interact through various channels. For example, fiscal policy stimulates aggregate demand and can cause inflation if monetary policy does not prevent it. At the same time, the level of official interest rates is relevant from the point of view of public expenditure insofar as it affects the servicing of public debt.

For the ECB's monetary policy to be effective, it is important for governments to regain fiscal discipline. European net sovereign issuances (taking into account the reduction in the ECB's bond portfolio) estimated for 2024 will be quite similar to those of 2023, which were already high from a historical perspective. The fragility of economic activity and the need to accompany the region's transformation in terms of energy transition, digitalisation and strategic independence are hindering fiscal consolidation.

On a positive note, it is worth pointing out that eurozone governments are currently adjusting their public accounts. Thus, the Eurogroup (the set of all eurozone finance ministers) has agreed to maintain a somewhat restrictive fiscal policy in 2024, emphasising the elimination of support measures implemented during the energy crisis. EU governments also formally agreed on the proposal of the reform of European tax rules in December 2023, which will enter into force in 2024. This provides additional support for European governments to continue to clean up their public accounts.

On the other hand, the ECB's decision to reduce its holdings of government bonds could highlight the fragmentation problems of wholesale markets. To limit the impact of fragmentation on the appropriate transmission of monetary policy, the ECB has announced a number of emergency programmes. Currently, the first line of defence is flexibility in the reinvestment of PEPP maturities (expiring during 2024) across countries. The central bank also announced an emergency asset purchase programme, the Transmission Protection Instrument (TPI). These measures have been welcomed by markets and have so far been effective in containing risk premiums during the process of monetary policy tightening. In fact, Lagarde at the press conference of the ECB meeting in December 2023 considered that the risks of fragmentation of capital markets were limited.

In any case, the acceleration of QT that will take place in the second half of 2024

will put greater pressure on European sovereigns to redirect their public accounts and will a priori leave the TPI as the only emergency instrument. The TPI, as well as not having been used yet, presents certain operational risks. In order for a country to be eligible for this programme, a series of requirements must be met: it must be in compliance with EU fiscal rules (it cannot be subject to an excessive fiscal deficit procedure), it must not be experiencing serious macroeconomic imbalances, it must be in compliance with the conditions associated with Next Generation funds (NGEU) and its public debt must be sustainable. Thus, fiscal rigour is not only decisive from the point of view of public accounts but also from the point of view of the proper transmission of monetary policy.

In short, the progress by QT in the search of a level of excess reserves that represents a point of equilibrium for the system is not solely conditioned by the need that credit institutions may have of excess reserves in an environment of high economic instability and regulatory requirements. The interdependence between monetary policy and fiscal policy occupies a prominent place in the discussion, both from the point of view of preserving monetary dominance as well as from the point of view of the proper transmission of monetary policy given the risks of fragmentation in the region.

The progress of QT in search of a level of excess reserves that represents a point of equilibrium for the system is a complex process, not only because of the difficulties of estimating what is the structural demand for liquidity by credit institutions in the short and long term and how it will evolve. It is also complex because of the interactions between monetary policy and fiscal policy in a context of reduced fiscal space of sovereigns in the eurozone and fragmentation.

6. CONCLUSIONS

In 2023, the ECB has been able to implement a substantial increase in key interest rates, a reduction in the size of its balance sheet and a change in the remuneration of minimum reserve requirements without major shocks in terms of economic growth and financial stability. Nevertheless, it is reasonable to think that the full impact of these measures has not yet been observed and that it is too early to assess the plethora of interactions between variables that these decisions trigger.

The ECB's reduction in the size of its balance sheet is justified to the extent that it allows it to regain monetary policy space, helps mitigate the adverse side effects of maintaining a heterodox policy and a large balance sheet for a prolonged period of time, and supports the many policy rate increases implemented in recent months.

As part of the path towards a smaller balance sheet, it is reasonable for the ECB – in addition to the size of the balance sheet per se – to consider a new operational framework, in line with what other central banks such as the Fed or the BoE have recently done.

However, in all of this process, one must remember that QT is not strictly an inverse phenomenon to QE as credit institutions have a limited capacity to incorporate

risk in their balance sheet and it is not easy to estimate what their structural demand for high-quality liquid assets and their preference for holding reserves at the central bank currently are and how they will evolve in the future. It is clear that the banking sector will have to operate in an environment of lower liquidity and lower excess reserves, but it is also clear that there is an increase in banks' risk aversion and a more conservative internal risk management alongside a more uncertain economic environment.

Economic uncertainty, the need for reserves due to persistent problems in alternative liquidity mechanisms to the ECB and in longer-term funding sources, and the fact that the stability of deposits is more doubtful in digital environments, increase the need for liquid assets by institutions. The problems in the euro area interbank market and the fragmentation of liquidity in the region are central issues in this discussion.

Another reason why credit institutions need to have a higher level of reserves than they did in the past is regulatory in nature. Excess reserves are computed in the calculation of the regulatory liquidity ratios introduced by the Basel regulation (Liquidity Coverage Ratio, LCR, and Net Stable Funding Ratio, NSFR) and these have never had to be met in an environment of non-ample excess reserves. More than half of the high-quality and liquid assets are currently excess reserves, and as they shrink, banks will find it increasingly difficult to find an alternative within the universe of HQLAs, in a context, as mentioned above, involving a lack of operability of the euro area interbank market, problems in financial markets and fragmentation of liquidity in the region.

On the other hand, the interdependence between monetary policy and fiscal policy features prominently in the discussion on how to move forward with QT, both from the point of view of preserving monetary dominance, as well as from the point of view of the proper transmission of monetary policy given the risks of fragmentation in the region.

In short, the progress of QT in search of a level of excess reserves that represents an equilibrium point for the system is a complex process, not only because of the difficulties of estimating what the structural demand for liquidity by credit institutions is and how it will evolve in the short and long term. It is also complex because of the interactions between monetary policy and fiscal policy in a context of reduced fiscal space of sovereigns in the eurozone and fragmentation.

Therefore, QT must proceed cautiously, with a pragmatic, flexible and telegraphed approach and in a reversible manner if necessary. In the same vein, it seems appropriate that the review of the ECB's operational framework should be carried out without foregoing any of the type of tools that the ECB has been putting in place over the last fifteen years and preserving a broad level of reserves that functions as an insurance against systemic risks, guarantees a sufficient supply of safe and liquid assets, helps to cope with the problems of fragmentation in the eurozone and limits the likelihood of official interest rates ending up back again in the effective lower bound. Moreover, it would not be advisable for the ECB to take the decision to increase the minimum reserve requirements for credit institutions.

On the other hand, whatever the size of the excess reserves that ultimately prevails

and whatever mechanism the ECB chooses for their provision, it is important to make progress in solving structural problems such as the absence of a well-functioning euro area interbank market, the stigma of ordinary refinancing operations, the deficiencies of the liquidity regulations, the institutional architecture problems and the fragmentation in the banking and capital markets in the eurozone, since the demand for liquidity by credit institutions depends on all these issues and is closely related to their evolution.

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**FISCAL POLICY: CONSOLIDATE AND INVEST
WHILE HELPING DISINFLATION**

DESIGNING AND IMPLEMENTING THE NEW FISCAL RULES

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INTRODUCTION

The Covid-19 pandemic triggered the activation of the general escape clause of the Stability and Growth Pact. The war in Ukraine prolonged that emergency until the end of 2023. In 2024, however, the Stability and Growth Pact had to be resumed, and the European Union faced a dilemma: if the current fiscal rules were to be applied, the economy would be in danger; if they were not applied, the prestige of the Commission and the fiscal credibility of the euro area would be put in jeopardy. That made the reform of fiscal rules a truly urgent matter during 2023.

The need for fiscal rules was never questioned, since in an economically and monetarily integrated region the imbalances of one country can cause significant negative external effects on the rest. The current framework, however, is not fit for purpose: it has become too complex (with numerous rules and numerous exceptions that hamper ownership), it is based on non-observable control variables like the potential output, the output gap or the structural balance (that are subject to methodological debate), it is pro-cyclical and unable to force countries to create fiscal buffers in good times, and it has hardly been enforced (which reduces its legitimacy and credibility)².

The problem was how to reform the current fiscal rules to make them less complex, more flexible, and more credible.

Hard though this task may seem, unfortunately, the problem of the euro area does not end there, as any monetary union requires not only fiscal rules, but also to address additional fiscal challenges: the need for a central fiscal capacity to facilitate macroeconomic stabilization, a sufficient common budget, and a clear definition of what to consider supranational public goods and policies (to be provided with common funds).

Unfortunately, the debate in the euro area and the Council agreement has only addressed the first issue, i.e., the design of new fiscal rules, prioritizing the need to avoid

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² For a good summary of the need for fiscal rules, as well as a list of shortcomings of the current system, see Darvas, Z., Martin, P. and Ragol, X. (2018), “European fiscal rules require a major overhaul”, Bruegel Policy Contribution No.18, October 2018 and Hernández de Cos, P. (2017), “Rules And Institutions For Fiscal Governance In Europe”, in Fernández Méndez de Andés, F. (ed.), “Euro Yearbook 2017”. Madrid, Fundación de Estudios Financieros and Fundación ICO.

negative external effects of national fiscal imbalances over the positive external effects of supranational macroeconomic stabilization and public goods. It will be a partial solution, if any.

The reform process began on 9 November 2022, when the Commission presented a Communication on the guidelines for the reform of the EU economic governance framework.³ The document urged member states to reach a “swift agreement” on the revision of fiscal rules, which “put growth at risk and are pro-cyclical” and stressed the need for “deep reform” involving legislative change agreed between the Council and the European Parliament.

Following the publication of the Communication, the Commission held multiple exchanges with member states and civil society. The results, summarized in the Council conclusions of 14 March 2023 (endorsed by EU leaders on 23 March), led to a legislative proposal presented by the Commission on 26 April 2023⁴. After months of discussion during the Spanish Presidency of the Council of the EU, the Council reached an agreement⁵ on 20 December 2023, which will be discussed with the European Parliament in the first quarter of 2024.

The new framework of fiscal rules has three components: a set of fiscal sustainability criteria and objectives, a mandatory fiscal trajectory for countries towards a sustainable fiscal position, and penalties in case of non-compliance. These aspects will be discussed in the following sections, and we will conclude with a preliminary assessment of what has been achieved.

SUSTAINABILITY ANALYSIS AND COUNTRY-SPECIFIC PLANS

The first question is how to define a sustainable fiscal policy. This requires the use of easily understandable variables and, if possible, observable. The Commission proposed to classify countries by risk levels based on a debt sustainability analysis (DSA) with a transparent methodology agreed with member states. A DSA is ultimately an element of anticipating risks, and therefore it is not easy to agree. The classification of countries in high, medium, and low risk in terms of a debt sustainability analysis requires the calculation of the structural deficit (linked to potential GDP and output gaps), and this is not a straightforward job. Although a “transparent methodology” “agreed with the member states” has been promised, the starting assumptions and calculation procedures will likely be subject to bitter debates, as they have always been. Anyway, the DSA will be carried out by the Commission, but with the approval of the Council, so this will increase the collective ownership of the new methodology.

³ COM/2022/583 final.

⁴ COM/2023/240 final for 2023/0138(COD), COM/2023/241 final for 2023/0137(CNS) and COM/2023/242 final for 2023/0136(NLE).

⁵ ST 15874/4/23 REV 4 for 2023/0138(COD), ST 15876/4/23 REV 4 for 2023/0137(CNS), and ST 15396/2/23 REV 4 for 2023/0136(NLE).

Based on the debt sustainability analysis, the European Commission and each member country will agree on a “technical trajectory” to bring deficit and debt below the limits of 3% and 60% of GDP, respectively. The modification of these “magic” numbers would have required treaty changes, so that possibility was abandoned from the very beginning.

If either of the two limits is not met, an adjustment path toward balance will be established in the form of multi-annual plans. The main novelty is that this multi-annual technical trajectory will not be the same for every country, but the result of discussions between the Commission and each member state endorsed by the Council. Each member state will prepare a “medium-term fiscal-structural plan” setting out commitments to fiscal adjustment, reform, and public investment. The standard horizon for these plans will be four years, although they can be extended up to seven years, provided that the extension “is supported by a set of priority reforms and investment commitments”. Countries with compliant deficit and debt values can also ask for the Commission to provide “technical information” to elaborate their fiscal-structural plans.

The Commission would be responsible for assessing the balance between reforms and investment and adjustment, estimating the growth impact of the proposed reforms or investments (which could offset larger initial deficits). When setting these priority reforms and investment commitments, those approved within the framework of the Recovery and Resilience Plans will be “taken into account”, among other considerations like the need to promote the green and digital transition and the strengthening of defense capabilities.

THE CONTROL VARIABLE: NET PRIMARY EXPENDITURE

Before member states design their national medium-term fiscal-structural plans, the Commission will transmit a risk-based and differentiated technical trajectory to member states where government debt exceeds the 60% of gross domestic product (GDP) reference value or where the government deficit exceeds the 3% of GDP reference value. This technical trajectory would ensure that, by the end of a fiscal adjustment period of four years, government debt is “on a plausibly downward trajectory or stays at prudent levels” and the projected government deficit is brought and maintained below the 3% of GDP.

The trajectory defined by the Commission requires a control variable to assess the annual progress of each country. In the new fiscal framework, this control variable will be the net primary expenditure. Here, the Commission has echoed the demands of the many authoritative economic voices calling for the replacement of the non-observable structural deficit with an observable (or at least much less arguable) expenditure rule⁶.

⁶ For a summary of the advantages of an expenditure rule, see, for instance, Manescu and Bova (2021) “National Expenditure Rules in the EU: An Analysis of Effectiveness and Compliance”, European Economy Discussion Paper 124, April 2020.

With the previous rules, the calculation of the structural deficit required an explanatory vademecum of almost 200 pages, so simplification was essential. The new control variable, the net primary expenditure, will be calculated as the observable expenditure net of discretionary revenue measures and excluding interest expenditure, expenditure derived from EU funds, and cyclical unemployment expenditure. The medium-term path will be translated into corresponding annual spending ceilings.

Although controlling the net primary expenditure (a virtually observable variable) is technically a much more advisable solution than tracking the structural deficit, it must be emphasized that the expenditure rule does not avoid the need to use structural variables.

Firstly, even if the annual target is set in terms of net primary expenditure, what is ultimately sought is a progressive reduction of the structural (and therefore unobservable) deficit. This will require its calculation with an agreed methodology (although at least the compliance will be only measured in terms of expenditure). Secondly, the net primary expenditure specifically excludes “cyclical expenditure on unemployment”, which indirectly forces the calculation of a structural component to deduce the cyclical one (although methodological discrepancies will not be as problematic as if the target variable were the structural deficit itself). Finally, member states will have to calculate in any case the potential GDP and output gap to calculate their structural and cyclical income. Therefore, the expenditure rule does not eliminate the need for structural variables, but just the quarrel about compliance –which is not a minor thing. Since experience shows that there is usually no consensus even on the initial level of a country’s structural deficit and that calculations are always very sensitive to the parameters used (especially the interest rate) and not exempt from subjective interpretations, it is good that the role of structural variables in assessing compliance is reduced as much as possible.

Deviations from the agreed net expenditure paths, both positive and negative, will be recorded every year in a control account for each member state.

The excessive deficit procedure (EDP) has been kept, although clarified. It will be triggered because of an excessive deficit or because of an excessive debt. The Council and the Commission will assess the compliance with the deficit and/or the debt criteria of each member state, considering, among other things, the degree of “public debt challenges”, the size of the deviation, the progress in the implementation of reforms and investments and, “where applicable, the increase of government spending on defense”.

Debt-based excessive deficit procedures will be triggered, with a previous report by the Commission, when debt exceeds the reference value, the headline deficit is not close to balance or in surplus, and when the deviations recorded in the control account of the member state exceed specific amounts.

SAFEGUARDS: COMPLEXITY ENTERING THROUGH THE BACK DOOR

As we have seen, in the new framework the Commission will set (and the Council will

endorse) a path for the evolution of net primary expenditure for each member state, and this will be the variable evaluated to determine whether a country complies with the rules or not. However, this method does not guarantee a specific rhythm of adjustment.

This has led to the requirement of several safeguards, i.e., additional restrictions to the agreed multi-annual fiscal plans to make sure that the fiscal adjustment is carried out as fast as possible, without undue delay. There are two types of safeguards: those that focus on the speed of reduction of deficit (or its components), and those that deal with the rhythm of debt reduction.

The Commission itself incorporated in its legislative proposal of April 2023 the requirement of a minimum structural deficit reduction of 0.5% of GDP per year. The Council discussions, as usual, led to more complexity with additional requirements. The new framework will include four safeguards.

First, a minimum rate of reduction of the structural deficit: the latter should be reduced at a rate of 0.4% of GDP per year, although if the country is undertaking reforms and investments (and therefore within a 7-year plan), the reduction of the structural deficit may be limited to 0.25%. This, in essence, amounts to giving favorable treatment to green and digital investments, which are normally included in these schemes. Notwithstanding, if the country is subject to an Excessive Deficit Procedure, the average minimum annual reduction rate will be 0.5%, although the evolution of interest expenditure until 2027 will be taken into account (to prevent an excessive concentration of interest expenditure that makes it excessively difficult to reduce the structural deficit), as well as defense spending (something that some countries insisted on to facilitate the commitment to increase spending within NATO).

A second safeguard concerns the relationship between observable deficit and structural deficit. The so-called “deficit resilience safeguard” will require a safety margin below the deficit reference value of 3%. Thus, once a deficit of 3% of GDP (from the deficit rule) has been reached, member states will need to keep reducing their structural deficit as a precautionary measure up to 1.5% of GDP to generate a fiscal buffer for adverse times. This 1.5% of GDP becomes the new target for all EU countries, even for those with a deficit below 3%.

A third safeguard concerns the pace of debt reduction. These types of safeguards are more dangerous since debt is just a stock variable resulting from the evolution of two flow variables: the deficit and the GDP. Setting a debt requirement is equivalent to setting targets for both the observed deficit and the GDP. The current fiscal rules already included the rule of annual reduction of one-twentieth of the public debt. Although this requirement has fortunately been abandoned, the Council imposed a new “debt sustainability safeguard” so that debt at the end of the period should imply an average annual reduction of 1% of GDP for countries with debt above 90% of GDP and of 0.5% for countries with debt between 60% and 90% of GDP. At least, this rhythm of debt reduction will be required only when the deficit has fallen below 3% (in the case of a country subject to the EDP, the average annual reduction would begin to apply in the year in which the EDP is expected to be abrogated).

In the case of countries subject to an Excessive Deficit Procedure, an additional safe-

guard is included, regarding the maximum deviation of expenditure from the expected adjustment path, to avoid systematic errors. Thus, the actual net primary expenditure of each year may not deviate by more than 0.3% of GDP from the annual target, nor by more than 0.6% cumulatively for the total adjustment period.

So, from now on, when a member state's deficit is above 3% of GDP, the country can be put under an excessive deficit procedure (EDP) and will have to cut its structural deficit by 0.5% of GDP annually. Once the deficit falls below 3% of GDP, the rhythm of reduction of structural deficit will be 0.4% of GDP a year (in a four-year plan) or 0.25% (in a seven-year plan) until it reaches a deficit of 1.5% of GDP. This is less strict than the previous rules, which required governments to cut structural deficits by a minimum of 0.5% of GDP a year until the budget was balanced or in surplus.

The assessment of these safeguards is complicated, pending some additional details. Some of them, such as the minimum deficit reduction, have a certain logic, although they reintroduce the concept of structural deficit when assessing compliance, and this contradicts the objective of achieving simpler rules. The debt sustainability safeguard, as we will see later, introduces even more complexity.

Table 1. The new fiscal rules approved in December 2023*

Element	Measure
Starting point: debt sustainability analysis	Debt Sustainability Analysis Framework (DSA) with transparent methodology and agreed with member states
Long-term goal	Deficit: 3% of GDP Debt 60% of GDP
Multi-annual adjustment path	Country-specific technical trajectory, negotiated between the Commission and member state and approved by the Council, within a fiscal-structural plan executed within a maximum period of 4 years (extendable to 7 with investments and reforms).
Control variable	Annual net primary spending (excluding discretionary measures, interest on debt, European funds, and cyclical spending on unemployment). Deviations from the target will be registered in a control account, with a maximum deviation of 0.3% (yearly) and 0.6 (accumulated)
Rhythm of fiscal adjustment	Deficit: minimum annual reduction of 0.4% GDP in structural deficit (0.5% if EDP, although consideration of interest burden until 2027) until reaching a structural deficit of 1.5% (even if the observable deficit is below 3%) Debt: minimum annual reduction of 0.5% GDP if debt is between 60% and 90% (1.0% if above 90%).
Sanctions for non-compliance	Half-yearly fines of 0.05% of GDP until the country reacts. No cap on cumulative fines.
Transparency	The Commission would make public the debt sustainability analysis, the baseline multi-year adjustment path, and the level of the structural primary balance at the end of the 4-year adjustment period.
Other issues	Maintenance of the possibility of an escape clause in exceptional circumstances. Review of the Macroeconomic Imbalances Procedure with a similar approach to fiscal rules.

Source: author. * The definitive fiscal rules might slightly differ as a result of the negotiations with the European Parliament in the first quarter of 2024.

THE EFFECTIVE IMPLEMENTATION OF FISCAL RULES

Flawless though any fiscal rules may be from a theoretical point of view, they would be useless if the implementation mechanisms fail. In this case, the reform of the fiscal rules has not contributed much to reinforce the system of incentives.

From an institutional perspective, fiscal rules would work better if there were an adequate a clear role for every institution. Although the Commission initially gave a monitoring role for national independent fiscal institutions, so they had to assess the compliance of government plans with the agreed fiscal path, the Council did not include this aspect in its final agreement. Therefore, the compliance assessment is left to the Commission and to the Council, a tandem that has proven defective at assessing the former fiscal rules. The bilateral negotiations between the Commission and the member states will miss the key role played by a credible third party, allowing politics to play a bigger role than advisable. The role of the European Fiscal Board has also been enhanced, although with no additional effective power.

On the other hand, the corrective arm of the fiscal rules has not been properly addressed. Although the introduction of specific criteria for opening the Excessive Deficit Procedure (EDP) on debt sustainability grounds (and not just deficit sustainability) increases transparency, the consideration of grey concepts such as “substantial debt challenges” gives a certain margin for arbitrary decisions.

In the area of sanctions, fines are maintained, although a reduction in their amount has been approved with a theoretically stricter application. Thus, in case of non-compliance, half-yearly fines amounting to 0.05% of GDP will be imposed until the country takes action. There is no cap on cumulative fines (the Commission’s proposal that they should not exceed 0.5% of GDP was ultimately rejected).

The problem is that these fines continue to operate on a pro-cyclical basis (i.e., further reducing the sustainability of the indebted country's finances), undermining its credibility.

Other enforcement measures initially included in the Commission's communication eventually disappeared from the legislative proposal and the Council's agreement. This was the case for moral sanctions such as the obligation for ministers to appear before the European Parliament in the event of non-compliance, or for economic sanctions such as the possibility of freezing European funds.

CONCLUSIONS: BETTER RULES, BUT FAR FROM PERFECT

The negotiations with the European Parliament on the preventive arm regulation are expected to start in January 2024. The regulation on the corrective arm and the directive on requirements for budgetary frameworks of member states will require the European Parliament to be consulted. Although some changes might be expected, it is unlikely that the main components of this new fiscal framework will be altered.

It is early to assess how the new rules will work, but we can anticipate a first general assessment.

From a technical point of view, the new fiscal rules represent an undeniable step forward compared with the previous system, whose failures were well known. However, if the idea was to increase simplicity, flexibility, and credibility, these objectives have been only partially fulfilled.

From the point of view of *simplicity*, the replacement of the structural deficit by net primary expenditure as the control variable is undoubtedly a wise move, as compliance will now focus on elements more linked to discretionary fiscal policy that governments can control (unlike the structural deficit)⁷. Of course, given the very characteristics of modern economies, some complexity will always be unavoidable. On the other hand, the use of grey concepts such as “plausible downward path” introduces some degree of interpretation and thus reduces transparency.

The target of simplicity has also been damaged by the existence of multiple safeguards. If the idea was to use a single control variable (net primary expenditure), but in practice the new rules will include many other control variables (many of which are non-observable). Ultimately, the compliance of a member country will not only be assessed every year by its net primary expenditure, but also by variables such as the structural deficit, public debt (which involves following the evolution of the headline deficit and GDP), cyclical expenditure on unemployment (the estimation of which determines the compliance with the spending rule), the deviation of the effective expenditure from the target, or the degree of implementation of structural reforms or investments⁸. We may now find a member state strictly complying with the expenditure rule but failing to meet many other targets. This excess of control variables necessary leads to a complex decision by the Commission and the Council that risks politicization or arbitrariness.

As for *flexibility*, it has also been increased in the new framework. The existence of country-specific multi-annual adjustment plans is a good idea, that combines the need for strict fiscal rules with the need for some degree of customization. This flexibility, however, is subject to several important constraints.

First, the maintenance of the benchmarks of 3% deficit and 60% debt as arbitrary reference values. Although this is understandable, given that these figures are incorporated into the treaties and are therefore difficult to change, its existence is nothing more than a historical legacy of the time of the creation of the euro, which was a very different world. It is shocking that in the current geopolitical context, in which investment needs are very different from those of 1999, those limits remain fixed and unchangeable. The existence of four-year plans (or seven-year plans) partially cushions the severity of these figures, but the arbitrary limits exist and remain enforceable.

⁷ See Hernández de Cos (2017), *op. cit.*

⁸ In the previous fiscal framework, up to six control variables could be counted. See Eyraud, L. y Gómez, R. (2014), “Constraints on subnational fiscal policy”, in Cotarelli and Guerguil (eds.), “Designing a European Fiscal Union: Lessons from the experience of Fiscal Federations”, Routledge, London.

Second, although the new fiscal rules suppress the absurd requirement of an annual reduction of 1/20th of the debt (a requirement not established in the treaties, but in secondary legislation), the Council has decided to add several safeguards that act as additional restrictions in an already complicated optimization process.

The obligation to reduce the structural deficit at a minimum rate of 0.4% per year (0.5% for member states in an Excessive Deficit Procedure) is strict but has a certain logic. Let us for instance consider a member country with a structural deficit of 4% of GDP. At a reduction rate of 0.5% per year, a balanced structural budgetary position would take no less than eight years. In this period, it is difficult not to see some cyclical slowdown during which (and despite the operation of the automatic stabilizers) governments would show resistance to adjustments in primary spending, so a certain minimum effort is advisable. Anyhow, the cost of setting an arbitrary figure such as 0.5% restricts flexibility and leads to the problem of procyclicality: when a country suffers a crisis, its cyclical deficit will worsen and the obligation to adjust will cause a further fall in GDP that will further worsen the indicator.

The deficit resilience safeguard also reduces flexibility but makes some sense: logically, fiscal rules should also try to set a fiscal buffer in the good times so it can be used in adverse circumstances and shocks (although this has seldom been the case so far).

However, the debt sustainability safeguard is much more problematic. Theoretically, it acts “as a floor to the effort underlying the technical trajectory and the net expenditure path”, and applies only once the deficit is below 3%, but in practice, it introduces complex additional restrictions. As we mentioned above, debt is just a stock resulting from the effect of two annual flows: government deficit and GDP. A reasonable system of fiscal rules would make sure that the evolution of the government budget (through the control of net primary expenditure) is sustainable and preserves growth. Once a balanced fiscal position is attained, public debt should just naturally decrease as GDP grows.

The debt sustainability safeguard (as well as the rest of the safeguards) must be considered at the time of designing the multi-annual fiscal trajectory. This means that the Commission and the member state must take into account at the same time restrictions related to the net primary expenditure, the structural deficit, the observed deficit, and the GDP, as all variables are included in the different safeguards. Understandable though these may seem, we have now a fiscal framework theoretically based on the net primary spending as the control variable but, in practice, we must consider many other control variables. The more control variables are added, the less likely the full compliance of the fiscal rules becomes. Here it is not only flexibility that is sacrificed, but also credibility.

In any case, the real problem of flexibility with these fiscal rules appears at the European level. These rules are undoubtedly better than the previous ones but fail to consider the different geopolitical landscape that the EU must face. Any fiscal mechanism must show an appropriate balance between sustainability and growth. Without sustainability, growth cannot be guaranteed, but without growth, the sustainability of public accounts cannot be achieved either. The experience of the euro crisis was, in this respect, enlightening. The EU needs fiscal rules, but it also needs to finance its

long-term investment needs, in particular its green and digital transitions. It also needs to boost its industry, and it is obliged to do so even if it does not like it because, in a non-cooperative geopolitical framework in which the main blocs make industrial policy, the EU is obliged to react if it does not want to be left behind.

The debate about the EU investment needs has been absent during the negotiation of the new fiscal rules, and this is probably a big mistake. As they are now, the new fiscal rules will constrain public investment in the most indebted member states. This will have two effects: on the one hand, an increase in real divergences between member states with greater fiscal capacity and those obliged to a harsh adjustment (divergences already fostered by the asymmetric amount of State aid allowed since the pandemic); on the other hand, an insufficient level of European investment to finance supranational public goods.

This is not a new concern. Awareness of this problem led some countries to propose that investment expenditures in green transition should not be included in public deficit for compliance purposes. This “green golden rule”, however, would be nothing more than a mere accounting artifice that does not solve much. For a start, it would not provide any solution for the European (i.e. joint) funding needs but would force member states to finance their investments with their national debt, which runs against the idea of sustainability; secondly, markets would not pay attention to what the Commission considers “acceptable” expenditure, but to its financing, i.e. the amount of debt issued, for which the “color” (green or brown) has little to do with its sustainability. Finally, it would resurrect the need for complex instructions to define what is considered “green”, opening up the possibility of accounting tricks and conceptual discussions (in the end, we would just replace a vademecum on the structural deficit with a vademecum on green investments).

However, the call for a “green golden rule” made by some countries (and eventually abandoned) highlights an indisputable fact: all fiscal rules (no matter their perfection) reduce the volume of investment from “what is needed” at the European level to “what is sustainable” for each of the member states. If we accept that in the EU there are not only negative externalities arising from fiscal imbalances, but also positive externalities resulting from investments in decarbonization or technology, then we are accepting that there are European public goods that should be financed at the European level but remain financed at the national level. If total investment is the sum of individual investments conditioned by the debt sustainability of each member state (regardless of any external effects), then total European investment will be insufficient. The logical result is that not only the reduction of total emissions but also the EU’s long-term growth will be below potential, as we should have learned by now from the Global Financial Crisis and the euro crisis.

It must be acknowledged, though, that the new fiscal rules give a certain privileged treatment to some European public goods, such as green and digital investments and defense spending. Both soften the requirement of minimum structural deficit reduction. In addition, EU-funded expenditure (such as Next Generation EU) is excluded from the net primary expenditure. However, the fact that countries do not have to

reduce their expenditure or structural deficit so quickly does mean that individual investments will be sufficient.

The only solution, therefore, is for part of the EU's spending on goods with positive externalities to be financed jointly. This does not mean that funds are distributed between member states (this solution, as seen with the Next Generation EU, does not guarantee the depth of structural reforms). They could be made available, for instance, for project proposals (preferably transnational), properly assessed and endorsed. This would only be possible with a central fiscal capacity.

The Commission dismissed the debate on a golden rule just by mentioning that “there was no consensus” on this issue and did not even bother to enter the debate on a central fiscal capacity, probably for fear of blocking the discussion. This was a mistake. While the Commission acknowledged that the proposal for a centralized fiscal capacity to smooth the business cycle and increase the euro area's resilience to shocks was quite frequently mentioned in the public debate before the Communication (according to another Commission document, nearly half of the respondents, eight out of ten think tanks, six out of ten academic institutions and half of the trade unions and a quarter of the business associations suggested the creation of a central fiscal capacity), it opted to leave the significant investment needs of the coming decades to member states. The implicit argument that the request for a central fiscal capacity could just be the biased claim of highly indebted countries is ridiculous unless we consider “indebted countries” all the defenders of a central fiscal capacity, including the European Central Bank, the European Fiscal Board, and most universities and think tanks.

The lack of *credibility* is also problematic. Even if a simple and flexible set of rules were established, the success of the reform will ultimately depend on the effectiveness of its implementation, linked to two factors: the credibility of the targets and the role of incentives.

We have already mentioned the problem of maintaining the benchmarks of a 3% deficit and a 60% debt. These values are not optimal but simply reflect the impossibility of amending the treaties. This is in itself an indication that there are rules that are just there but do not make much sense, so they are a first source of lack of credibility.

The number of safeguards has also forgone a big part of the credibility of the targets. If a country is correcting its deficit and starting to grow steadily but its debt is not properly decreasing, does it make any sense to speed up the adjustment, risking growth? How will a country be penalized if only some of the safeguards are not respected?

As for the incentives, we have already mentioned that the lack of active participation of independent fiscal institutions (whose recommendations are not binding) passes all the responsibility of the assessment of the multi-annual fiscal trajectory on the Commission. This makes it easy for member states to convey the dangerous message, at the political level, that the adjustment path is imposed by the Commission. An additional problem comes from the fact that the Commission has suffered a certain loss of credibility when it comes to demanding reforms linked to the Recovery and Resilience Plans, as it has largely limited itself to demanding legislative milestones with no effective impact. This is understandable, as the Commission has strong incentives to make a success

out of the Next Generation EU experience, but has led some countries to believe that, if the Commission is given the responsibility of assessing the investments and reforms (including the extension of the adjustment period from four to seven years), it would incur in a similar conflict of interest.

In conclusion, the new fiscal rules are a step forward in the problem of coordinating fiscal policy in the EU, even though its enforcement will probably face many problems derived from the complex safeguards. The targets of the reform have not been correctly achieved: simplicity has been sacrificed on the altar of flexibility, and credibility remains to be seen. In any case, these rules are far from being the solution for the fiscal challenges that the EU will have to face. The EU has massive investment needs for the coming decades, and it counts only on four weak financial tools: the Next Generation EU funds, which will not be extended (remaining as a one-off, and therefore only a temporary solution); the rest of European funds, which are insufficient in amount and too slowly implemented; private investment, curtailed by the absence of a genuine Banking Union and a functioning Single Capital Market; and member states' public investment, now additionally constrained by fiscal rules.

The problem with these fiscal rules is mainly that they will not be applied in a vacuum but in an extremely complex geopolitical and economic landscape. In the absence of parallel debates on how to improve European financing, the EU will be left behind in the economic and technological race. Some might think that EU common financing might come only *after* member states prove that they can comply with strict fiscal rules. This could be logical, but not necessarily right if the EU wants to run a geopolitical race in which time is of the essence.

LONGER-TERM FISCAL CHALLENGES FACING THE EU

**ZSOLT DARVAS,
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AND JEROMIN ZETTELMEYER¹**

EXECUTIVE SUMMARY

The pandemic, and subsequent price shocks triggered by Russia's invasion of Ukraine, have increased longer-term fiscal pressures in the EU through higher debt, higher expected real interest rates and higher public investment needs. This paper offers some simple quantitative assessments of those effects and discusses policy implications, with the following results.

First, annual increases in structural primary fiscal balances required to bring debt on a sustainable path and ensure compliance with the February 2024 agreement between Council and Parliament on the EU fiscal rules range from -1.1 to 1.1 percent of GDP. For most high debt countries, adjustments lie between 0.2 and 0.5 percent of GDP per annum.

Second, based on the debt sustainability analysis methodology of the European Commission, the required additional fiscal adjustment looks manageable by historical standards, although it is substantial in some cases. However, new "safeguards" proposed by the Council of the EU in December of 2023 will require continued fiscal adjustments to levels that may be excessive for some countries.

Third, market data suggests that the future path of real interest rates is very uncertain. Compared to the period immediately preceding the pandemic, longer-term expected real interest rates have increased by about 2 percentage points but remain

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moderately low on average, at about 1.3 percent in real terms. Whether interest rates remain at their current levels, go down again, or even increase further depends on whether the structural factors that led to low interest rates in the first place persist or unwind, with arguments on both sides. Hence, while there is a possibility that interest rates might decline again, fiscal policymakers should not make plans that assume such a decline.

Fourth, public spending needs for additional defence and climate spending run well above 1 percent of GDP per year. These needs do not appear to be incorporated in current fiscal baselines, and the December 2023 ECOFIN agreement on the revised EU fiscal rules does not allow even a temporary exemption for such spending. Hence, additional fiscal adjustment, on top of the adjustment described above, would have to be made to make room for increased climate and defence spending. A good option would have been the incorporation of a fiscally responsible green investment rule in the revised EU fiscal framework, which would have allowed a temporary exemption of EU-endorsed and monitored climate spending, provided that total fiscal adjustment ensures that the public debt ratio plausibly declines at least from the end of the adjustment period.

INTRODUCTION

Since 2020, the European Union has suffered two large shocks: first, the pandemic, then the price shocks triggered by Russia's invasion of Ukraine (referred to as 'war shocks' below). These shocks have created new fiscal challenges for the EU, through three channels. First, deficits and debt have increased. Second, there has been an impact on both actual and expected real interest rates, and hence the cost of public borrowing. Third, the shocks have accelerated and increased the need for public investment in specific areas, particularly climate and defence. This creates a dilemma: fiscal space has likely declined, but public investment needs have gone up.

We seek to contribute to the debate on how to address this dilemma by offering some simple quantitative assessments. Considering changes in debt, growth expectations and real interest rate expectations, how much has the fiscal outlook worsened compared to 2019? How much adjustment will be required to put debt on a downward trajectory and comply with the reformed of EU fiscal rules? How large are the differences in fiscal space across the EU? Is the recent increase in interest rates permanent or temporary? To what extent could higher public investment needs, particularly on climate and defence, add additional fiscal pressure? We conclude with a brief discussion on how the objectives of lowering debt and accommodating higher public investment could be reconciled.

The first part of the paper employs (1) simple methods that aim to enable comparisons both over time and across countries and make clear what is driving the results, as well as (2) a more sophisticated stochastic debt sustainability analysis based on the methodology of the European Commission that considers debt composition, ageing

costs, and cyclical variations in output, corresponding to the December 2023 ECOFIN agreement on the new fiscal rules.

1. FISCAL SPACE AFTER THE PANDEMIC AND WAR SHOCKS

Figure 1 shows the evolution of the distributions of public debt and the primary (non-interest) fiscal balance in the current 27 EU countries since 1993, the year after the signing of the Maastricht treaty. The 2022 debt ratios of countries at or below the median are not exceptionally high; they are in fact slightly below both the 1993 benchmark and post-2010-12 euro crisis levels. Primary deficits in these countries are also not exceptionally large. However, the debt ratios above the 75th percentile, representing the quarter of countries with the highest debt ratios, are at historic highs. Furthermore, these debt levels have drifted further from the median than at any time since the early 1990s.

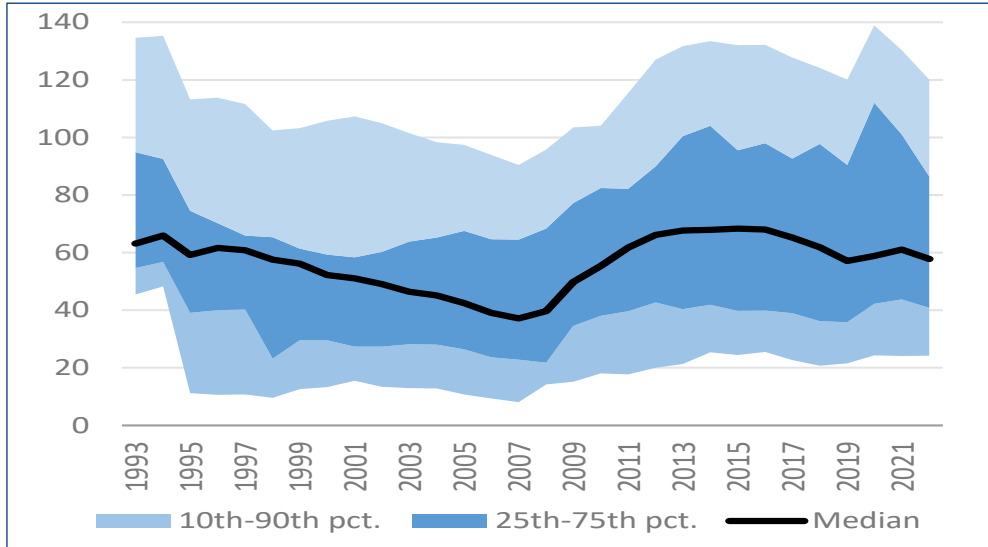
Yet, these changes do not offer a definitive assessment of how much the fiscal outlook has changed since 2019:

- Recent increases in debt and deficits may partially self-correct, as output continues to recover from its pandemic-induced plunge and temporary pandemic and energy shock-related expenditures expire. Indeed, 2021 and 2022 witnessed a rebound in the primary balance, accompanied by a decline in debt ratios (also reflecting the impact of unexpected inflation on nominal GDP).
- Current debt and primary deficits do not capture the effect of the recent rise in interest rates. Insofar as this results in higher future real interest rates, it could exert upward pressure on deficits and debt ratios in the coming years.
- Finally, long-term growth may have been affected by the pandemic, the policy response to the pandemic (such as reforms undertaken in the context of the national recovery plans) and the energy shock, with uncertain net impact.

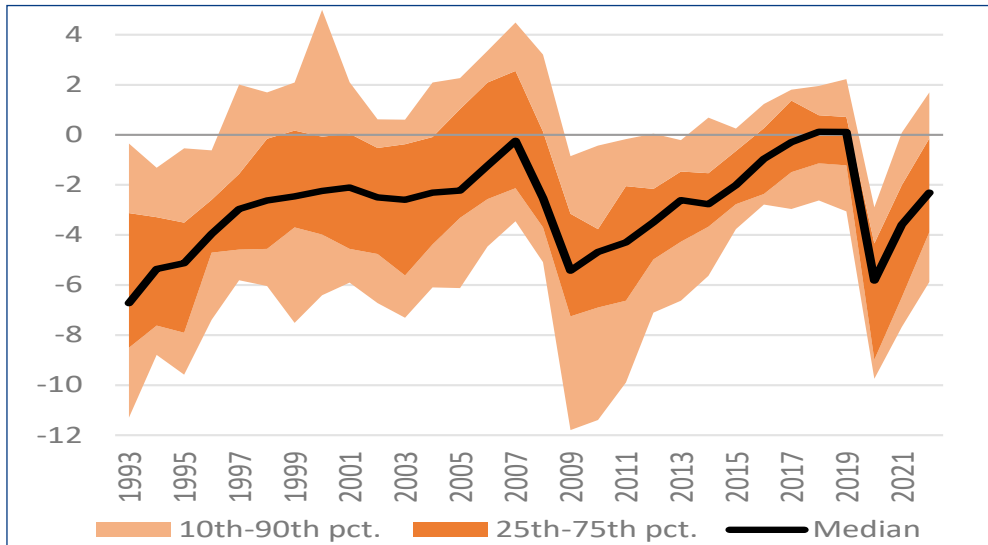
In short, while it is reasonable to assume a deterioration in the fiscal outlook due to pandemic and war shocks, the extent of this decline remains unclear. A more precise evaluation requires an examination of the drivers of longer-term fiscal pressures.

Figure 1: General government debt and primary balance in percent of GDP, current EU, 1993-2022.

1a. Debt.



1b. Primary Balance.



Source: Bruegel based on data from the IMF October 2023 World Economic Outlook.

Note: Figure 1a shows the evolution of the distribution of gross public debt in the current EU countries, 1b shows the evolution of the distribution of the primary balance. Both are expressed as shares of GDP. The solid lines in the centre show the median debt and primary balance, respectively. Dark shaded areas span the 25th and 75th percentile of the distributions of debt and the primary balance, respectively, while the lighter shaded areas span the 10th and the 90th percentiles. The primary balance is defined as general government revenues minus non-interest expenditures.

1.1. Changes in the drivers of longer-term debt sustainability, 2019-2023

Figure 2 provides evidence on how the drivers of debt sustainability have changed since 2019. To identify the *longer-term* effects of the pandemic and energy price shock, we first compare 2019 five-year ahead forecasts for debt ratios from the October 2019 and October 2023 IMF World Economic Outlook (WEO), and market expectations for real interest rates.

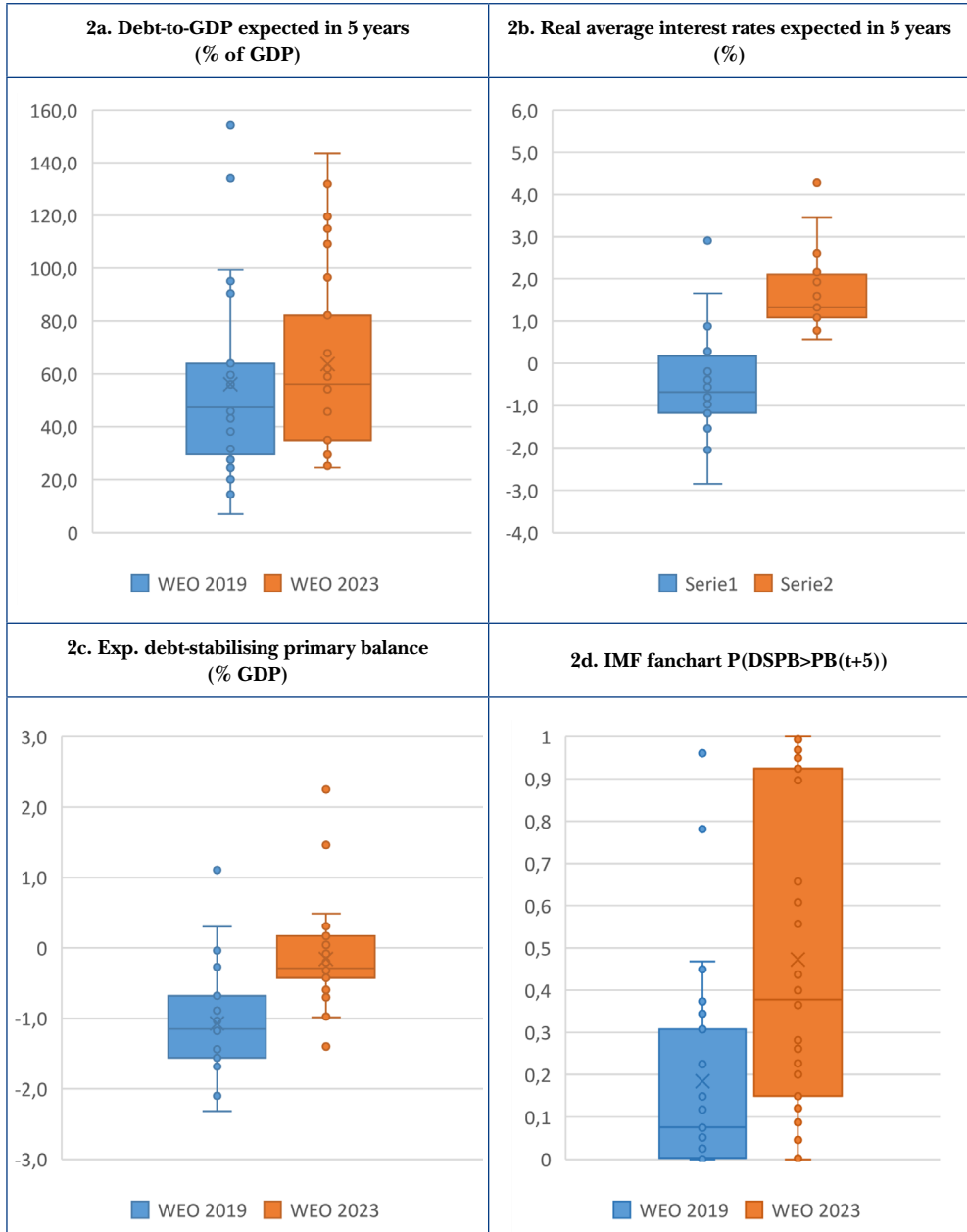
- The median of the distribution of five-year-out expected debt/GDP in the EU has increased by 10 percentage points of GDP (Figure 2a). At the same time, debt is expected to have become more dispersed, with the 25th percentile of the expected debt distribution rising by only 6 percentage points of GDP, and the 75th percentile rising by almost 15 points of GDP.
- Longer-term expected growth (not shown) has not declined; if anything, growth expected in five years is slightly higher today than it was in 2019. At the 75th percentile of the growth distribution, expected real growth is higher by 0.3 percent per year.
- Longer-term expected real government borrowing rates have increased substantially, by 2 percentage points (Figure 2b). Nevertheless, they remain moderate on average, in the order of 1 to 2 percent, and the difference between real expected borrowing rates and expected real growth continues to be negative in most EU countries².

A simple way of combining these factors involves the concept of the ‘debt-stabilising primary balance’, shown in Figure 2c. This is the primary balance that is necessary to stabilise the debt at a particular level, assuming the economy is in a steady state in which the primary balance, gross financing needs, real interest rates and real growth rates remain unchanged. If real interest rates are higher than real growth rates and the primary balance is zero, debt will grow faster than GDP, and the debt-to-GDP ratio will rise. To offset this, the debt-stabilising primary balance needs to be in surplus. Conversely, if real interest rates are lower than real growth rates and the primary balance is zero, then debt will grow slower than GDP, and the debt ratio will fall. Hence, the debt-stabilising primary balance can be in deficit.

Figure 2c shows that the steady-state debt-stabilising primary balance has risen, but not dramatically: by about 0.9 percentage point at the median and the 75th percentiles, and 1.1 percentage points at the 75th percentile. This means that an economy that could previously afford to run a primary deficit of about 1 percent of GDP forever without seeing its debt ratio rise (because its interest rate was slightly lower than its output growth), would now need to run a primary balance of about zero to achieve the same result, as long-term real interest rates have increased by more than growth (the possibility that real interest rates might decline again is examined below).

² The exceptions include the Belgium ($r-g=0.2$), Czech Republic ($r-g=0.1$), Greece ($r-g=1$), Hungary ($r-g=0.8$), Italy ($r-g=1.7$), Poland ($r-g=0.3$), Romania ($r-g=0.6$), and Spain ($r-g=0.3$).

Figure 2: Longer-term drivers of fiscal pressure of the EU27, October 2019 versus October 2023.



Source: Bruegel based on IMF (October 2019 and October 2023 databases of the World Economic Outlook) and Bloomberg.
Note: Figures 2a and 2b show the distributions of 5-year expectations of debt/GDP and real interest rates, respectively, according to the IMF's October 2019 and October 2023 World Economic Outlook. For example, in Figure 2a, the left box chart shows the distribution of debt/GDP expected for 2024 in October 2019, while the right box chart shows the distribution

of debt/GDP expected for 2028 in October 2023. The distribution of long-term government borrowing rates in 2b, is computed as an average of short and long-term forward rates, weighted by the original maturity structure of debt, deflated by 5-in-5 inflation swap forward rates (with the same deflator used for all euro-area countries and thus assuming no intra-euro inflation differentials). Figure 2c shows the distribution of the steady state debt-stabilising primary balance expected in five years, computed as $pb^* = d^*(r-g)/(1+g)$, where d is the 5-year expected debt shown in Figure 2a, g is the five-year expected growth rate, and r is the long-term expected real interest rate shown in Figure 2b. Figure 2d shows the distribution of probabilities that 5-year expectations for the primary balance will be below the debt stabilizing primary balance based on the IMF (2022) fanchart methodology. In each figure, the boxes show the interquartile range (25th to 75th percentile of the distribution), the lines inside the boxes the median and the x-crosses the mean. The 'whiskers' represent the top and bottom of the distribution, excluding outliers (observations more than 1.5 times the length of the box away from either end of the box).

Because the future trajectory of debt drivers is subject to uncertainty, we consider a more sophisticated assessment that goes beyond the concept of a deterministic debt-stabilising primary balance. The IMF's (2022) fanchart methodology allows for a probabilistic assessment: By drawing multiple times from historical samples of debt drivers and combining them with a debt accumulation equation, one can construct various trajectories for the debt ratio, as well as for the primary balance necessary to stabilise it. The share of trajectories with a debt-stabilising primary balance above the forecasted actual primary balance is an estimate of the probability that a country will fail to stabilise its debt. The distribution of these probabilities is shown in Figure 2d. It shows that while in 2019 the median probability was only 0.1, it has now increased to 0.4. The 75th percentile saw an even larger climb from 0.3 to 0.6, implying that for these countries, an explosion of debt resulting from insufficiently high primary balances is now assessed to be more likely than a debt decline. The next section answers the question of how much extra adjustment would be needed to prevent such scenarios.

1.2. By how much do primary balances need to rise to start bringing down debt?

While the concept of steady-state debt-stabilising primary balance used in Figures 2c and 2d is a convenient measure to compare fiscal pressures over time and between countries, it may overestimate the primary balance required to stabilise debt ratios in EU countries today because it assumes that, starting in 2029, all debt is rolled over at the interest rates expected for 2029, which is higher than past rates. In fact, only a portion of the debt stock is rolled over, while most of the rest of the debt will continue to be serviced at rates corresponding to the lower rates of pre-2022 debt issuance, until the historic debt stock has matured.

In addition, the debt-stabilising primary balance is (by definition) lower than the primary balance required for declining debt, something that Article 126 of the Treaty on the Functioning of the European Union requires of all countries with debt above 60 percent. The new EU fiscal framework proposed by the European Commission in April 2023 envisions the exact level of primary balance these countries will have to reach, to be determined by a country-by-country debt sustainability analysis (DSA), the 3 percent deficit ceiling and simple rules requiring minimum deficit and debt

adjustments ('safeguards'). In a previous paper we replicated the Commission's DSA and assessed how much adjustment the April proposal would imply, and which elements of the framework would be driving the adjustment (Darvas, Welslau and Zetelmeyer, 2023).

Since the April proposal, negotiations have reached a compromise, which was agreed by the Council and the Parliament in February 2024. Table 1 presents the medium-term adjustment requirements, i.e., structural primary balances at the end of the four- or seven-year adjustment period that the agreement would imply. We based our calculation on November forecasts by the European Commission, February market expectations for interest rates and inflation, ECB data on the composition of government debt, and an updated version of our replication of the Commission's DSA methodology. Columns 1-3 show the latest European Commission forecasts for the debt ratio, the fiscal balance, and the structural primary balance (SPB) for 2024, the expected base year of the new framework. Columns 4 and 5 show the end-of-adjustment period structural primary balance that would need to be reached (at a minimum) to satisfy all five DSA criteria, which require the debt ratio to fall over the 10 years following the adjustment period assuming:

- *Baseline.* Baseline economic projections;
- *Lower SPB.* The structural primary balance is permanently lower by 0.5 percent of GDP after the end of the adjustment period;
- *Adverse r-g.* The interest rate-growth differential is permanently higher by 1 percentage point following the end of the adjustment period;
- *Financial stress.* Borrowing rates rise for one year by 1 percentage point for countries with a debt ratio below 90 percent of GDP, and 1 percentage point plus 0.06 times the gap between the debt level and 90 percent for countries with debt levels exceeding 90 percent;
- *Stochastic criterion:* Based on a five-year debt fan chart following the adjustment period, using baseline economic projections and the historical variance-covariance of shocks to debt drivers, the debt ratio falls with 70 percent probability.

Columns 6 and 7 show the end-of-adjustment period structural primary balance that would need to be reached (at a minimum) to get the overall fiscal *deficit to stay below 3%* of GDP over the next 10 years, under baseline economic projections, including expected changes in ageing costs. Columns 8 and 9 show the impact of the application of requirements by the *Excessive Deficit Procedure* (EDP) and the two safeguards. In case of a persistent deficit, the EDP requires annual adjustments of at least 0.5 percentage points until the overall deficit falls below 3% of GDP. In line with the December 2023 ECOFIN agreement, this adjustment is measured in terms of the structural primary balance in 2025-2027 and in terms of the overall structural balance from 2028. The two safeguards additionally require that:

- *Debt sustainability safeguard.* The debt ratio must fall by a minimum of 1 percentage point of GDP per year on average for countries starting with

an initial (2024) debt ratio above 90 and by a minimum of 0.5 percentage point of GDP per year on average for countries with debt ratio above 60, where the average is calculated starting from the year prior to the adjustment period (2024) or from the year in which the excessive deficit procedure is projected to be abrogated, whichever occurs last, until the end of the adjustment period.

- *Deficit resilience safeguard.* In all periods during which the structural deficit exceeds 1.5%, the annual adjustment of the structural primary balance must be at least 0.4 percentage points in the case of a four-year adjustment period and at least 0.25 percentage point in the case of a seven-year adjustment period.

Columns 10 and 11 contain the minimum structural primary balance that satisfies all criteria, including the safeguards, for the respective four- or seven-year adjustment period. Columns 12 and 13 show the average annual fiscal adjustment associated with the targeted structural primary balances, obtained by subtracting the 2024 projected SPB (column 3) and, depending on the length of the adjustment period, dividing by four or seven.

The results of the analysis show that medium-term structural primary balance targets vary considerably across countries and, depending on the adjustment horizon, range from negative for some low-debt, low-deficit countries, to positive and large for some high-debt countries. The largest SPBs to be achieved by the end of the adjustment period are, quoting first results for the four-, then for the seven-year adjustment period: 3.3 (2.9) percent of GDP for Italy, 2.3 (2.7) for Spain, 2.2 (2.3) percent for Belgium, 2.8 (2.6) percent for Portugal, and 2.4 (2.6) percent for Hungary. Among high-debt countries, the debt safeguard is the driving adjustment for just three countries, Finland in the four-year, France in the seven-year, and Spain in the four- and seven-year scenario. The deficit resilience safeguard causes higher adjustment requirements for Greece in the four- and seven-year scenarios, and for Cyprus in the seven-year scenario.

Conditional on the granting of the extension of adjustment periods to seven years for some countries, the above quoted structural primary balance targets imply annual adjustment requirements in the range from -0.65 (Denmark) to 0.68 (Belgium) percent of GDP. For most high debt countries, adjustments lie between 0.07 (Portugal) and 0.71 (Belgium) percent of GDP per annum. However, the deficit resilience safeguard may require continued fiscal adjustment beyond the horizon of the adjustment period, until a structural deficit below 1.5% is reached. This would result in targets that may be excessive in some countries, for example up to 3.3 (3.6) for Italy.

To summarise, debt pressures have increased considerably because of the pandemic and war shocks. This is not so much because of the rise in debt itself, but because of higher expected longer-term interest rates. The result remains manageable in all EU countries, in the sense that the fiscal adjustment that is needed to put debt on a continuously declining path and comply with the emerging reform of the fiscal

framework, is feasible by historical standards when assuming a seven-year adjustment period. This said, required adjustments are ambitious in several cases and policy makers will need to meet the challenge of reconciling required consolidations with the investment needs that are instrumental in facilitating the green transition.

Table 1. Fiscal adjustment requirements under proposed EU fiscal framework (in percent of GDP).

	European Commission forecasts for 2024			Min. SPB required by DSA criteria		Min. SPB required by 3% deficit cap		Min. SPB required by EDP and safeguards		Minimum SPB satisfying all criteria		Average annual fiscal adjustment need	
	Debt	Fiscal balance	SPB	4-year adj.	7-year adj.	4-year adj.	7-year adj.	4-year adj.	7-year adj.	4-year adj.	7-year adj.	4-year adj.	7-year adj.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)=max(4,6,8)	(11)=max(5,7,9)	(12)=((10)-(3))/4	(13)=((11)-(3))/7
Greece	152	-0,9	2,0	1,3	1,2	1,2	1,3	2,3	2,5	2,3	2,5	0,07	0,07
Italy	141	-4,4	-0,9	3,3	2,9	3,2	2,8			3,3	2,9	1,05	0,55
France	109	-4,4	-2,4	0,8	0,6	0,3	0,4		2,1	0,8	2,1	0,81	0,65
Spain	106	-3,2	-1,0	1,9	2,2	1,2	1,6	2,3	2,7	2,3	2,7	0,82	0,52
Belgium	106	-4,9	-2,4	2,2	2,3	1,7	1,8			2,2	2,3	1,14	0,68
Portugal	100	0,1	2,1	2,8	2,6	1,5	0,9			2,8	2,6	0,16	0,07
Finland	77	-3,2	-1,0	0,5	0,3	-0,7	-0,8	2,1		2,1	0,3	0,77	0,19
Austria	76	-2,4	-0,7	1,0	1,1	0,0	-0,4			1,0	1,1	0,42	0,25
Hungary	72	-4,3	1,0	2,4	2,6	1,6	2,1			2,4	2,6	0,36	0,22
Cyprus	71	2,1	3,4	-0,1	-0,5	-0,5	-0,6		-0,1	-0,1	-0,1	-0,89	-0,51
Slovenia	68	-3,3	-1,1	1,5	1,4	1,7	1,9			1,7	1,9	0,69	0,43
Germany	64	-1,6	-0,2	0,5	0,2	-0,3	-0,6			0,5	0,2	0,19	0,05
Slovakia	60	-6,5	-5,1	1,2	1,6	1,0	1,3			1,2	1,6	1,57	0,96
Croatia	59	-1,8	-1,2	0,4	0,5	-0,5	-0,5			0,4	0,5	0,38	0,24
Malta	56	-4,6	-2,7	-0,3	0,0	-0,6	-0,2			-0,3	0,0	0,60	0,39
Poland	54	-4,6	-1,8	0,0	0,3	-0,2	0,0	0,1	0,7	0,1	0,7	0,48	0,36
Romania	49	-5,3	-3,0	1,3	2,1	1,2	1,6			1,3	2,1	1,08	0,73
Netherlands	47	-1,8	-0,5	1,2	1,2	1,6	1,4			1,6	1,4	0,53	0,27
Czech Republic	45	-2,4	-0,1	-0,2	0,0	0,4	0,7			0,4	0,7	0,13	0,12
Latvia	42	-3,1	-1,7	-1,4	-1,1	-1,6	-1,5	-0,3	-0,1	-0,3	-0,1	0,35	0,22
Ireland	41	0,6	0,8	-2,8	-2,9	-1,4	-1,4			-1,4	-1,4	-0,55	-0,32
Lithuania	38	-2,3	-0,5	-1,4	-1,3	-0,7	-0,9			-0,7	-0,9	-0,05	-0,05
Sweden	30	-0,7	1,5	-2,3	-2,1	-1,2	-1,1			-1,2	-1,1	-0,67	-0,37
Luxembourg	29	-2,1	-0,6	-2,0	-1,8	-0,2	-0,2			-0,2	-0,2	0,09	0,05
Denmark	28	1,8	2,9	-3,1	-3,2	-1,5	-1,7			-1,5	-1,7	-1,10	-0,65
Bulgaria	24	-3,0	-2,7	-2,1	-1,5	-1,1	-0,7			-1,1	-0,7	0,40	0,28
Estonia	21	-2,4	0,0	-3,7	-3,5	-2,5	-2,4			-2,5	-2,4	-0,64	-0,35

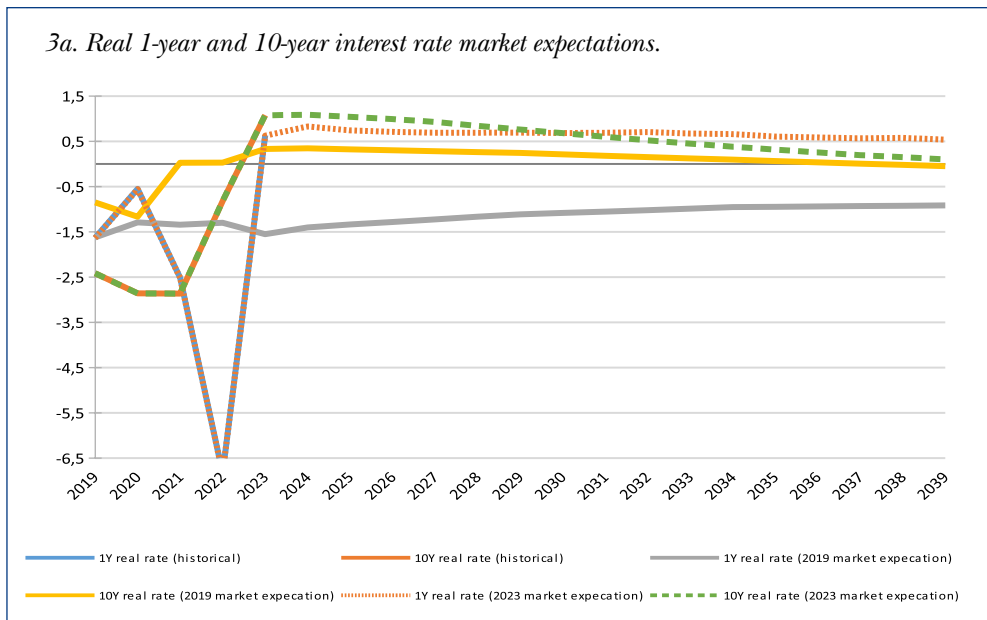
Source: Bruegel based on European Commission November 2023 forecasts, Bloomberg and ECB. Note: Methodology based on European Commission (2023d). Orange and blue shading marks binding criteria for a four or seven-year adjustment respectively.

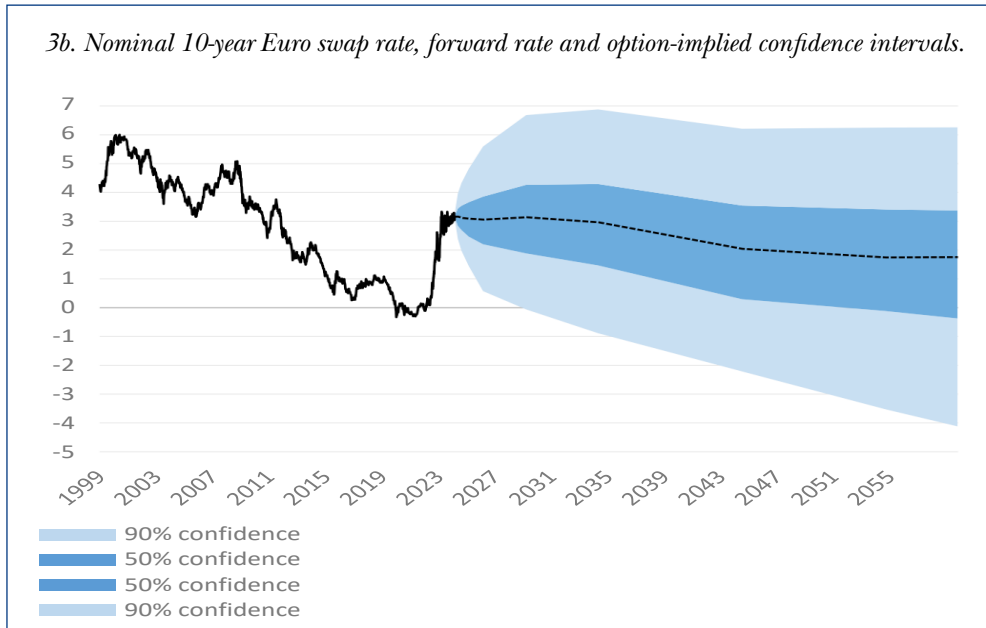
2. WILL REAL INTEREST RATES STAY AT THE CURRENTLY EXPECTED LEVELS?

As discussed in the previous section, five-year forward expectations for real interest rates have increased substantially compared to their pre-pandemic levels. Figure 3a shows the long-term trajectory of market expectations for 1-year and 10-year real interest rates based on forward swaps, corrected for swap-EU yield spreads and inflation expectations in 2021 and in 2023. Median market expectations for real rates are to stay well above the levels expected before the pandemic and war-related inflationary pressure. The large increase in expected long-term real rates over the next five years, as seen above in Figure 1b, is expected to remain large for the next two decades. The expected persistent rise in short-term real rates is even larger and equally persistent.

The expected rise in real rates is driven by investors' anticipation of persistently elevated nominal rates shown in Figure 3b. The 10-year euro swap rate, which closely mirrors EU yields (with a small spread, typically around 10 basis points on 10-year rates), is expected to remain stable until 2030 before slowly decreasing and stabilising just below 2% in the long run. However, the experience of recent decades has shown that the predictive power of forward rates is low. To gauge the uncertainty surrounding this baseline projection, it is possible to derive probability distributions using swap option prices. This exercise indicates that there is a 50 percent probability that rates will fall within the range of 0.3 percent to 3.5 percent in 2043, while the 90 percent confidence interval ranges from -2.2 percent to 6.2 percent (Figure 3b).

Figure 3: Euro swap rates, real interest rates, and market expectations (in %).





Source: Bruegel based on Danske Bank and Bloomberg (data retrieved 1 October 2023). Note: Figure 3a shows historical and expected real interest rates for 1-year and 10-year EU debt, based on euro swaps corrected for the average swap-EU yield spread and market inflation expectations. Figure 3b shows historical and possible future values of the 10-year euro swap rate, which reflects market expectations of the average long-term rate over the next 10 years and can thus be considered a good proxy for the 10-year EU yields. Dark and light shaded areas correspond to the 50 percent and 90 percent confidence intervals, respectively, as defined by risk-neutral probabilities derived from the option prices on 10-year-swap rates.

Given the high uncertainty around nominal market interest rate expectations, it helps to reflect on what the fundamentals behind long-term real rates may imply about the possible direction of real rates in the next few years. Before the current post-COVID-19 episode of high inflation and sharp monetary tightening, interest rates were on a steady downward trend for at least two decades (Figure 3). This fall can be explained by the saving and investment behaviour of economic agents (and hence the supply and demand for funds), as well as by the demand for safe assets.

2.1. Potential drivers of the fall in rates in recent decades

On the supply side, the decades before COVID-19 saw an increase in savings. One simple reason was higher income levels. Another major driver behind this trend was demographics, and in particular the increase in life expectancy, which pushes workers to save more of their income in anticipation of their longer retirements (Ferrero *et al.*, 2017; Blanchard, 2023). At the global level, a third explanation for the increase in saving was the ‘global savings glut’ phenomenon identified by Bernanke (2005): some

emerging country governments – China and oil-exporting countries in particular – accumulated huge current-account surpluses resulting from reliance on exports and, in some cases, from exchange-rate interventions since the end of the 1990s. Finally, the increase in inequality in advanced countries, with an increase in wages and capital gains at the top of the income distribution and stagnation in real revenues for the bottom half of the distribution since the end of the 1970s, led to an increase in the income share of the population, characterised by a lower propensity to consume.

On the demand side, profitable, or sufficiently safe, private investment opportunities may have been lacking in advanced economies. One reason may be low population growth in advanced countries, which could translate into low future demand for goods and services and thus weighs on current investment. Other factors could also drive the decline in capital expenditure: the fall in the relative price of durable equipment; a broken financial sector or one that has wrong incentives; poor managerial incentives to invest within companies; slower productivity growth (or greater difficulty in rewarding innovators); monopoly positions in some industries leading to huge rents and disincentives to increase production; and finally, the reduced capital intensity of leading industries. The decline in public investment after the global financial crisis and the euro crisis also contributed to this lower investment trend.

Greater demand for safe assets also played a crucial role in reducing safe interest rates. First, the tighter prudential regulations adopted after the global financial crisis required financial institutions to hold safer and more liquid assets, therefore structurally increasing the demand for this type of asset. Second, the global savings glut resulted in a large increase in the international reserves held by emerging market countries, which were overwhelmingly invested in safe assets – ie sovereign bonds from advanced countries. This could in fact have been part of a more general trend, in which savings might have been concentrated in the hands of savers with a low propensity to invest in risky activities, possibly because these risk-averse savers might have a preference for ‘nominal safety’ or liquidity, rather than risk-adjusted returns³.

2.2. Is the era of low interest rates over?

Beyond the current sharp increase in monetary policy rates, which is likely to be partly reversed as inflation recedes, are some of these fundamental trends reversing, resulting in a regime shift towards higher real interest rates?

³ Several papers have sought to quantify the weights of these different drivers based on various models. For instance, Rachel and Summers (2019) explained the fall by 320 basis points in equilibrium real rates in advanced countries from 1970 to 2017 as follows: the fall in productivity growth explains 180 bps of the rate decline, demographic factors (ie lower population growth, longer retirement, length of working life) explains another 180 bps, the rise in inequality exerted a drag on real rates of 70 bps, and other private sector factors explain an additional 260 bps. Meanwhile, increases in government debt and expansions in social insurance programmes actually pushed rates up by 360 bps in the meantime.

As far as saving is concerned, one major change in recent years has been the fall in China's current account surplus, from almost 10 percent of GDP in 2007 to less than 2 percent in 2022. However, interest rates do not seem to have reacted to this fall during the pre-COVID-19 period. This could indicate that the role of the global savings glut (or at least China's contribution to it) was not as important as previously thought.

Another potential change could come from demographics. The fall in the fertility rate in most countries (Goodhart and Pradhan, 2020), and/or an increase in the retirement age to compensate for the increase in life expectancy, could also dampen the increase in saving.

The demand for safe assets is expected to remain high, mainly because of financial regulation requirements. However, two factors could affect demand in the opposite direction. First, reduced reserve accumulation from emerging economies may lessen the demand for safe assets. Second, in advanced countries, low-income workers are regaining bargaining power in a strong labour market (as is currently the case in the United States). This could reduce income inequality in favour of households with a high propensity to consume.

The trickiest evolution to predict, but also probably the most crucial, is that of investment, as noted by Blanchard (2023). Investment could go up significantly for many reasons in the coming years. Climate change could bring about fundamental changes because climate change mitigation will require huge green investment from both the private and the public sectors (see also section 3). A significant increase in carbon prices could lead to stranded assets that would need to be replaced quickly. And adaptation to higher temperatures will also lead to higher investment needs (eg in dams). Moreover, COVID-19 and current geopolitical tensions are driving firms to rethink the geography of their value chains and are pushing them towards reshoring parts of their activities to increase their resilience, which could lead to increased capital expenditures. Public investment should also increase to face these new challenges (green, defence, education, digital, healthcare, etc.). Finally, in the private sector, new investment opportunities could also arise, for instance, if artificial-intelligence technologies deliver on their transformative promises. If they materialise, these various trends would push interest rates up.

To conclude, it is possible to think of reasons why interest rates may be permanently higher than in the pre-COVID-19 years, but it is very difficult to assess the quantitative importance of these arguments⁴. Even if there are good reasons to believe that rates will eventually come back to their pre-pandemic lows after the current inflation episode subsides (Blanchard, 2023; IMF, 2023), uncertainty around the timing and extent of this decline suggests that fiscal policymakers should not take it for granted. Instead, EU policymakers should bring fiscal balances gradually towards (or in the

⁴ Although its baseline scenario is for real rates to go back to pre-COVID-19 levels when inflation falls back to target in advanced countries, in its alternative scenarios, IMF (2023) tried to quantify the effects on equilibrium rates of these various possible trends (deglobalisation, lower inequality, energy transition, higher government debt, etc.), and found non-negligible effects if they were to materialise.

case of high-debt countries, above) their debt-stabilising primary balances, conditional on baseline market expectations. If rates end up being lower than suggested by current forward rates, policymakers will still be able to adjust their plans and reduce their primary balance targets in a few years.

3. FISCAL PRESSURES ARISING FROM PUBLIC INVESTMENT PRIORITIES

A potential additional source of fiscal pressure may be the failure of current spending plans to adequately account for pressing public investment needs. We briefly highlight three priority areas: defence (which is entirely public spending), climate transition (which is shared between the public and private sectors in a ratio of about one-third/two-thirds), and digital transition (which is mostly private, though it requires some public resources).

3.1. Defence

In 2006, NATO defence ministers agreed to commit a minimum of 2 percent of their GDP to defence spending – a commitment that was reinforced in 2014 in response to Russia’s annexation of Crimea and turmoil in the Middle East. Countries below 2 percent spending agreed to move towards the 2 percent target within a decade (NATO, 2023b). Eurostat data for 2021 indicates a level of 1.3 percent of GDP defence spending in the EU, with only three countries (Greece, Latvia and Estonia) meeting the 2 percent threshold. Data reported by NATO (2023a) is slightly higher than Eurostat data (see Annex Figure 1) and suggests that Poland was also above 2 percent in 2021. Preliminary data for 2022 reported by NATO (2023a) suggests that actual defence spending in 2022 kept growing at the same rate as nominal GDP on average in the EU.

Defence spending will likely increase, as several countries have announced ambitious plans in response to Russia’s invasion of Ukraine. NATO members might now take the 2 percent military spending requirement more seriously. Reaching that target would require 0.7 percent of GDP in additional annual defence spending on average in the EU. Some EU countries with relatively high debt levels will have to increase their defence spending more than the EU average, since such spending stood at just 0.8 percent in Portugal, 0.9 percent in Belgium and 1.0 percent in Spain. Italy’s defence spending was 1.4 percent of GDP in 2021. However, the most indebted EU country, Greece, was well over the target, at 2.8 percent in 2021.

3.2. Climate transition

While climate change can affect debt sustainability through several channels, including growth and borrowing costs, the most direct medium-term channel is higher

public investment needs (Zenios, 2021). According to the central scenario in European Commission (2020b), achieving a 55 percent greenhouse gas emissions reduction by 2030 compared to 1990 requires additional total (public and private) annual investment in energy and transport of €360 billion (at 2015 prices) on average per year, corresponding to roughly 2 percentage points of annual EU GDP. Even more investment is needed beyond 2030 to reach net-zero emissions by 2050. Additionally, the costs of reducing to zero by 2027 the dependence on Russian fossil fuels requires an investment of €210 billion (presumably at current prices) in 2022-2027 and a further €90 billion in 2028-2030, according to the REPowerEU action plan (European Commission, 2022).

A significant share of this additional investment will have to be funded by the public sector. The share of public funding can be reduced by appropriate government regulation, taxation policy and a higher carbon price. Nevertheless, some public spending cannot be substituted by private investment easily, for example, when energy-network externalities cannot be properly priced. Other examples justifying public investments are informational inefficiencies and the difficulty of pricing tail risks.

Fostering private investment with the use of regulation, taxation and elimination of subsidies has limitations. For example, a significant increase in gas and electricity prices related to the war in Ukraine should be welcomed from the perspective of the green transition, as it creates strong incentives for the private sector to move away from fossil-fuel consumption. But governments throughout the EU have rushed to dampen the impact of higher energy prices. There are political limitations on energy price increases, and the same applies to tighter regulations and subsidy elimination.

Based on the National Energy and Climate Plans of EU countries for overall climate-related investments during 2021-2030 (including tax incentives and subsidies), the share of the public sector in total climate investment is about one-third (Darvas and Wolff, 2022). This implies that the public sector should fund about 0.6 percent of GDP of the total 2 percent of GDP additional climate investment needs. Estimates in Baccianti (2022) are even higher, suggesting 1.8 percent additional annual public investment needs. The increased climate mainstreaming of the EU's Multiannual Financial Framework and the green component of NextGenerationEU (NGEU) help to fill only a small portion of the funding gap. Moreover, NGEU expires in 2026, so southern and eastern EU countries that are currently receiving large amounts from NGEU will have to find new resources after 2026 to maintain their climate investment.

The IMF WEO forecasts that total economy investment (both private and public) in the EU is expected to decline from 24.6 percent of GDP in 2022 to 23.8 percent of GDP in 2028. While the components of the investment forecasts are not known, it is unlikely that the IMF baseline includes 2 percent of extra climate investment when the total investment rate is expected to decline.

3.3. Digital transition

European Commission (2020a) estimated the digital transformation investment gap at €125 billion, or 0.9 percent of GDP, per year. Some part of this funding need must be covered by the public sector, such as the cost of reaching the 100 percent online provision of key public services target of the EU's 2030 Digital Compass⁵. The public sector can play an important role in fostering digital skills and digital inclusion, and the digitalisation of small- and medium-sized enterprises, among others. Darvas *et al* (2021) estimated that NGEU would cover only a portion of the investment gap. Some countries with high public debt rank poorly in digital public services and digital skills.

CONCLUSION

Our findings and their implications can be summarised in four main points.

1. *Pandemic and war shocks have increased longer-term fiscal pressures in the EU through three channels: higher debt, higher expected real interest rates, and higher public investment needs; the required long-term increases in primary fiscal balances are 0.5 percent to 1.5 percent of GDP for most countries.*

To quantify the fiscal impact of higher debt and higher investment needs, one can compare the permanent fiscal balances that are required to stabilise debt at approximately today's level with those that were required to stabilise debt before the pandemic. These have increased by 0.9 percent of GDP on average, and by 1.1 percent to 2 percent of GDP in the 25 percent most impacted countries. Additional public spending needs for defence, climate and digital transitions – which does not appear to be incorporated in fiscal baselines, eg of the IMF – run well above 1 percent of GDP per year.

2. *There are wide differences in fiscal space across EU countries, and these have widened further as a result of pandemic-related debt increases and higher expected real interest rates.*

Annual increases in structural primary fiscal balances required to bring debt on a sustainable path and ensure compliance with the February 2024 Council-Parliament agreement on the EU fiscal rules, when the adjustment period lasts for seven years, range from -0.7 to 0.7 percent of GDP. For high-debt countries, adjustments lie between 0.1 and 0.7 percent of GDP per annum.

3. *Fiscal pressures remain manageable even for the countries with the highest adjustment needs, in the sense that the adjustment these countries need to undertake to put their debt paths on a steadily declining path appears feasible by historical standards.*

The required annual fiscal adjustment looks manageable by historical standards, although it is substantial in some cases. However, new safeguards require continued

⁵ See https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en.

fiscal adjustments to levels that may be excessive for some countries like Italy. Moreover, no special treatment of public investment has been endorsed by the Council. This implies that countries facing minimum adjustment requirements (either 0.5% per year when an excessive deficit exists, or 0.25%-0.4% per year when the 1.5% deficit resilience margin has not yet been reached) should consolidate their current budgets faster than these minimum requirements if they wish to implement additional green investments. For political economy reasons, this is very unlikely to happen, which risks that necessary green public investment would not be implemented. A good option would be to exclude Council-endorsed and Commission-monitored green investment from the minimum annual adjustment needs for a temporary period, while ensuring that by the end of the adjustment period, the structural primary balance reaches a level which complies with all debt sustainability and deficit reduction criteria. In any case, it is essential to explore ways to undertake this investment most efficiently, including at the EU level.

4. While a decline of the real interest rate over the medium term remains a possibility, fiscal policymakers should not make plans that assume such a decline.

The main quantitative findings of this paper are based on current market expectations for real interest rates. Since 2019, these have increased by about 2 percentage points, although they remain moderate by historical standards. The median level is around 1.3 percent, while the highest levels in the euro area around 2 percent (a few countries outside the euro area face higher rates). Market implied uncertainty around nominal interest rates is very high over the next three years. Whether interest rates remain at their current levels, go down again, or even increase further depends on whether the structural factors that led to low interest rates in the first place persist or unwind, with arguments on both sides. Hence, while there is a possibility that interest rates might decline again, fiscal policymakers should not make plans that assume such a decline.

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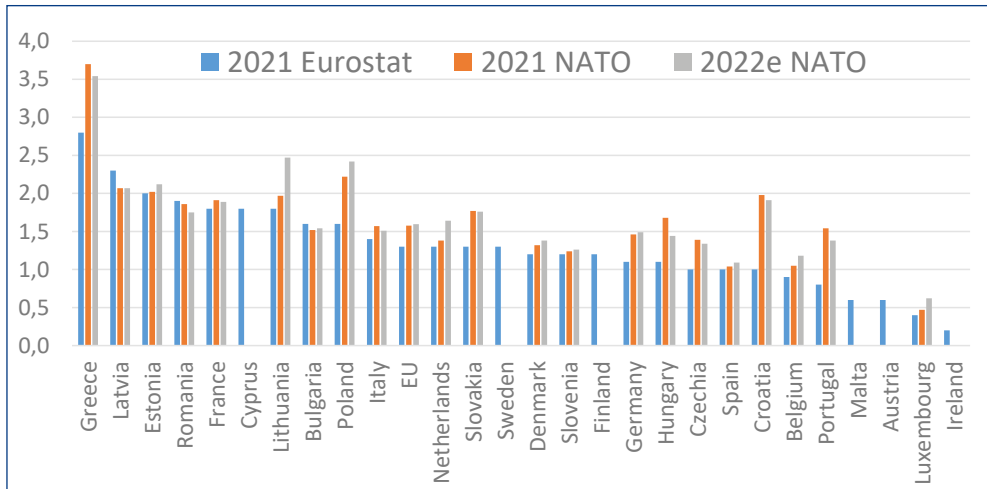
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Figure A1: Defence spending in EU countries (% GDP).



Sources: Eurostat’s ‘General government expenditure by function (COFOG) [GOV_10A_EXP_custom_5665704]’ database; NATO (2023a): *The Secretary General’s Annual Report 2022*, Table 3: Defence expenditure as a share of GDP (page 159).

Note: 2022e refers to an expected value for 2022 as reported by NATO (2023a). NATO data for the EU refers to the 21 NATO members of the EU as of 2022. According to Eurostat, only three countries, Greece, Latvia and Estonia reached the 2% of GDP defence spending commitment in 2021, while NATO data suggest Poland has exceeded the target as well.

THE REFORMS COMPONENT OF SPAIN'S RECOVERY PLAN

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1. INTRODUCTION

In a special meeting of the European Council held in July 2020, European leaders reached an agreement on a new multiyear financial framework for 2021-2027 and on a package of extraordinary measures to support the recovery from the deep crisis caused by the Covid-19 pandemic.¹ These measures would be articulated through a recovery fund, known as *Next Generation EU (NGEU)*, to be executed between 2021 and 2026. The instrument would channel around 750,000 million euros (at 2018 prices) in grants and loans to EU member states, favoring the poorer countries and those that were worst hit by the crisis.

To mitigate the economic and social consequences of the pandemic, these resources would have to be used to finance investments and reforms designed to set the basis for robust and sustainable growth, with special attention to supporting the digital and green transformations. To be eligible to participate in the program, EU member states would have to prepare *Recovery and Resilience Plans* detailing their investment and reform proposals. The European Commission would then assess these plans on the basis of their coherence with these priorities and their consistency with the specific recommendations addressed to member states within the framework of the European Semester in recent years. The disbursement of the funds would then be conditional on the satisfactory fulfillment of the established objectives within the agreed time frame. (EP&CEU, 2021, arts. 18, 19 and 24).

Over the following months, EU member states prepared, negotiated and launched their Recovery Plans. The Spanish Plan was submitted in October 2020 and approved in July 2021 by the EU Council, with a financial contribution of 69,500 million euros in grants. An addendum to the Plan was presented in June 2023 and was approved by the European Commission and the Council in October of the same year. The

¹ See <https://www.consilium.europa.eu/en/press/press-releases/2020/07/21/european-council-conclusions-17-21-july-2020/>

revised Plan includes an additional 10,300 million euros in grants and 83,000 million in loans. The Plan also includes a detailed listing of 140 investment targets and 111 reform milestones that must be fulfilled to the Commission's satisfaction before disbursements can be made.

NGEU has two noteworthy novel features. One is that, breaking a long-standing taboo, it will be financed through the emission of mutualized debt issued by the European Commission on behalf of the entire EU. To finance and repay this debt (by 2058) the EU will have to find new "own revenue" sources. Another novelty is that, unlike most European funds to date, the Recovery Fund will disburse its resources following a *pay for performance* criterion, rather than simply reimbursing spending on authorized programs and investment projects. Performance, moreover, will be partly measured in terms of the implementation of reform measures that are expected to have long-lasting positive benefits for growth, equity or sustainability. Hence, NGEU funds will be used to incentivize structural reforms.

The two features may be seen as parts of a negotiated package. Since the burden of debt servicing and repayment will fall disproportionately on the richer EU countries, an ambitious program of structural reforms that will improve the growth potential of poorer countries and help improve their public finances may be a reasonable *quid pro quo* for the transfer implicit in debt mutualization— provided it helps increase this second's group contributions to the EU budget in the future, or at least reduce their need for further assistance. For the bargain to be satisfactory for both parties, and hence susceptible of repetition in the future, it is important that the reform programs be well designed and correctly executed.

This paper asks to what extent this is happening in the case of the reforms contained in the Spanish Recovery Plan. Over the last two and a half years, Spain has approved a large number of reforms, some of them of great economic and social importance, generally respecting the deadlines established in the Annex to the Plan, although often at the expense of an excessive use of urgent legislative procedures that may have reduced their quality. The following section lists the main reforms contained in the Spanish Plan and checks whether their stated objectives are in line with NGEU's requirements. The rest of the paper will then look more closely at the content of some of these measures, and at the Commission's assessment of them.

My conclusion is that, from the point of view of the objectives of NGEU, the balance of the reform program contained in the Spanish Recovery Plan has been spotty up to now, with some important reforms pointing in the wrong direction and some others lacking ambition. The Commission's reports, however, have mostly ignored the problematic features of the new legislation, with one important exception that served as a reminder of the need to balance the books of the public pension system. In the following months, the Commission will have to pronounce itself over the just completed pension reform and about some other important measures, like the new housing law. It will be doing both Spain and Europe a disservice if it does not raise its voice against ill-conceived measures and fails to push for a course correction to take full advantage of NGEU's potential to strengthen the Spanish economy.

2. THE REFORMS COMPONENT OF THE SPANISH RECOVERY PLAN: AN OVERVIEW

As has already been noted, Recovery and Resilience Plans must be consistent with the country specific recommendations (CSRs) addressed to EU member states in the context of the European semester in recent years. Box 1 lists the most important such recommendations for the case of Spain. They concentrate on fiscal sustainability, with special attention to the pension system, reinforcing social protection and improving labor market performance and educational outcomes.

Box 1: Main country specific recommendations to Spain (2019 and 2020)

- **Fiscal sustainability**
 - Pursue fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability,
 - Preserve the sustainability of the pension system.
- **Social protection**
 - Improve coverage and adequacy of minimum income schemes
 - Improve support for families
 - Ensure that social services have the capacity to provide effective support.
- **Labor market**
 - Foster transitions towards open-ended contracts, including by simplifying the system of hiring incentives.
 - Ensure that employment services have the capacity to provide effective support.
 - Support employment through arrangements to preserve jobs, effective hiring incentives and skills development.
- **Education**
 - Reduce early school leaving and improve educational outcomes.
 - Increase cooperation between education and businesses with a view to improving the provision of labour market relevant skills and qualifications, in particular, for information and communication technologies.
 - Improve access to digital learning.

Source: CEU (2019 y 2020).

Box 2 lists the major reforms included in the Spanish Recovery Plan and their stated objectives. Comparing the contents of both boxes we see that, at least in principle, the proposed reforms are indeed consistent with the CSRs. In both cases, the focus is on the improvement of labor market performance, educational outcomes and social protection, while preserving the sustainability of public finances. As we will see below, however, some of the measures that have been approved so far as part of the Plan are not consistent with their stated objectives or fail to pursue them in an effective or efficient manner. For future reference, I have underlined in Box 2 those stated objectives for which the tension with implemented measures is greater.

Box 2: Major reforms included in the Plan and their stated objectives

- **Labor market:** Its main objectives are to reduce structural unemployment and youth unemployment, reduce the widespread use of temporary contracts and correct labour market duality, increase investment in human capital, modernise collective bargaining instruments and increase the effectiveness and efficiency of active labour market policies (p. 210).
- **Social Protection:** “The focus shall be on ensuring appropriate coverage depending on the circumstances leading to vulnerability and ensuring adequate income support, thereby contributing to poverty reduction. To this end, it shall take into account the structural needs of households, notably families with children and people with disabilities. It shall also link income support to active job seeking, in order to foster socio-economic integration and avoid poverty traps”. (p. 204).
- **Pensions:** “The objective ... is to reform the pension system in order to i) ensure the financial sustainability of the system in the short, medium and long term, ii) maintain the purchasing power of pensions, iii) preserve the adequacy of pensions, iv) protect pensioners from poverty and v) ensure intergenerational equity” (p. 256). The Council Decision approving Spain’s original plan leaves a considerable leeway for the final form of measures to be negotiated with the social partners but warns that the final design of the reform “should be compatible with the medium- to long-term fiscal sustainability of public finances.” (CEU, 2021a, p. 14).
- **Fiscal Reform:** “The objectives pursued by the reform of the Spanish tax system are to make it more equitable, progressive, sustainable and fair, while deepening the design of green taxation, incorporating a gender perspective The reforms also aim at contributing positively to economic growth, job creation, economic resilience and inter-territorial cohesion. As the overall ratio of tax revenue to GDP in Spain is lower than in peer economies, there is scope to raise revenues and foster the medium and long-term sustainability of public finances.” (p. 244).
- **Housing:** “The objective of this measure is to implement, by means of the Housing Law, a first of a kind regulation in Spain, to address the various public planning, programming and collaboration instruments already in place to support the right to decent and adequate housing. It shall address the rehabilitation and improvement of the existing housing stock, both public and private, and regeneration and renewal of the residential environments in which they are located, to improve the quality of life. The law addresses the achievement of a sufficient level of housing stock for rental property, available at affordable prices.” (p. 16).
- **Education:** “This component of the ... plan focuses on modernising the education system and improving education infrastructure. It aims at a more flexible and inclusive system better tailored to the needs of each pupil and introducing new teaching and learning techniques, including digital. (p. 193)

Source: CEU (2021b), unless noted otherwise.

The preliminary record of the reforms component of the Spanish Recovery Plan is mixed. While improving social protection has probably been the first priority of the current Government, good wishes have not always translated into effective policies and fiscal sustainability considerations have not received the attention they deserve. A sorely needed minimum income scheme (IMV, for its Spanish initials) has been intro-

duced to combat poverty (BOE, 2020), but its rollout has been greatly slowed down and its effectiveness compromised by the decision to have the central Government manage it, rather than the autonomous communities that were already running supplementary income programs and manage the employment services whose collaboration is essential to avoid turning the IMV into a poverty trap. In the same line, it has taken over two years to introduce (in BOE, 2022b) incentives to accept employment offers without losing benefits that will bring the scheme's effective marginal tax rate below 100%.²

Progress has also been made in reducing labor market duality through an important legal reform, negotiated with the social partners (BOE, 2021b), that greatly restricts the use of temporary contracts, slightly increasing outsiders' bargaining power, and modifies some aspects of collective bargaining in favor of unions while preserving firms' ability to adjust to negative shocks. The reform has greatly increased the share of open-ended contracts, thereby dramatically reducing what may be called "contractual precariousness," but has had little effect so far on average contract durations and wages (Felgueroso and Doménech, 2023 and Conde Ruiz et al, 2023). There has also been little real improvement in the functioning of the public employment offices that run intermediation services and manage active labor market policies, in spite of a new employment law that introduces mostly cosmetic changes (BOE, 2023c).³ In the area of education, there has been a significant legislative and budgetary effort, with revisions of several basic laws and ambitious investment plans, but there have also been complaints that the new legislation pays insufficient attention to the quality of education (Gomendio, 2023).

As for tax reform, the report of the expert committee established in the Plan was published in February 2022 (Ruiz Huerta et al, 2022) but there has been no attempt so far to implement any of the (mostly sensible) reforms proposed in it, a task that should in principle have been completed by the first quarter of 2023. Aside from tinkering with indirect taxes on energy and foodstuffs to lower measured inflation and alleviate its effect on household budgets, substantive tax measures during the last two years have been largely limited to the introduction of new *ad hoc* levies on certain large corporations in the energy and financial sectors and a supplementary wealth tax, a set of measures not contemplated in the Recovery Plan.

The law establishing the sectoral levies is problematic on both procedural and substantive grounds. It has been rushed through Parliament in record time using a non-standard procedure to avoid all normally required reports by advisory bodies, such as the Council of State, and other quality filters on legislation initiated by the Government. The new taxes it creates, moreover, are highly questionable. The first one (the levy on banks and energy firms) is particularly worrisome as a threat to the rule of law, for it sets a very dangerous precedent that would essentially give the Gov-

² For a more detailed analysis of IMV, see section 4.1 of Felgueroso and de la Fuente (2020) and Appendix 7 to de la Fuente (2022).

³ For a more detailed analysis, see Appendix 1 to de la Fuente (2022) and the references listed there.

ernment of the day the power to establish arbitrary levies on specific sectors or even firms, violating the principle of equal treatment of equals and the requirement that taxes reflect economic capacity (rather than its presumption or ideological biases against certain agents), as set out in the Constitution and the General Tax Law. The levy has little in common with the solidarity tax on the measured extraordinary profits of energy companies contemplated in CEU (2022) and should be reformed to bring it into accordance with this Council Regulation, which is often but wrongly cited to justify it.⁴

The supplementary wealth tax also raises complicated issues. In order to neutralize certain cuts in the wealth tax introduced by regional governments, it essentially reverses the assignment to these administrations of competences in the matter, acting in an opaque way that has brought forth constitutionality challenges by several autonomous governments. While the Central Government ultimately does have the constitutional power to regulate what continues to be a national tax (although “ceded” to the regions), the method used to do so is problematic. Competences over the tax have been transferred to the regions as part of a broader package that regulates the current regional financing system and has been ratified through bilateral agreements between the central and each of the regional governments. Since the new tax amounts to a change in the package imposed unilaterally by the Central Government, there may be grounds for a challenge before the Constitutional Court.

Other clear cases of misguided legislation under the auspices of the Recovery Plan have to do with the public pension system and with housing. The new pension legislation is a clear step backward in terms of the sustainability of Spanish public finances because it contains changes that will considerably increase pension expenditure over the next decades without introducing significant compensating measures in terms of expenditure containment or revenue increases. The new housing law, in turn, is likely to considerably aggravate the scarcity of affordable rental housing that motivated its introduction. The following two sections will look in some detail at these two important reforms.

3. A QUESTIONABLE PENSION REFORM

One of the most important and controversial measures included in the Spanish Recovery Plan has been a comprehensive package of public pension reforms that have been passed into law between 2021 and 2023 (BOE, 2021a, 2022a and 2023a). The main measures are listed in Box 3, which includes brief descriptions of their content, stated objectives and possible shortcomings.

⁴ See de la Fuente (2022b) for more details.

Box 3: Main measures included in the recent public pension reform

- **Repeal of the pension revalorization index and return to the indexation of all pensions to the CPI** to guarantee their purchasing power. (p. 257)

- **Repeal of the Sustainability Factor (SF)** that would have reduced starting pensions to compensate for the effects of increases in life expectancy, to be **replaced by a new intergenerational equity mechanism (IEM)**.

The design of the mechanism was not specified in the original Plan. Its first formulation (BOE, 2021) introduced a temporary rate increase of 0,6 percentage points to Social Security contributions between 2023 and 2032 to build up a reserve fund to help cover pension expenditure after 2033, and a vague commitment to do something if this was not sufficient in the future.

- *stated objective*: “to address the impact of the forthcoming demographic changes without worsening the adequacy of current and future pensions.” (p. 257)

- *problems*: The repeal of the SF will aggravate the system’s sustainability problems. The IEM will not improve intergenerational equity because it continues to increase the burden on the young to maintain the generosity of pension benefits and will be insufficient to guarantee the sustainability of the system, or even to replace the SF.

- **New incentives for delaying retirement beyond the legal age or discouraging early retirement.**

- *no objection*, but it is highly unlikely these measures will generate the large savings in pension spending the Government foresees.

- **Reform of the system of social contributions for self-employed workers.** They will no longer be able to choose the level of their contributions, which will be based on their income from now on.

- *no objection*, but it is highly unlikely this reform will generate a large surplus during several decades, as the Government expects.

- **Adjustment of the contributory period used for the calculation of the retirement pension.**

- *stated objective*: “to reinforce the progressivity of the system and adapt the current regulation to discontinuous careers and other forms of atypical work” (p. 257).

- *problems*: it was expected that the computation period would be lengthened as a way to partially compensate for other measures that will increase pension expenditure, but the way it was done (allowing people to disregard the most unfavourable periods) will actually increase starting pensions and hence expenditure. It is questionable that the pension system should be progressive.

- **Non-contributory and minimum pensions will be raised and linked to the poverty threshold.**

- *problems*: the Government seems to underestimate the cost of the measure.

- **Measures to increase revenue**: Gradual increase of the maximum contribution base, coupled with a quasi-freeze of maximum pensions in real terms until 2050, new solidarity contribution on labor incomes above the maximum contribution base, increased IEM contribution (will rise from 0,6 percentage points in 2023 to 1,2 pp. in 2029 and remain in force until 2050).

- *problems*: these measures will be insufficient to avoid sustainability problems and will reduce the contributory character of the pension system, partially turning social contributions from delayed compensation into a pure tax.

- **New safeguard clause of the IEM:** Starting in 2025, the financial situation of the public pension system will be reviewed every three years using the Aging Report's projections of pension expenditure and AIREF's estimates of the effects of the recent reform on revenues. If expenditure net of additional revenues exceeds a certain threshold (in terms of expected average values over 2023-50) a semiautomatic adjustment mechanism will be triggered. Unless an agreement can be swiftly reached on alternative measures, social contribution rates will be raised to correct the imbalance in a maximum of five years.

- **Problems:** The threshold will be exceeded from the start. The mechanism is likely to force a sharp increase in social contribution rates which may have adverse effects on employment, and the threshold still allows a rather large basic deficit.

- **"Separation of sources" of Social Security funding**

- **stated objective:** "to change the financing of the pension system ... so that contributory benefits are financed through social contributions and non-contributory benefits are paid from the state budget. The reform shall consist of the state taking over the financing of a number of expenditure items, which are currently covered by social contributions." (p. 256)

- **problems:** There are few non-contributory benefits that were not already financed by government transfers since 2013, when the Government assumed the entire cost of minimum pension complements. Most of the new transfers cannot be justified with this logic and essentially serve to move the deficit from the Social Security budget to that of General Government, making the problem less visible and hence harder to solve.

- **MAIN PROBLEM:** the reform can compromise the financial sustainability of the system and its intergenerational equity. The Government has published expenditure and revenue projections purporting to show the sustainability of the system is not at risk, but its calculations have been broadly questioned.

Source: CEU (2021b).

The first stage of the reform involved the repeal of two automatic expenditure control mechanisms introduced as part of the previous reform: a rule for the revalorization of pensions that essentially froze them while the system was in deficit, and the so-called *Sustainability Factor*, which would have reduced starting pensions to compensate for increasing life expectancy (but was repealed before it went into effect). It is generally agreed that this first round of changes will put considerable upward pressure on future pension expenditure. There is no such agreement, however, regarding the extent to which other parts of the reform will help balance the system's accounts through expenditure savings or additional revenues. While the Government is very optimistic in this regard, most academics and private analysts are seriously concerned about the effects of the reform on the financial sustainability of the public pension system, or rather, about the danger that rapidly rising pension expenditure may leave Spain with little fiscal margin for almost anything else.⁵

⁵ See the Ministry of Social Security's projections of the revenues and expenditures of the public pension system (MISSMI, 2023) and the critical response prepared by a large group of academic experts (de la Fuente et al, 2023).

The Government's optimistic projections of the net financial effect of the reform rely heavily on its estimates of the budgetary implications of the recently legislated changes to the contribution system for self-employed workers and the strengthening of incentives for postponing retirement. While the measures adopted in these areas are quite sensible on their own right, a large majority of analysts find it extremely unlikely that they will generate the large savings or additional revenues the Government has penciled in in its reports. Among other problems, the Ministry's calculations, do not seem to take into account that both of these measures will have a delayed effect on expenditure through higher future pensions that will already be substantial in 2050, and are based, furthermore, on extremely optimistic assumptions regarding the take up rate of incentives for pension postponement and its effects on expenditure.

The reform was completed with a third package of measures that was approved in 2023. It includes some modifications in the calculation of the initial pension, a gradual increase in the maximum contribution base accompanied by the quasi-freezing of maximum pensions until 2050, the introduction of a solidarity contribution on labor incomes above the maximum contribution base, a revision of minimum and non-contributory benefits to increase their amounts and link them to the evolution of median income, and a redesign of the (misnamed) Intergenerational Equity Mechanism (IEM) to introduce a gradual increase in social contribution rates and a safeguard clause to which I will return below. Against all expectations, the changes to the calculation of the initial pension were not designed to help contain expenditure but will actually increase it (by allowing retirees to disregard the months with the lowest contributions). All together, the new package can be expected to generate some net revenue gains, but not nearly enough to bring the system back into equilibrium.

Over the last few years, the Government has reduced the official deficit of the pension system by greatly increasing its annual transfers to it. The official story is that this is just the completion of the long process of "separation of sources" thorough which the Government has gradually assumed the cost of non-contributory benefits which were previously financed by surplus social contributions. In fact, that process was essentially completed in 2013, when the Government assumed the full cost of the complements that bring contributory pensions to a guaranteed minimum level. The one significant exception to this has to do with the financing of certain reductions in social contributions that are used as employment incentives, but the cost of these subsidies (around 1,700 million in 2023) is only a fraction of Government transfers to the Social Security System, which increased by almost 20,000 million euros between 2019 and 2023 (de la Fuente 2023d, pp. 15-17).

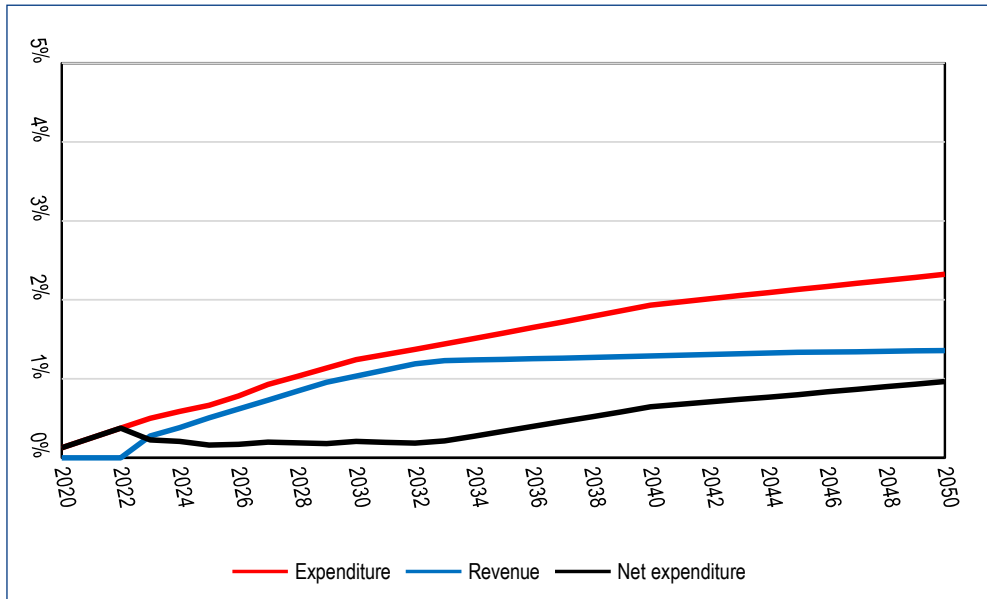
To get a feeling for the magnitudes involved, Figures 1 to 3 compare the Government's projections of the public pension system's revenues and expenditures (in the absence of corrective measures) with an alternative based on the most recent edition of the EU's Ageing Report, that of 2021 (EC, 2021a), and my own estimates of the incremental effects of the reform published by FEDEA (see de la Fuente, 2023 a, b and c). As can be seen in Figure 1, while the Ministry of Social Security (MISSMI) expects that the reform, as a whole, will have only a moderate impact on the system's budget

deficit, which would never exceed 1 percentage point of GDP, my calculations point to an increase of more than 3 points of GDP in the system's basic deficit (i.e. its deficit without considering Government transfers).

According to my projections, total expenditure on public pensions (including those of civil servants and non-contributory benefits) would reach 17,8% of GDP in 2050, 2,5 points above the Ministry's forecast (Figure 2). If we take as a reference the central scenario of the 2021 Ageing Report (EC, 2021a) for the rest of the EU, that figure would put Spain in the lead in terms of pension spending as a percentage of GDP, 5,2 points above the EU average and 1,6 points above Italy, which would take second place. The sharp increase in expenditure would also translate into an important increase in the basic deficit of the public pension system which, in the absence of corrective measures, would average 4,5 points of GDP during the period 2022-50 and reach 6,3 points in 2050 (Figure 3). Between now and 2050, that gap would absorb almost 40% of the State's net tax revenue (excluding the participations of regional and local administrations in shared taxes), reaching 50% in 2050.

Figure 1: Expected effect of the recent reform on the finances of the pension system. Incremental revenue and expenditure and net impact as a % of GDP.

a. MISSMI



b. FEDEA

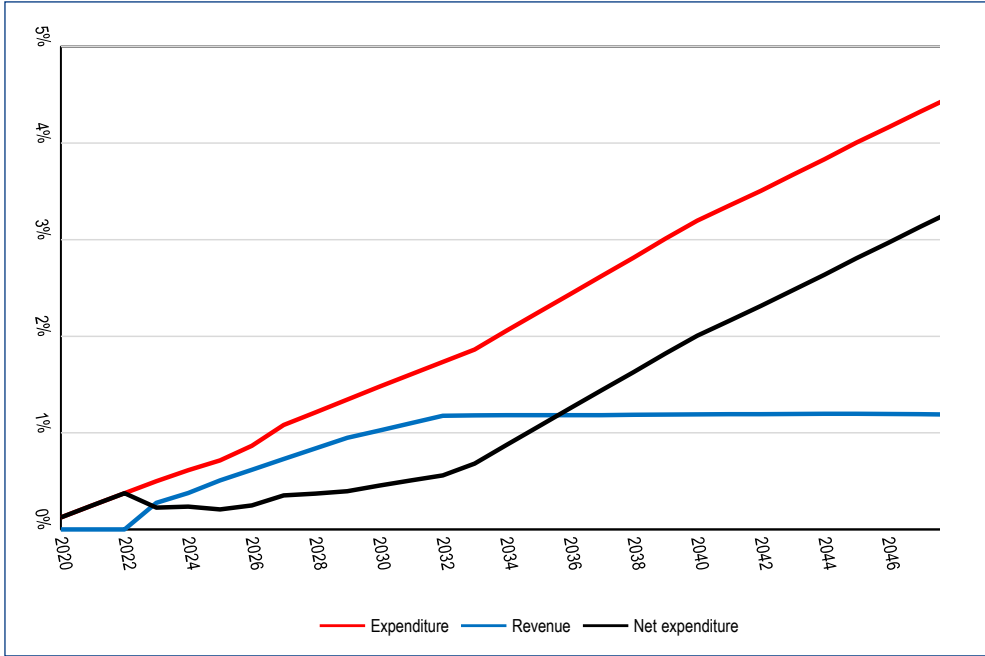
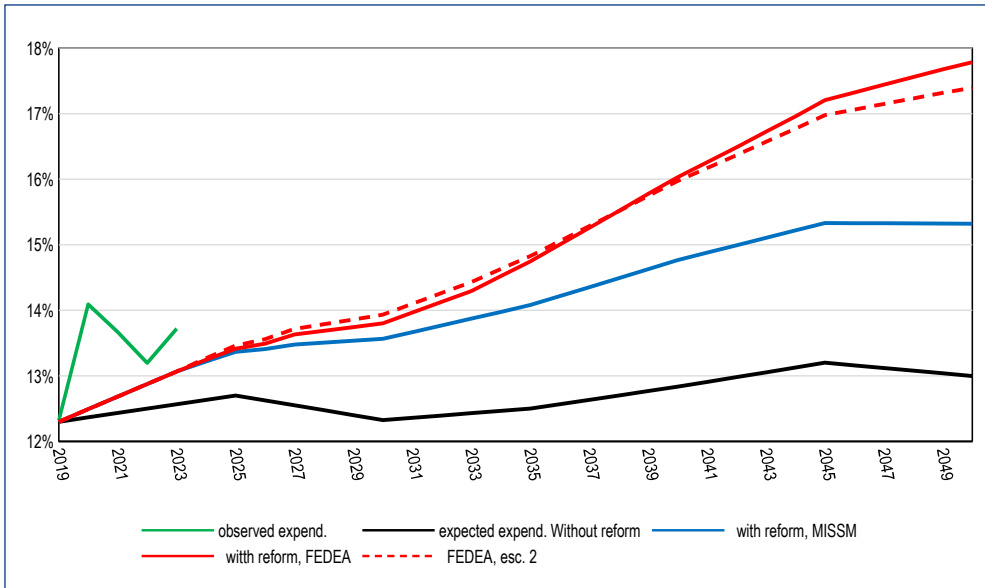
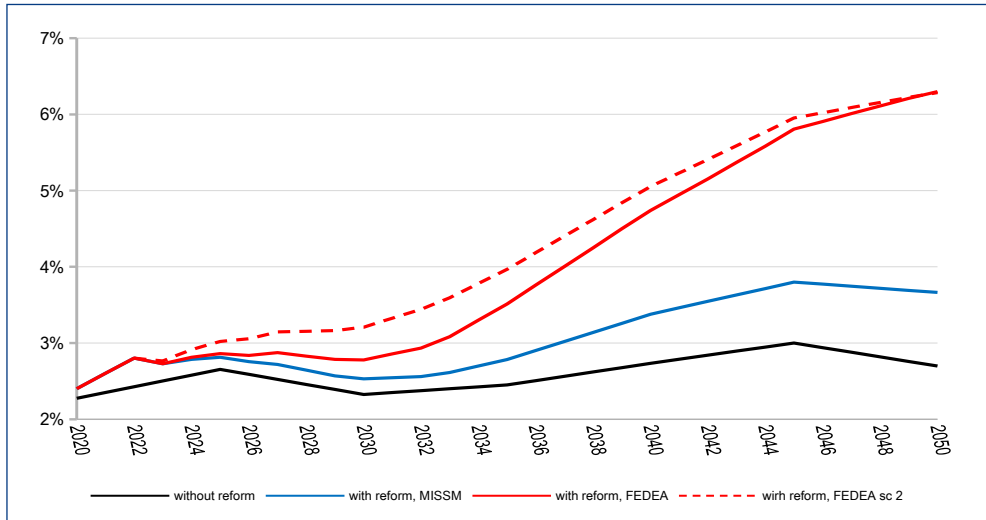


Figure 2: Expected evolution of spending in public pensions, % of GDP.



Source: de la Fuente (2023c).

Figure 3: Expected evolution of the basic deficit of the public pension system.



Source: de la Fuente (2023c).

It must be kept in mind that the reform does introduce a quasi-automatic mechanism that will force the introduction of corrective measures if future official projections anticipate a sufficiently large increase in net expenditure. The mechanism takes the form of a safeguard clause introduced into the second version of the IEM (see Box 3) under pressure from the European Commission in order to cap projected pension expenditure net of new revenue measures. Starting in 2025, the system will undergo a series of periodic reviews that will rely on the spending projections of successive Ageing Reports and on estimates of the impact of the reform's new revenue measures prepared by AIReF. If expected average expenditure over 2022-2050, net of expected average new revenues over the same period, exceeds 13,3% of GDP, the correction mechanism will be triggered, forcing, in the absence of a rapid agreement over alternative measures, an increase in social contribution rates to finance the estimated excess expenditure.

The consensus view among academic specialists (see de la Fuente et al, 2023), however, is that the safeguard clause would have to be activated right away, as the relevant condition would be satisfied with the most reasonable projections available today. It is also worrisome that its activation would still leave the public pension system with a rather large basic deficit that will considerably reduce the resources available to meet other priorities. With the projections summarized above, average pension expenditure between now and 2050 would be above 15% of GDP while the incremental revenues of the pension system generated by recent reforms would not exceed 1% of GDP. These projections would immediately trigger the safeguard clause, forcing a raise in social contribution rates of between 3 and 4 percentage points. This adjustment would help contain the system's basic deficit but would still leave it at an uncom-

fortably high level: 3,2% of GDP on average between now and 2050 and around 5% in 2050. These results suggest that it may be wise to reconsider a reform that would need important corrections from the very moment of its approval, even under fairly lax limits on the system's maximum basic deficit.

4. THE NEW HOUSING LAW

Another socially minded but problematic reform has been the approval of a new housing law (BOE, 2023b) that aims to “give content” to “the right to decent housing.” The attempt to make progress in this complicated question is likely to be not only unsuccessful but also counterproductive. Ignoring the lessons of both our own recent history and economic theory,⁶ the norm chooses a set of policy options that will only aggravate the existing shortage of affordable rental housing, mostly by weakening private property rights over real estate.

As stated in the law's preamble and in its second article, a central objective of public housing policy must be to “facilitate the existence of an adequate and sufficient supply of housing that responds to the existing demand and allows the equilibrium of the market” (BOE, 2023b, p. 71.485). To pursue this objective, the new law sets out a series of instruments that include increased investment in the public stock of rental housing and fiscal deductions for income from private rentals, but also a more problematic set of options that will inevitably tend to worsen the supply problems the law presumably wants to solve. Among them is the possibility of introducing rent controls in areas considered “stressed” by local or regional authorities, the imposition of general limits on the actualization of rents and mandatory extensions of rental contracts in favorable terms after their expiration, as well as some provisions that make it complicated for owners to recover their property from delinquent tenants or illegal occupants. All these measures reduce the return to investment in residential real estate destined for rental or increase its expected risk, thus reducing its current and future stock through the withdrawal of properties from the market and a decline in investment in the construction of new units.

The law also contains imprecise language on the “social function” of housing property that weakens property rights over housing units and is likely to further discourage investment in the sector. In this line, the law's preamble states that the constitutional right of citizens to have access to housing “modulates both property rights and free enterprise when they operate in the housing sector, from the double perspective of the social function of property and general interest” (BOE, 2023b, p. 71,479). Articles 1.2 and 11 introduce certain limits to and duties associated with the ownership of housing units, with a view to “guaranteeing the social function of property.” Article 1.2 refers to the *duty* of owners of housing units to “destine them to the habitational use foreseen by the law” and arts. 11.1.e, 19.1 and 19.4 to their “obligation to collab-

⁶ See, among many others, López García (2019) and Arruñada (2022).

orate with the public administrations and supply information” on the use of their housing properties to “facilitate the increase of the supply of affordable rental housing.” While vaguely worded, these provisions can be interpreted in ways that would allow public administrations to impose unreasonable obligations on property owners, including that of renting their property at below market prices, or even the threat to have it expropriated to be destined to social uses, as has already been announced in Catalonia.⁷

Hence, the new law contains provisions that allow public authorities to expropriate without proper compensation part of the economic value of private property in order to finance what are seen as social policy measures. Even if we agree on the goodness of such measures (which is often questionable, as their beneficiaries are not always the needier parties), this is not a reasonable way to finance a public policy. If we decide that certain individuals need help to have a decent place to live in, the cost of the necessary aid should be shared by all in an equitable manner through the tax system. Hence, public administrations should assume the relevant costs in the first instance and then pass them on to society through general taxes. What should not be done is to arbitrarily force such costs, totally or partially, onto private parties that just happened to walk by. This way to proceed not only ensures an unfair distribution of the costs of such policies, but also hides them from the public’s view, invalidating the usual accountability mechanisms.

5. THE COMMISSION’S REACTION

As required by art. 24 of the RRF Regulation (EP&CEU, 2021), the European Commission has assessed Spain’s requests for payment on the basis of the fulfillment of the successive tranches of required targets and milestones. Three such requests have been submitted so far, the last one in November 2022, and all three have been approved by the Commission. So far, the Commission’s assessments of Spain’s progress in the implementation of its Recovery Plan (EC, 2021b, 2022 and 2023) have been quite benign. In many cases, the reports simply note that the relevant law has been passed, without looking carefully at its content and its possible shortcomings, and the Spanish Government’s estimates of likely economic or budgetary effects are generally accepted without question.

The one significant exception I have found to this rule is in the Commission’s report on Spain’s second request for payment (EC, 2022, pp. 91-3) and has to do with some of the components of pension reform. As most analysts, the Commission’s services question the Spanish Government’s estimates of the pension savings generated by the new incentives to postpone retirement and the net effects of replacing the Sustainability Factor with the first version of the Intergenerational Equity Mechanism. The document warns of the danger of a widening gap between expenditures and revenues that

⁷ For a more detailed discussion, see Nasarre (2022) and de la Fuente (2023e).

would have to be corrected by adjusting the design of still pending reforms, citing in particular the expected extension of the computation period used to calculate starting pensions. These warnings disappear, however, in the third assessment report (EC, 2023), even though the discussion of the Government's estimates of the net effects of the new contribution system for the self-employed, also widely questioned in Spain, would have been a perfect occasion to reiterate them while the final components of the reform were being discussed.

As noted above, the expected extension of the pension computation period has not finally materialized but the Commission's concerns seem to be behind the revision of the IEM to introduce the semiautomatic safeguard clause discussed above, which may have dispelled the Commission's doubts. At any rate, we will have to wait for the report on the fourth payment request to know the Commission's assessment of the entire pension reform, including the Ministry's projections of its effects on revenues and expenditure until 2050, as well as its opinion on the new housing law. It is to be hoped that the Commission will not allow such questionable reforms to go through unchallenged and will push for corrections that will increase the sustainability of our public finances, our growth potential and the prospects for further advances in European integration. We are still on time to rectify.

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**LESSONS FROM PRUDENTIAL POLICIES
IN A WORLD OF DIGITAL FINANCES**

DIGITAL EURO: HOW TO FACE THE CHALLENGES OF AN EVENTUAL FUTURE ISSUANCE.

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ABSTRACT

This article deals with the European Central Bank Digital Currency (CBDC) project currently being explored by the Eurosystem and European regulators: the digital euro. The introductory section explains the work done by international central banks to explore the issuance of digital currencies. Section 2 introduces different options for its main features and design, analyses the reasons argued by central banks to conduct research or even experiment with CBDC and highlights the potential risks of such a project. Section 3 undertakes an in-depth review of the digital euro project. It describes the milestones in terms of calendar and includes a detailed explanation of the key elements of the design proposed by the Eurosystem. Notably, use cases, limits, distribution model and allocation of activities or the support to financial and digital inclusion. Finally, this section also presents the main elements of the European Commission proposal on that topic. Section 4 sets out the challenges arising from the digital euro and how to address them. In particular, there is a review of the main features that the design of an eventual digital euro should consider so as to minimise the potential risks. The last section is devoted to stressing the main conclusions of this ongoing discussion.

Tags: CDBC, Digital Euro, Token, Stable Coin, Digitalization, Wholesale, Retail, Deposits, Holding Limits, Banking System, Payments, P2P, Offline.

1. INTRODUCTION

Bank money has been digital for decades given that electronic means of payment has been used daily during this time. More recently, the growing digitalization and the unstoppable wave of technological innovation across the payments landscape have reached the design of sovereign money itself.

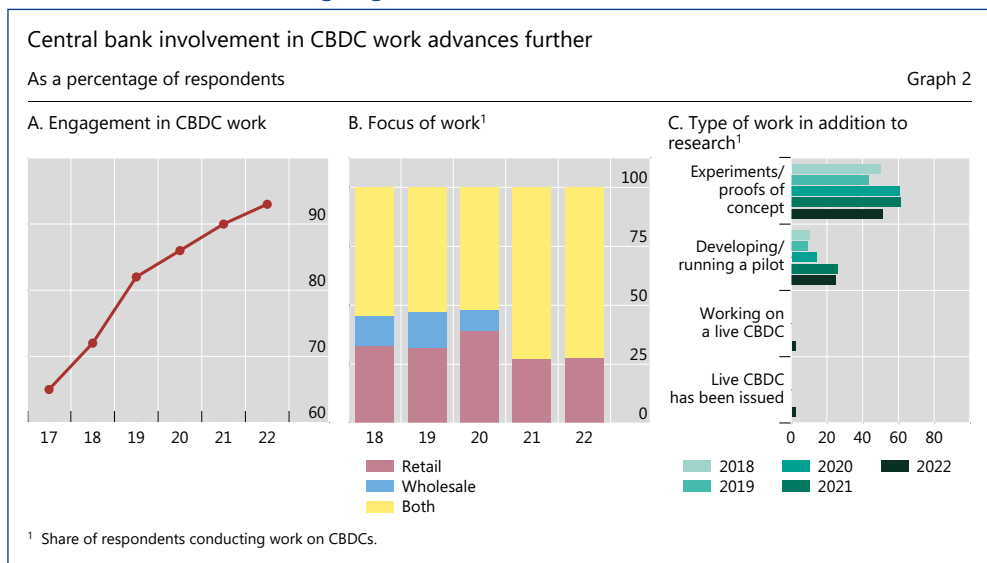
Central banks are exploring the opportunity to apply new technologies to central bank money, to digitize it and thereby ensure that citizens maintain access to risk-free sovereign money as a payment option, promote financial inclusion and, in particular, prevent the possibility of rapid market adoption of private stable currencies (stablecoins) issued by large technology companies, which could generate systemic risks and even endanger monetary sovereignty itself.

Recent BIS reports highlight the interest –or commitment– of the different central banks in the issuance of digital currencies (Central Bank Digital Currencies, CBDCs).

A retail CBDC refers to digital central bank money offered to the general public (available to citizens), as opposed to a wholesale CBDC, which is designed for the use among financial intermediaries for the settlement of interbank transfers and related wholesale transactions in central bank reserves.

Throughout 2022, 93% of the central banks surveyed (out of a sample of 86) reported that they are already conducting some form of research or experimentation with CBDCs, both in the wholesale and retail scope, as is the case for the European Central Bank, and some are even already in the implementation phase of real pilot projects. Most of the focus is on retail CBDC.

Exhibit 1. Central Banks ongoing work on CBDCs



Source: BIS, Results of the 2022 BIS survey on central bank digital currencies and crypto

However, the main obstacle they face is to address the adequate design to limit the important effects that a retail CBDCs issuance can have on the implementation of monetary policy and on financial stability. Indeed, if CBDCs held by the general public are not limited, a massive shift of deposits towards these currencies could have an impact on the key role played by banks in financing the real economy.

The digital euro, that the European Central Bank is currently exploring and will eventually issue in the future, foresees these risks and the need for tools to help to limit its function as a store of value, and thus control the impact on financial intermediation and on credit institutions' liquidity.

2. AN APPROACH TO CBDCS: FEATURES AND JUSTIFICATION

CBDC is potentially a new form of digital central bank money, different from reserves held by commercial banks at central banks. Central banks have been exploring the issuance of digital money for years, analysing the different characteristics that this type of digital currencies issued by monetary authorities might have.

The various design choices for a CBDC include:

- The access (widely vs restricted): whether they should be issued and used only in wholesale markets (to make cross-border wholesale transactions more efficient) or to make it also available to the general public, simulating cash. These are probably the two main CBDC types: wholesale and a general purpose CBDC (also known as retail CBDC).
- The degree of anonymity ranging from full anonymity via tokens or none (deposits at the central bank, directly accessible to the public)
- And the interest-bearing characteristics: whether they could serve to reinforce the transmission of monetary policy (by applying official interest rates to CBDCs) or not.

Exhibit 2. Main CBDCs Optional features

Accessibility	WHOLESALE	RETAIL
Technical form	TOKEN (anonymous)	ACCESSIBLE IN ACCOUNT
Interest Rate	INTEREST-BEAR	NON INTEREST-BEAR

Source: CBDC – in a whirlpool of discussion, Bank of Lithuania

There are other important choices or features such as the operational availability (ranging from current opening hours to 24 hours a day and seven days a week) or the technology – for instance, the issuance of wholesale CBDCs with the use of the Distributed Ledger Technology (DLT) or blockchain technology can improve the efficiency

of financial securities settlement. For the time being, the use of DLT in retail CBDC is a possibility, although the authorities do not consider it essential for its setup.

¿What are central bank's reasons to consider issuing CBDCs?

The different forms of CBDC have different implications for payment systems, monetary policy transmission as well as the structure and stability of the financial system.

While the introduction of a wholesale CBDC is aimed at trying to make the wholesale payment and settlement systems more efficient and secure, the introduction of a general purpose CBDC, available to all citizens, may achieve broader objectives and have different implications:

- First, allowing households and businesses to open central bank accounts would give them direct access to efficient and digital payment instruments and would also help financial inclusion in some less banked countries. This would make private digital currencies less attractive and slow down their potential adoption.
- Another important reason for central banks to provide CBDCs directly to the general public is to prevent citizens possibly losing direct access to sovereign money should cash become scarce or even disappear. This was, for example, the objective of the Bank of Sweden's ekröna project, which initially responded to the virtual disappearance of cash in the Swedish economy in recent years. And this is one of driving forces behind the potential issuance of the digital euro.
- The introduction of a retail CBDC could also help to reinforce monetary policy, transmitting interest rates directly to the general public in the case of an interest-bearing CBDC, since changes in interest rates would directly affect depositors.
- Central banks also see in CBDCs a way to compete with the growing popularity of global stablecoins, and potential projects such as Facebook's Libra -which is no longer alive. For this purpose, if CBDCs are issued, they must be interoperable with other forms of money and with existing payment solutions, and allow cross-border payments, which would require some degree of collaboration among central banks.

The optimal choice of CBDC design will depend on the desired policy goals and market characteristics of each jurisdiction, such as, for example, the payment systems efficiency, the level of innovation, the degree of financial inclusion, credit quality or the existence of a credible deposit guarantee mechanism, among others.

In any case, the issuance of a CBDC for the general public is not free from important implications for the financial system and they should be carefully analysed.

One of the main risks for the financial stability, where citizens have access to central bank deposits, is the potential deposit outflows from commercial banks to CBDCs in search of safety, in the event of an economic turbulence.

A more structural risk would be the reduction of financial intermediation. Banks would compete with the central bank to maintain deposits and would therefore either have to remunerate depositors more attractively to try to preserve their deposit base or, alternatively, rely on other financing sources. This situation could lead to a tightening

of credit conditions by banks if they are unable to keep depositors and the new sources of liquidity are more expensive, which would have an impact on the financing to the real economy.

Research suggests that it is difficult to predict the outcome. The effects would depend on the specific features of the CBDC and on the behaviour of the central bank after its issuance.

Despite those risks, most central banks are studying the creation of a retail CBDC and more than half of them are conducting concrete experiments or working on a CBDC pilot project with the purpose of being ready for the future. **The Eurosystem is one of them.**

Although the Libra project was dropped, the risks posed by new forms of private money have not disappeared and continue to generate warnings for central banks. For this reason, retail CBDC projects continue their course, including the digital euro, one of their main objectives being to preserve the value of public money in the new digital ecosystems, while guaranteeing its coexistence and convertibility with the rest of forms that money can adopt.

3. THE DIGITAL EURO PROJECT

The digital euro can be classified as a general-purpose CBDC. It is aimed at ensuring that citizens can access central bank money on a digital form as Europe moves into the digital age.

The Eurosystem launched its exploration phase on 2 October 2020, when it published its approach to the possibility of issuing a digital euro, along with a market consultation to gather the different views of both end-users and financial institutions.

The report was a preliminary, non-conclusive, approach to the scenarios that might justify the issuance of a digital euro, if one or more of them were to occur, and to the potential basic and desirable design features: the digital euro should be a complement to existing cash and commercial bank money; widely accessible to citizens in all euro area countries via supervised service providers; and that the private sector should be able to offer new value services on top of it.

The Eurosystem subsequently launched a two-year investigation phase on the design and potential distribution of the digital euro, which ended on 18 October 2023, when the Governing Council made the formal decision to move on to the next phase, **the preparation phase**. This new phase is expected to last two years, starting on November 2023, and is expected to be as advanced as possible from a practical point of view, without guaranteeing the future issuance.

This preparation phase will be devoted to finalising the digital euro rulebook and to select providers that could develop a digital euro platform and infrastructure. It will also include testing and experimentation to develop a digital euro that meets both the Eurosystem's requirements and user needs, for example in terms of user experience, privacy, financial inclusion, or environmental footprint.

Why a digital euro?

The authorities see a digital euro as the next step in the evolution of the European currency:

- The digital euro would co-exist with euro cash and other electronic means of payment, offering the citizens more payment options and helping to preserve the role of public money as the anchor of the payment system in the digital era, by ensuring convertibility with different forms of money.
Central bank money ensures that citizens can convert their private money (e.g. from commercial banks) into public money. Banknotes and coins are currently the only type of central bank money available to the public. As economies become more and more digital, it makes sense to explore having digital public money, in particular, if cash eventually disappear.
- A digital euro would also contribute to Europe's strategic autonomy and economic efficiency by offering a European means of payment that could be used for any digital payment, meet Europe's social objectives, by reducing the dependence on the non-European payment solutions that dominate some market segments.
- It will also be based on a European infrastructure and governance. This is important, given that recent geopolitical tensions have highlighted the risks of relying exclusively on external providers for critical needs.

Design of the digital euro proposed by the Eurosystem

Within this section we will analyse the key elements of the design of a digital euro that have been considered by the Eurosystem so far. Notably, the use cases, the limits, the allocation of activities and the distribution model and the support to financial and digital inclusion.

Use cases

During the investigation phase, the ECB has determined the use cases for the digital euro as illustrated in Exhibit 3, prioritizing online e-commerce, physical store (point of sale, PoS), and peer-to-peer payments (P2P).

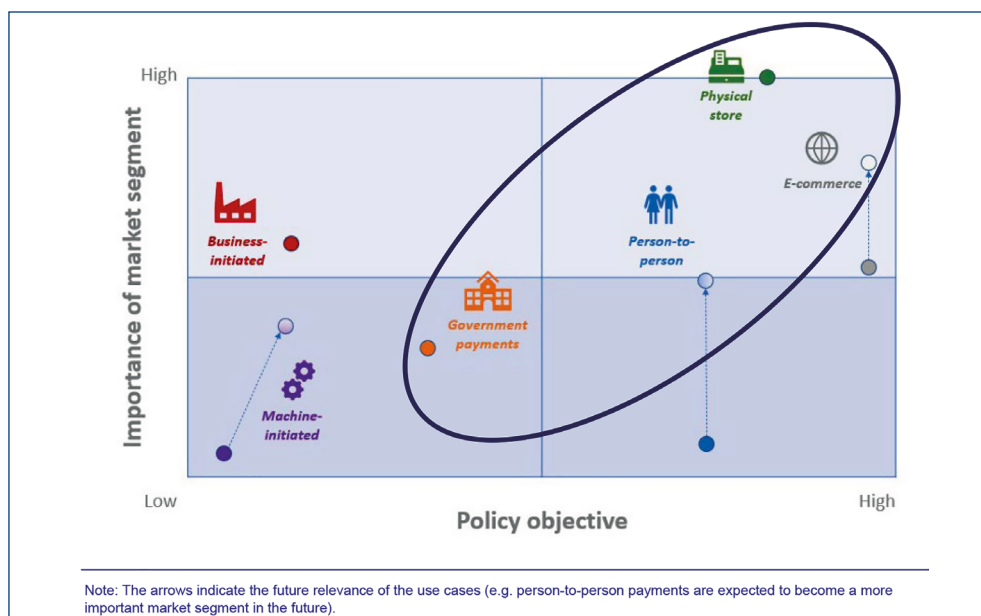
In the first two cases (e-commerce and PoS), the ECB highlights that both are currently served by a multitude of payment solutions often with a narrow national scope and, until now, they have been dominated by non-European providers and technologies. Therefore, the eventual introduction of a digital euro might contribute to a greater harmonization of payment solutions and reinforce European strategic autonomy.

The digital euro will be a complement to the physical cash. Although complete anonymity is not considered a viable option from a public policy point of view (as it is necessary to control the amount of digital euros to avoid it being used for illicit purposes), the Eurosystem will explore a higher privacy configuration for low-value transactions and “offline” payments, thus reproducing some cashlike characteristics.

The new *offline* functionality refers to payments in which the payer and the payee

are not connected online and, by design, need to be in physical proximity when a transaction is made (digital euros would be carried on the mobile phone or a prepaid card type). Although clients would be subject to holding/amount controls during onboarding, real-time information on holdings, balances, and transaction amounts would only be known by the user and not to third-party intermediaries.

Exhibit 3. Prioritisation of use cases



Source: ECB, *First Progress on the investigation phase of a digital euro*

Holding limits

The ECB is also considering incorporating tools to control the amount of digital euros in circulation, to curb their use as a store of value and prevent excessive migration from banks deposits to the digital euro, which in turn could negatively affect banks' lending to the real economy, especially in times of financial stress.

Setting limits on citizens' digital euro holdings is considered an effective instrument for this purpose, so it is likely that holding limits will be included in the final design of a digital euro. The final decision on the tool, and how to calibrate it, will need to be done closer to the moment of an eventual introduction of a digital euro, considering the economic and financial environment at that time.

To ensure a seamless payment experience, if holdings of digital euros are limited, a *waterfall functionality* can be introduced to allow users to make or receive payments in digital euros, above any holding limit established by the central bank.




That is to say:

- When receiving a payment, liquidity exceeding the holding threshold would be automatically transferred to a linked private money account chosen by the end user.
- Similarly, at the discretion of the end user, a reverse waterfall functionality would ensure that end users could make a payment even if the amount exceeds their current digital euro funds. Additional liquidity would be drawn from the linked private money account and the transaction would be completed in digital euros at its full value.

Merchants and government and public institutions in the euro area will – at least in the first releases – have *zero-holding* limits (i.e. they cannot hold digital euros), with deviations limited to what is required for the technical implementation of the waterfall and reverse-waterfall functions (i.e., exceeding holding limits only for a few seconds).

Even if the holding limit is set at a low level, the waterfall and reverse waterfall features would allow incoming and outgoing payments seamlessly made and that the user experience is not adversely affected.

Exhibit 4. Availability and accessibility rules of the digital euro

	 Individuals	 Businesses	 Governments
Access (First releases)	<ul style="list-style-type: none"> • Euro area residents • Non-resident euro area citizens via euro area PSP 	<ul style="list-style-type: none"> • Euro area businesses • Non-Euro area business via Euro area PSP 	<ul style="list-style-type: none"> • Euro area governments
Holdings (Euro area)	<ul style="list-style-type: none"> • Euro area residents & citizens same holding limit (decided close to launch) 	<ul style="list-style-type: none"> • Zero daily holding limit 	<ul style="list-style-type: none"> • Zero daily holding limit

Source: ECB, *High Level Product Description (8th ERPB technical session in digital euro)*.

Distribution model and overview of allocation of activities

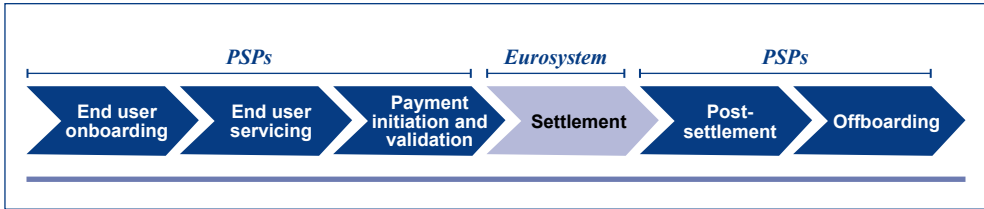
Holding a digital euro will imply holding a direct liability of the central bank, as it currently happens with banknotes. This means that a digital euro would be recorded as a liability on the Eurosystem's balance sheet and that the Eurosystem is responsible for any settlement errors of the digital euro. The Eurosystem will therefore retain full control over the issuance of digital euros and the settlement of online digital euro transactions, including registration and associated verification tasks.

Payment service providers (PSPs) will be the intermediaries of the digital euro and will have a contractual relationship with end users in relation to the account management. They will be responsible for opening accounts and wallets, carrying out KYC and AML checks and initiating transactions, customer authentication and the validation of the transaction, as well as the reconciliation. The supervised intermediaries would also carry out tasks related to funding and defunding in digital euros (recharge/withdraw-

al). Users will be able to choose to convert private money or cash into digital euros, and vice versa, manually, or automatically.

End users will be able to access and use the digital euro through online banking, applications of payment service providers or through an application provided by the Eurosystem that offers a harmonized entry point for basic payment functionalities.

Exhibit 5. Overview of allocation of activities.



Source: ECB, *A stocktake on the digital euro*.

To achieve the objectives of a digital euro and ensure that all citizens of the euro area can pay and receive payments in digital euros, with a harmonized user experience, a payment scheme will be designed to establish a common set of rules, standards and common procedures that supervised intermediaries would have to comply with in order to distribute the digital euro.

The Eurosystem considers that the digital euro should be **free for a basic use by individual users**. These free basic services – that will be established on the Regulation - could include: (i) opening/holding/closing of a digital euro payment account, (ii) non-automated and automated funding and defunding from a non-digital euro payment account, (iii) waterfall/reverse waterfall services, (iv) provision of a basic payment instrument and (v) initiating and receiving payment transactions.

PSPs will only be able to charge customers for the provision of certain services, such as additional payment instruments (for example, an additional payment card) or for additional value services based develop on top of the digital euro, for instance, automatic reimbursement of subsidies, Buy Now Pay Later services, conditional payments, pocket money for children or split payments.

PSPs would also be able to charge merchants for using digital euro acquiring services. At the same time, PSPs that provide fee-based acquiring services to merchants will compensate the PSPs distributing the digital euros to end users by paying an inter-PSP fee, similar to what happens in the payment card fees model. This arrangement aims to maintain a fair balance of incentives between the two roles of PSPs.

Support to financial and digital inclusion

Finally, a digital euro will be designed to be inclusive and accessible to people with limited digital and financial skills and resources, as well as to people with disabilities and the elderly. The Eurosystem will aim to design an app for accessing the digital euro in a way that takes these needs into account and will also consider offering a digital euro

payment card for those who are vulnerable to digital financial exclusion and prefer a physical card rather than an app. Offline functionality will also support digital euro payments in areas with poor network coverage.

The European Commission Regulation Proposal

The decision to issue the digital euro will have relevant consequences: it will not only affect millions of people and transactions in the European financial system but may also disrupt funding and payment markets.

This is why, during the investigation phase, both the European Commission and the other co-legislators - the EU Parliament and Council - have emphasised the need for this project to be based on a solid and democratic legal basis.

In that vein, on 28 of June, the European Commission proposed "*The euro: single currency package*", which contains the legislative proposal that establishes the legal framework and essential elements of a possible digital euro, as a complement to the euro banknotes and coins, which, once adopted by the European Parliament and the Council, would allow the European Central Bank to decide whether and when to issue the digital euro. Some important elements of the Regulation establishing the framework for the digital euro are outlined below:

Legal tender: The proposal foresees that the digital euro will be legal tender for both online and offline payments, with some exceptions, e.g. for small merchants who already choose not to accept digital payments (as the cost of setting up a new infrastructure to accept digital euro payments would be disproportionate), or where the beneficiary is a natural person acting in the course of a purely personal or household activity, or where another means of payment has been agreed.

Limits to the use of the digital euro as a store of value: The European Central Bank has the competence to develop the instruments to limit the use of the digital euro as a store of value and will decide on their parameters and use. These should: safeguard financial stability objectives; ensure the ease of use and acceptance of the digital euro as legal tender; and respect the principle of proportionality. In any case, the digital euro will not bear interest.

Distribution: All payment service providers (PSPs) under the Revised Payment Services Directive (PSD2) will be allowed to provide the digital euro payment services set out in Annex I of the proposed regulation. However, the distribution of the digital euro will be mandatory for credit institutions providing account servicing payment services, which will be required to provide all basic digital euro services defined in the Regulation¹.

¹ Basic digital euro payment services are listed in Annex 2 of the proposal and include, among others, opening, holding, and closing of a digital euro payment account; consulting balances and transactions; non-automated funding and defunding from a non-digital euro payment account; initiation and reception of digital euro payment transactions; or provision of at least one electronic payment instrument for the

Fees: To ensure a broad adoption and use of the digital euro, and in line with its legal tender status, natural persons residing in the euro area, as well as visitors, are expected not to pay any direct fees for basic access and use of the digital currency. According to the proposal, the digital euro users shall not be required to have or open a non-digital euro payment account or to accept other non-digital euro products.

Therefore, the only way for PSPs to monetise digital euro distribution will be through providing services that are not defined as basic services or by charging fees to legal persons (business, merchants). In this vein, merchant service charges and inter-PSP fees are regulated to ensure that they do not exceed the lowest of the following amounts: (i) the relevant costs incurred by payment services providers, including a reasonable margin of profit and that (ii) fees or charges requested for comparable means of payment. To this end, the ECB should regularly monitor the relevant costs, fees and charges and publish and revise periodically those amounts.

Financial inclusion: To foster financial inclusion, individuals without a bank account will be able to open a digital euro account at public, local or regional entities, as well as at post offices.

Privacy and data protection and AML: Payment service providers should be able to process personal data to the extent required to perform essential tasks necessary for the proper functioning of the digital euro. Online digital euro payment transactions would follow the same data protection, privacy and anti-money laundering and anti-terrorist financing rules as private digital means of payment.

For offline digital euro payments, the European Central Bank, national central banks and PSPs will not have access to personal transaction data and will be subject to an adapted AML framework.

Access outside the euro area: The priority for European Authorities is to make the digital euro first available for euro area residents and visitors, and to extend its use to non-euro area Member States and third countries at a later stage. In that case, access to digital euro payments from third countries will be possible prior an agreement between the ECB and the central bank of the other country. The regulator is sensitive to the impact that an excessive use of digital euro by non-euro countries would have on the monetary sovereignty and financial stability of those countries, and the size and composition of ECB' balance sheet.

4. CHALLENGES ARISING FROM THE DIGITAL EURO AND HOW TO ADDRESS THEM.

The potential issuance of the digital euro, as mentioned in previous sections, might pose significant risks for the European financial and payments system, with potential trigger effects on financial stability and the banking sector. The effects ranges from the potential reduction of bank deposits and its impact on bank liquidity, which could alter

execution of digital euro payment transactions.

the provision of credit to the economy, to the impact on the sustainability and innovation of private payment solutions.

Moreover, by providing retail customers with instant access to central bank money as a risk-free asset, the digital euro can potentially accelerate the risks of bank runs in a stressed financial environment.

Authorities might provide the digital euro with features that could give it a **competitive advantage over existing private payment solutions and crowd them out** with the goal of ensuring a broad adoption of the digital euro by the population, (e.g., mandatory acceptance, new privacy features for low-value online digital euro transactions, or free of charge for a broad range of services).

Considering such risks, some analysts have questioned whether there is any other alternative solution to meet the main objectives set for the digital euro by the European Central Bank and taking into account that the current European payments system is working well².

Some analysts also support the work done by the authorities in order to be ready to eventually issue a digital euro, if necessary and in the face of certain potential future events that may require the monetary authority to act. But given the far-reaching implications of this initiative for all participants in the European financial market, including the Eurosystem itself, it is highlighted that the digital euro should have a clear purpose and offer clear benefits in response to a market need.

In the area of cross-border payments within the Eurozone, there is currently no pan-European solution that allows citizens to make P2P payments. The digital euro could represent an opportunity to fill this gap, by leveraging its momentum to **foster interoperability between different national solutions based on instant payments**, scaling them up to a European level and thus contributing to the goal of having a more integrated European payment market.

Below we look at some key features of the design and distribution of the digital euro, which are considered critical to ensure that, if issued, the digital euro can contribute to the objective of a more integrated and autonomous European payments market, without crowding out existing private payment solutions and monitoring the impact on the functioning and stability of the EU financial services market.

4.1. Function as Means of Payment

There is consensus that the digital euro has to be designed to serve as a means of payment, and not as a store of value, in order to avoid significant deposit outflows from commercial banks to digital euro accounts or wallets, which could affect the financing capacity of the banking sector and financial stability.

This risk would be especially relevant for the European economy, compared to other

² Digital Euro: When in doubt, abstain (but be prepared) | Think Tank | European Parliament (europa.eu).

geographies with a lower weight of banking credit provision to the private sector (95% of credit to GDP in the EU compared to 51% in the US).

A digital euro might imply a decline in retail deposits as a source of stable funding for banks. Banks can then replace the loss in deposits with other funding sources, preserving the size of the balance sheet, or they can reduce the size of their assets.

In case deposit outflows are replaced by other funding instruments –e.g. long-term debt, covered bonds or central bank loans– these are more expensive than overnight deposits. Therefore, both cases may have consequences for lending – a tightening financing conditions for firms and households or even a reduction in credit – which could affect financial stability and the real economy development.

The digital euro might as well exacerbate the intensity and speed of a potential liquidity crisis in times of stress, by providing retail customers with an agile and safe digital way to access money from the central bank as a risk-free asset.

The digital euro could also amplify the effects and increase the frequency of such events, and quickly spread doubts about the solvency of individual banks to the entire financial system, given the facility for customers of any bank to replace the euros in their bank accounts with digital euros at “a click” and at no cost, which could, of course, trigger a classic liquidity crisis.

The Eurosystem has considered two options in the investigation phase in order to ensure that the digital euro is used as a mean of payment, and not as a store of value.

On the one hand, a *two-tier remuneration system*, whereby digital euro’s holdings are discouraged through penalizing interest rates. However, this tool could be confusing to the public and discourage widespread adoption, while failing to be too effective when it comes to avoiding deposit outflows in crisis situations. Furthermore, this system would move the digital euro away from cash-like characteristics and make it more akin to a bank deposit, which would not be in line with the project’s political goals.

On the other hand, there is the option of establishing *limits in citizens’ digital euro holdings*. Hard limits on digital euro holdings are easy to understand and would facilitate adoption of the digital euro, especially as they would help users control their spending. A calibration for such a limit could be based on the average daily payment needs of European citizens.

A low limit would not hinder the usability of the digital euro due to the associated bank account or *waterfall* functionality - already approved by the ECB as part of the design of the digital euro - which would allow individual users to pay and receive payments that exceed the holding limit. This would also reinforce the ECB’s objective that the digital euro functions as a monetary anchor interchangeable with commercial bank money, thus replicating the functionality of cash.

The lower the limit, the lesser the impact on financial stability

A study of Copenhagen Economics on **the impact of a digital euro on financial stability and consumer welfare**³ examines the impact of the digital euro on financial stability considering different holding limits.

With the holding limit at 3,000, the study suggests that the digital euro can lead to an outflow of up to 739 billion euro of bank deposits in the euro area, which corresponds to a loss of 10% of the total household deposit base and 3% of the total bank liabilities.

With a holding limit of 500 euros, the loss of deposits could be limited to 139 billion euro, still an important number but a decrease of 81% compared to a 3,000 euro holding limit. Clearly, if the limit is set lower, the loss of deposits will be further limited and the impact less damaging.

Furthermore, the impact is diverse across banks. For highly impacted banks –small institution with greater dependence on deposits and less access to wholesale funding–, these figures could rise to 20% of the deposit base or 9% of total bank liabilities. Across the smaller banks in the sample, deposit outflows amount to 7% of total liabilities, more than twice the aggregate outflow across all banks (3%).

Finally, the holding limit should be set following clear principles and rules embedded in the regulatory framework that serve to provide stability and ensure that the holding limit is effective in all circumstances, including periods of low interest rates, political pressure, or contexts of economic or financial stress, in which bank deposit outflows are more likely to occur and central bank money becomes more attractive.

4.2. Privacy and compliance with AML.

The digital euro should guarantee the privacy and sovereignty of users in terms of data protection, as well as compliance with the anti-money laundering framework (AML).

As highlighted by the Eurosystem, the design of the digital euro in terms of privacy will be a key feature to provide citizens with trust and the Central Bank has no intention of accessing individuals' data.

Bearing in mind that a digital euro cannot be completely anonymous - to allow the use of tools that limit its use as a store of value and to ensure that it is not used to finance illegal activities -, the design of the digital euro must ensure that user's data can be accessed and processed by intermediaries in line with relevant privacy and security laws, particularly the GDPR.

³ [Effects-of-a-Digital-Euro-on-Financial-Stability-and-Consumer-Welfare_CE-Report_December2023.pdf \(cbf.eu\)](#)

At the same time, access to data for intermediaries is paramount to comply with legal obligations to prevent money laundering, as well as to support the provision of safe and convenient financial services according to customers' needs. The availability of data help to strengthen risk management, improves cybersecurity and consumer protection, and provides opportunities for innovation and new services.

In addition, payment transaction data plays a key role in the provision of financial services, for example, to enhance risk analysis and to provide credit more accurately and at a better price. Therefore, users should always have the possibility to allow intermediaries to use their data for purposes other than compliance with legal obligations.

4.3. Distribution of the digital euro

If the decision to issue a digital euro is finally made, only PSD2-regulated and authorised account servicing payment service providers should be allowed to act as digital euro intermediaries. All providers should meet the same standards for robustness of their Know your Customer (KYC), AML/CTF, consumer protection, and cyber resilience processes. Indeed, to ensure cyber resilience must be a priority. The entire system in which the digital euro is deployed, including any device or participant that may connect to the system, must comply with the highest cybersecurity standards.

4.4. Infrastructures

The digital euro could be supported by the current instant payment infrastructures and the different end-to-end solutions that already exist, allowing their interoperability. This would be the most efficient way to implement the use cases proposed by the ECB, whilst avoiding the cost of creating a completely new infrastructure.

Building on the existing infrastructures for instant payments would provide some considerable advantages, for example, in relation to the costs of deploying the digital euro for intermediaries (adaptation of point-of-sale terminals, reuse of retail payment systems, etc.). This strategy would also facilitate the complementarity of the digital euro with other means of payment currently available.

The digital euro could also be leveraged on existing national payment solutions to facilitate its implementation and boost its adoption by individuals and business.

For instance, **in Spain Bizum is the reference solution for P2P payments**. Bizum currently has more than 25 million users, more than half of the Spanish adult population, and covers 99% of the country's payment accounts. Instant payment transactions initiated through Bizum represent more than 85% of instant payments in Spain and have reached a 4-5% share of e-commerce in the Spanish market in just two years since the option became available. Bizum will also begin to offer payments in physical commerce throughout this year.

Bizum would be a natural solution with which users could manage their P2P pay-

ments, both with digital euros and with commercial bank money, through a same mobile application, regardless of whether it could coexist with other solutions promoted by third parties or by the Eurosystem itself. If so, the project could also help to boost the interoperability of existing private payment solutions and thus strengthen the strategic autonomy of payments in the EU.

4.5. Business Model and Incentives

The required investment and expected returns of launching and distributing the digital euro for intermediaries must be thoroughly analysed.

It is essential to create the right incentives for intermediaries to provide the related services, as well as for the development of new value-added functionalities.

The **initial investment** required to set up the digital euro ecosystem will be higher or lower depending on whether the ECB uses existing protocols and infrastructures, and on the costs of adapting the merchants' interfaces and equipment.

In addition to the cost of implementation, the provision of the digital euro will have **recurring costs for its distribution and intermediation**, such as those related to users' onboarding, funding and de-funding of digital euros, custody and maintenance of accounts/wallets, initiation of payments, and post-settlement services (including dispute and fraud management with merchants), among others.

The **cost of managing this transition** will also have to be considered. Intermediaries, as the point of contact with individuals, will play a major role in responding to questions and demands through their customer service channels (branches, call centres, etc.).

For this reason, it is very important to ensure an **adequate compensation model** for the intermediary entities, so that they can build a sustainable business model in a competitive space, based on equal conditions with other means of payment.

Authorities should not rule out other compensation models, which could complement the proposed model based on free of charge for end-users and fees for merchants. If the compensation model is not comparable or diverge significantly from the current model applied, it may not ensure that the digital euro competes on a level playing field with other private means of payment.

Furthermore, the ECB has indicated that the digital euro is considered as a "raw material" on which PSPs would build their digital euro service offers. Therefore, it is necessary to identify the **use cases and business models around the digital euro**, as these will be a key factor for the successful creation and long-term functioning of the new ecosystem.

In addition to basic services, regulated intermediaries could also develop value-added services such as chargebacks or dispute resolution mechanisms for merchant payments, payment-on-delivery functionalities in e-commerce, micro-credit and other services that are currently available in private solutions. For this to happen, it is important to ensure that the ECB develops a flexible infrastructure and rulebook that leaves sufficient room for private innovation to deploy new business models.

4.6. Innovation

The digital euro project should drive programmable - or conditional - payments that add value for customers, both in digital euros and in commercial bank money, improving European payments innovation capabilities.

Making payments programmable can allow, for example, delivery versus payment, so that the payment and transfer of an asset (e.g., a security) are executed simultaneously in a single transaction, or new forms of micro-credit.

To explore how to implement these opportunities, there would be the need to assess the design of a new programmability layer that could be built on top of the digital euro. This additional layer would enable the private sector to program and execute programmable payments done both in central bank and commercial bank money, adding further value to customers and the payments ecosystem.

Moreover, the digital euro project might fail to cover all the needs that may arise in the future digital money ecosystems. For example, in order to facilitate transactions involving tokenised assets and cross-border/cross-currency payments, there is a huge consensus that a European wholesale CBDC could be needed.

In this case, the discussion is not about issuing digital central bank money for wholesale transactions, because it already exists, but about a technological shift towards the use of Distributed Ledger Technologies (DLT) to adapt the current infrastructures to the technological progress. Indeed, new forms of DLT-based financial assets have emerged and are increasingly being intermediated by financial institutions. As this market grows, there could be a need for a native DLT payment instrument, which can be used between all financial institutions.

In addition, a move from using centralised databases to transfer cash and assets to using decentralised networks - DLT - could bring several potential benefits, such as the possibility to settle transactions instantly or to program them to settle automatically based on predefined conditions.

The Eurosystem has started an exploratory work - consisting of trials and experiments - to assess the potential impact of emerging technologies on the settlement of wholesale financial transactions as a response to increasing interest within the financial industry in the potential applications of DLT in areas such as securities-related transactions settlement on a delivery versus payment (DvP) basis and cross-currency payments settlement on a payment versus payment (PvP) basis.

5. CONCLUSIONS

As new forms of digital money emerge, most central banks are already exploring the possibility of issuing a Central Bank Digital Currency to ensure that citizens maintain access to risk-free sovereign money as a secure payment option in an increasingly digital environment. Europe is no exception.

The European Central Bank argues that the main goal for an eventual issuance of

the digital euro is two pronged. First, offering the citizens more payment options - in addition to cash and other private electronic means of payment - and helping to preserve the role of public money as the anchor of the payment system in the digital era. Second, contributing to Europe's strategic autonomy by offering a means of payment based on a European infrastructure and governance. Nonetheless, the ECB is still in the preparation phase and no decision will be made earlier than the next two years.

Authorities need to mull over the eventual issuance of the digital euro by analysing its benefits and potential negative effects on the financial stability, and the payments market.

On the one hand, the introduction of the digital euro could entail significant deposit outflows from commercial banks to digital euro accounts/wallets, which could affect the financing capacity of the banking sector and financial stability. To mitigate such risks, there is consensus that the digital euro should be designed as a means of payment and not as a store of value. The setting of holding limits could be the best option for that purpose.

On the other hand, the digital euro could crowd private payment solutions out of the markets if it receives a competitive advantage by authorities with the goal of ensuring widespread acceptance. If both solutions are to coexist, there is a need to provide the right incentives for intermediaries to distribute the digital euro and to develop value-added services.

The digital euro could be an opportunity to contribute to the objective of a more integrated and autonomous European payments market. Against this background, the digital euro could leverage on existing national payment solutions to facilitate and boost its adoption by individuals and business. This could also lead to the interoperability of the instant payment-based solutions that already exist and are successful and widely used in national markets. In addition, building on the existing infrastructures for instant payments would provide some considerable advantages, for example, in relation to the costs of deploying the digital euro for intermediaries.

The issuance of the digital euro is a strategic decision for Europe with far reaching consequences. Authorities must therefore ensure that the digital euro has a clear purpose and value for citizens before it is launched, so that the benefits outweigh the costs and risks of its roll-out. The decision must be made and addressed on the basis of a rigorous analysis by all stakeholders.

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THE US BANKING SECTOR SINCE THE MARCH 2023 TURMOIL: NAVIGATING THE AFTERMATH

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ABSTRACT

In March 2023 the so-called US regional banking sector turmoil sent a shockwave through the global financial system. Silicon Valley Bank (SVB)², the 16th largest in the country, collapsed in a matter of days, followed by Signature Bank (SBNY) and First Republic (FR) marking the largest bank failures after Washington Mutual Bank in 2008. Triggered by sizable deposit outflows and liquidity crises, this event raised concerns about the resilience of the banking sector and the soundness of small and medium-sized banks with similar profiles. Against a backdrop of a sharp monetary policy tightening cycle, investors immediately started to identify other weak banks based on key metrics: deposit outflows, uninsured deposits, unrealized losses, and commercial real estate exposures. Timely and forceful policy action helped to mitigate the loss of confidence and contain the contagion to other financial institutions. The March turmoil is a powerful reminder of the challenges posed by the interaction between tighter monetary and financial conditions and the buildup in vulnerabilities since the global financial crisis. Our paper offers a comprehensive summary of key events and delves into the attributes of the affected banks. It then unpacks the policy measures enacted in

¹ Legal Disclaimer: The views expressed in this paper are those of the authors and do not necessarily represent the views of the IMF, its Executive Board, or IMF Management.

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² SVB was classified as a “large bank”. According to the definition of the Federal Reserve, community banks serve businesses and consumers throughout the country. The Federal Reserve defines community banking organizations as those with less than \$10 billion in assets, and regional banking organizations as those with total assets between \$10 billion and \$100 billion.

response and provides a forward-looking view by evaluating the medium-term risks to financial stability posed by this weak tail.

INTRODUCTION

In March and April of 2023, the global financial system experienced the most significant banking stress since the Global Financial Crisis (GFC). The collapse of a few US banks, classified as large institutions, highlighted the lack of preparedness of some financial institutions for the fast pace of the monetary policy tightening cycle after the long period of low rates. The Federal Reserve interest rate hiking cycle that started in March of 2022 was unprecedented in both the level and speed of monetary tightening. Between March 2022 and September 2023, the US experienced an increase in the effective Federal Funds rate of 525 basis points, representing the fastest monetary tightening cycle since the 1980s, and bringing the overall level to heights not seen since before the GFC. Thus, the tightening of monetary policy to bring inflation back to target unmasked lingering fragilities in the weak tail of the US small and medium sized banking institutions.

While the interest rate hiking cycle was well telegraphed, the speed and magnitude of the increase posed a clear transitional challenge to the banking sector. Risks were not dealt with appropriately by certain management teams. A large part of the surge in deposits brought about by savings during the pandemic had been invested in longer-duration securities posing considerable interest rate risk in a higher-rate environment. Initially, strong loan growth and slower repricing of deposits contributed to the expansion of net interest margins; however, as interest rates continued to rise, banks faced increased financing costs, as well as a decline of the market value of their securities' holdings. This led to a sharp increase in unrealized losses on held-to-maturity (HTM) and available-for-sale (AFS) portfolios. Moreover, depositors moved out of banks and into higher return products like money market funds, leading to an acceleration of deposits outflows.

The failure of Silicon Valley Bank (SVB) in March 2023 acted as a catalyst and revealed structural challenges facing the business models of small and medium sized banks. Market sentiment became self-fulfilling as it led to deposit outflows at certain institutions,³ further feeding into investor concerns. Technological advances such as mobile banking and the rapid spread of information through social media potentially accelerated the deposit run. Within days, SVB and Signature Bank of New York (SBNY) failed, marking what are now the third- and fourth-largest bank failures in the banking history of the United States.⁴

The forceful response by policymakers to stem systemic risks avoided broader contagion by providing emergency liquidity and safeguarding depositors. The Federal Reserve played a pivotal role in limiting contagion to the rest of the US banking sector and provided liquidity to avoid market dysfunction. The new Fed facility (Bank Term

³ Banks above US\$250 billion in total assets received inflows during the period.

⁴ According to Bankrate, The 7 Largest Bank Failures in US History | Bankrate.

Funding Facility) helped tremendously distressed banks to replace deposit funding and restore liquidity. In addition, the Federal Deposit Insurance Corporation made uninsured depositors of SVB and SBNY whole, based on the “systemic risk exception. The US authorities’ policy actions preserved confidence in the US banking system. Given the interconnectedness of the financial system, the SVB collapse showed that even a non-systemic institution may cause serious risks to global financial stability.

SVB and SBNY were considered by market participants as super-regional banks because they were larger than community banks and smaller than the largest banks in the United States. The analysis in this note applies the characteristics of the super-regional banks that failed to 4,530 active deposit insured institutions to identify a weak tail of banks. The analysis follows the definition of the Federal Reserve to classify small or community banks as those with less than \$10 billion in assets, regional banks as those with assets between \$10 billion and \$100 billion, and large banks as those with assets over \$100 billion.⁵ The paper will present a chronological description of events, describing the market impact of the March turmoil and will provide an analytical analysis to evaluate the medium-term risks. We provide a market perspective of the events.⁶ Data cut-off date for the analysis is 3Q23 for balance sheet data and 4Q23 when available.⁷

1. SILICON VALLEY BANK FAILURE: CATALYST FOR THE REGIONAL BANKING TURMOIL

A COMPLEX AND CONCENTRATED BUSINESS MODEL TESTED BY HIGHER-FOR-LONGER INTEREST RATES ENVIRONMENT.

SVB defined itself as the “go-to financial partner” for investors in the innovation ecosystem (startups and venture capital). Benefiting from the enormous expansion of the technology sector, SVB quadrupled in size between 2017 and 2023, surpassing US\$160 bn in deposits.

SVB was unique in a number of ways. First, its client base was especially homogeneous, composed of mainly wholesale deposits with a high sectoral and geographical concentration in Silicon Valley in northern California. This led to a high degree of uninsured deposits (90 percent of total deposits), which tend to be more interest rate sensitive, being exposed to the same type of interest rate shocks (Figure 1, panel 2 and Figure 2, panel 1).⁸ Second, management invested heavily in long-term residential

⁵ See Federal Reserve Board - Community & Regional Financial Institutions and Federal Reserve Board - Large Financial Institutions.

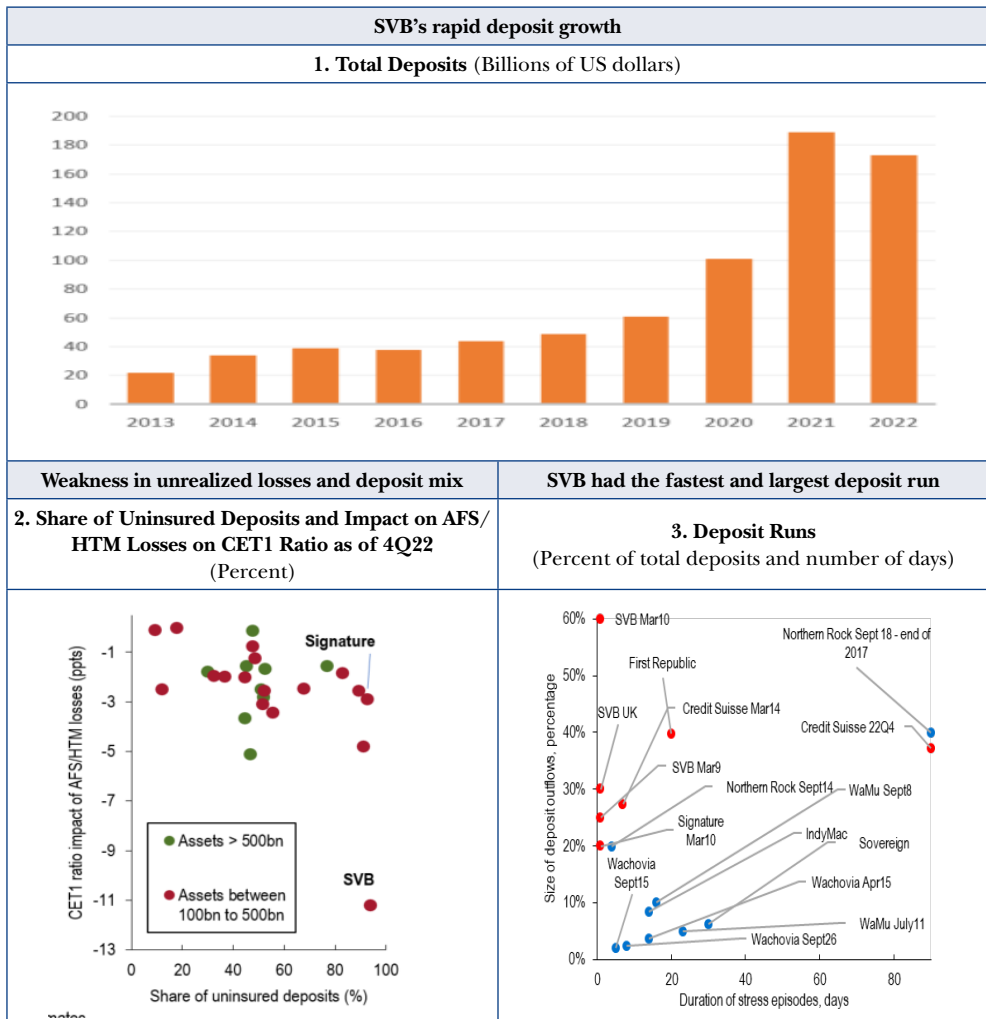
⁶ For a supervisory perspective of the events see Good Supervision: Lessons from the Field (IMF 2023).

⁷ Please see IMF GFSN: “The US Banking Sector since the March 2023 Turmoil: Navigating the Aftermath”, IMF 2024” for a more recent update..

⁸ Chang, Briana and Cheng, Ing-Haw and Hong, Harrison G., The Fundamental Role of Uninsured Depositors in the Regional Banking Crisis (October 21, 2023). The Fundamental Role of Uninsured Depositors in the Regional Banking Crisis by Briana Chang, Ing-Haw Cheng, Harrison G. Hong :: SSRN

mortgage-backed securities (RMBS), which were highly exposed to interest rate risk. Third, enhanced supervision and regulatory requirements for banks of the size of SVB had not been fully phased in due to its rapid growth.⁹ Fourth, SVB’s access to the Federal Reserve’s discount window was not operationally active.

Figure 1. Fast Growing Deposits, Large Share of Uninsured Deposits and Fastest Deposit Run.



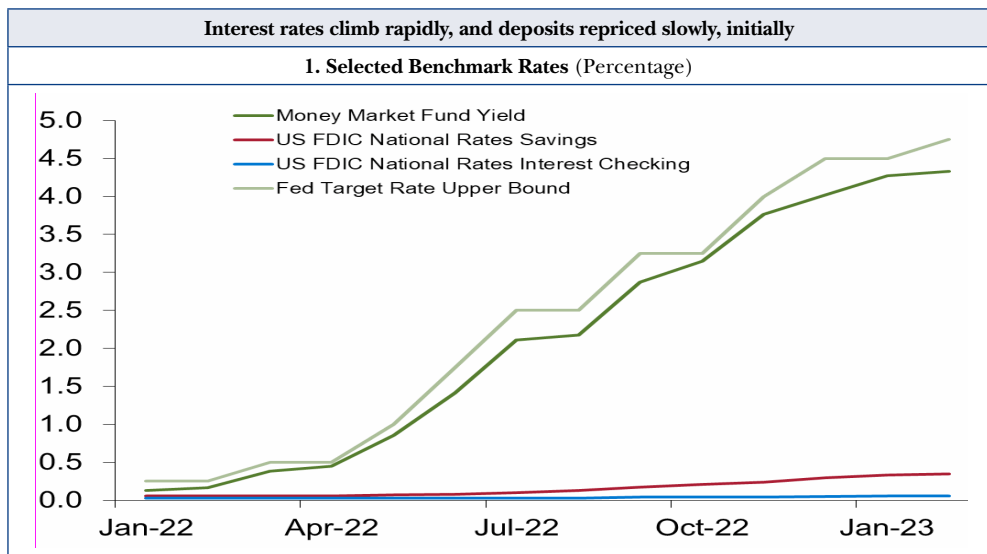
Sources: Ennis and Keister 2009; Federal Deposit Insurance Corporation 1997; Federal Reserve, bank financial reports; Investigation Commission of Althing 2010; Kobrin 2011; Levy-Yeyati, Martinez Peria, and Schmukler 2010; Nakaso and Hattori 2002; Nascimento 1991; Northern Rock Applicants v Caldwell & HM Treasury (UKUT 408, 2011); Rose 2015; Schumacher 2000; Shin 2009; Simorangkir 2011; and IMF staff calculations.

⁹ Review of the Federal Reserve’s Supervision and Regulation of Silicon Valley Bank, April 2023.

During the end of 2022 and beginning of 2023, the slowdown in technology-related activity increased deposit withdrawal while low venture capital activity froze funding inflows (Figure 1, panel 1). As the volume of unrealized losses expanded, SVB became exposed to a sudden liquidity risk that the existing weak risk management and poor leadership foresight didn't anticipate. In early March 2023, a plan to raise capital as part of a balance sheet restructuring plan, failed, and the news triggered concerns by depositors and quickly transformed into a bank-run. The reporting of US\$ 42 billion of deposits leaving the bank on March 9, with another US\$ 100bn forecast to flow out the next day, triggered a liquidity crisis, marking the fastest and largest deposit run (Figure 1, panel 3).¹⁰ The bank was closed on March 10 by the California Department of Financial Protection & Innovation and the Federal Deposit Insurance Corporation (FDIC) was appointed receiver.¹¹

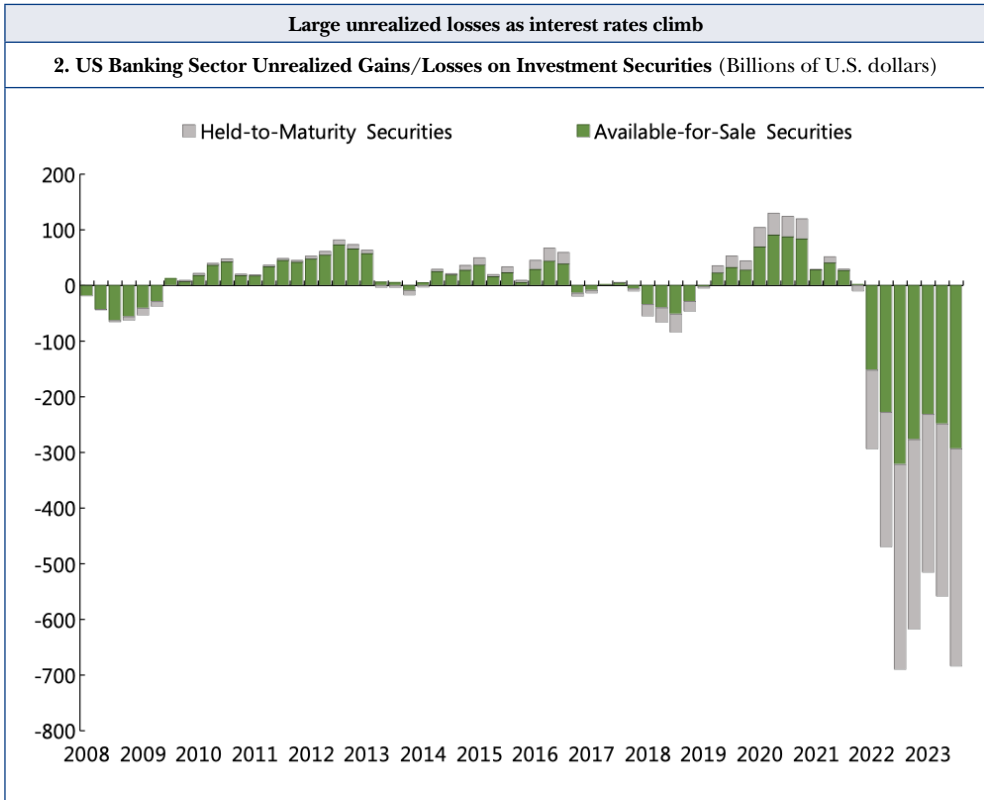
RIPPLE EFFECT ON OTHER REGIONAL BANKS: SIGNATURE BANK AND FIRST REPUBLIC BANK FAILURES.

The collapse of SVB sparked a broader re-evaluation of the stability of the US banking sector. Investors began to assess the liquidity and solvency of certain regional institutions focusing more on uninsured deposits. Investors began to assess the liquidity and solvency of certain institutions after adjusting for haircuts from mark-to-market of their assets, in particular held-to-maturity securities and real estate loans (Figure 2, panel 2).



¹⁰ Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank, April 2023.

¹¹ Failed Bank Information for Silicon Valley Bank, FDIC, March 10, 2023, FDIC: Failed Bank Information for Silicon Valley Bank, Santa Clara, CA



Signature Bank of New York (US \$110 billion in assets), with a large exposure to volatile crypto-assets and high share of uninsured deposits (close to 90 percent), quickly became a target of contagion and a run on the bank followed almost immediately after SVB's collapse. The New York State Department of Financial Services and the FDIC closed the institution on March 12 after it lost more than 70 percent of its equity value within days.¹²

First Republic Bank with US \$212 billion in assets, focused on high-net worth individuals. Its business model provided preferential long-term rates for these types of customers. In exchange, FRB managed their wealth, mostly by keeping their large savings as uninsured deposits in the bank. In particular, almost half of their loan book was residential real estate mortgages, which had lost significant value due to the repricing from increased interest rates.

After losing almost 75 percent of its equity value, a consortium of 11 publicly-listed banks led by JPMorgan Chase, deposited US\$ 30 billion at FRB in an effort to boost liquidity. This provided a strong signal to the market and supported confidence in

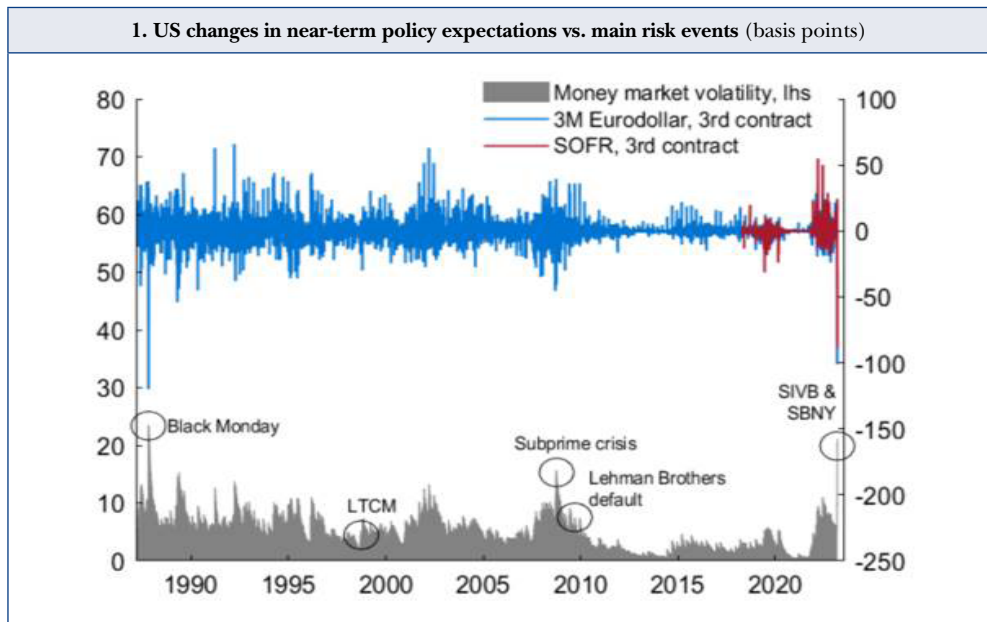
¹² Failed Bank Information for Signature Bank, March 12, 2023, FDIC: Failed Bank Information for Signature Bank, New York, NY

the regional banking sector. However, sentiment around the stability of the bank did not improve, leading to the bank’s closure by the California Department of Financial Protection and Innovation. The FDIC was appointed receiver, and JPMorgan Chase acquired all deposit accounts and nearly all assets on May 1.¹³ First Republic Bank’s failure marked the second-largest bank failure in U.S. banking history since Washington Mutual Bank failed in 2008.

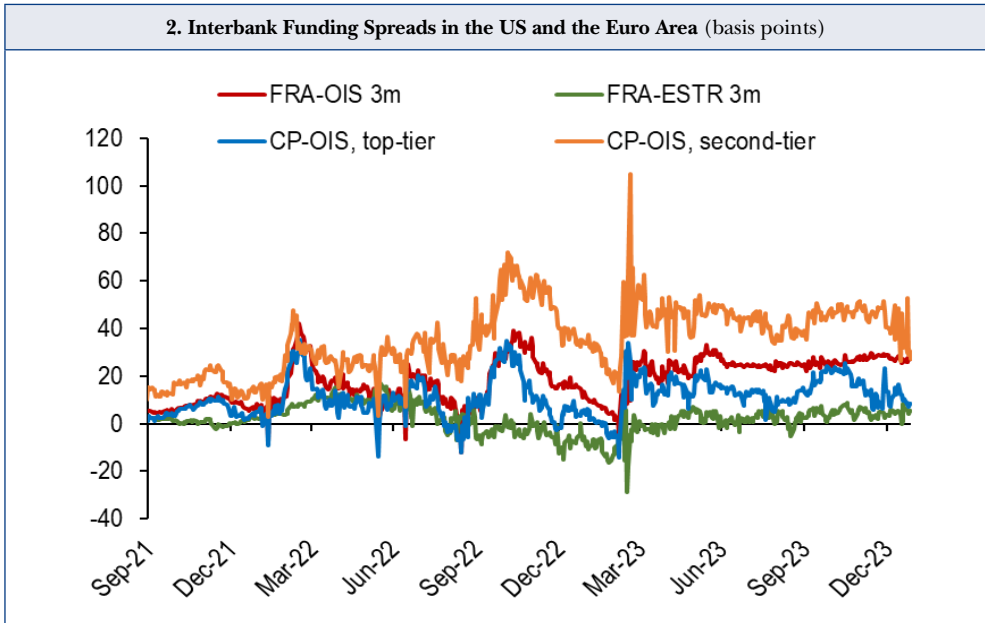
2. FINANCIAL MARKETS SHAKEN BY THE BANKING TURMOIL.

The collapse of SVB and the contagion to the US regional banks had a profound impact on financial markets (Figure 3). This stress was the most important sector-specific shock since the GFC. Stock prices of regional banks plummeted, which was accompanied by a substantial increase in market volatility. The stress rapidly extended to the funding market resulting in a sharp tightening of financial conditions in the short-term markets. The banking turmoil also led to a sharp flight to quality in the sovereign bond market and an unprecedented repricing of market rate expectations. Since 2023, the US regional banks have recovered somewhat but uncertainty about the underlying risks remain elevated (Figure 4).

Figure 3. Financial Markets Grappling with a New banking Turmoil.

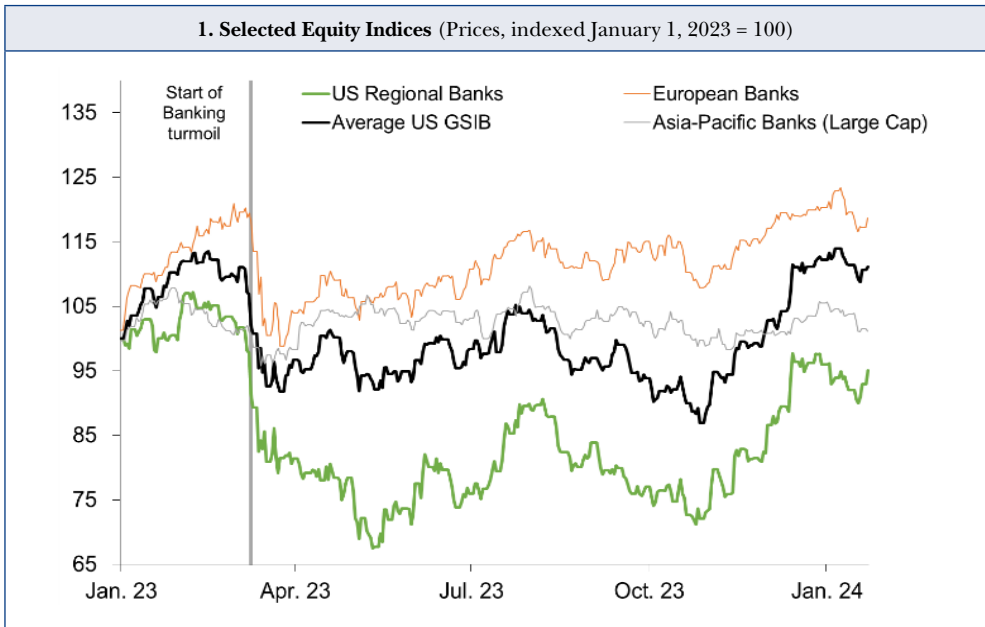


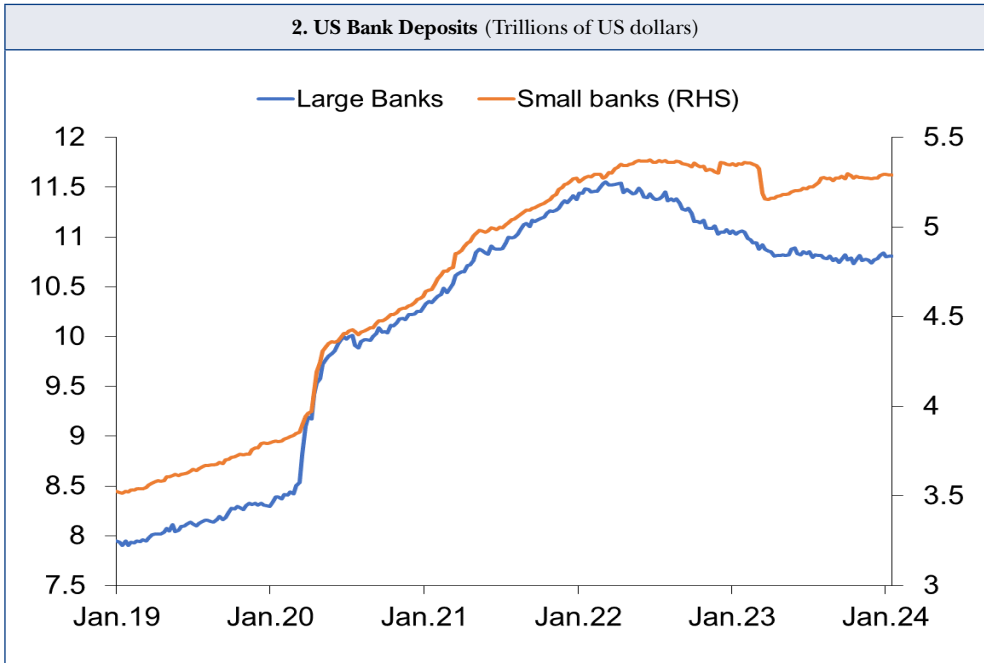
¹³ Failed Bank Information for First Republic Bank, May 1, 2023, FDIC: Failed Bank Information for First Republic Bank, San Francisco, CA



Sources: Bloomberg Finance L.P.; Federal Reserve H.8., and IMF staff calculations.

Figure 4. Bank Equity has Broadly Recovered since March, except for US Regionals while Deposits ‘Outflows Stabilized.





Sources: Bloomberg Finance L.P.; Federal Reserve H.8., and IMF staff calculations.

3. A SWIFT AND BOLD POLICY RESPONSE MITIGATED THE RISK OF CONTAGION.

The fear of broader contagion was top of mind for policymakers since of the onset of the March 2023 turmoil. To contain further fallout, US financial regulators enacted a series of bold measures ranging from close monitoring and coordination to full protection of depositors and emergency lending programs.

BLANKET DEPOSIT INSURANCE COVERAGE

Triggered by large and rapid deposit outflows, the liquidity crisis led the US authorities to announce on March 12, 2023, that it would guarantee all SVB and SB uninsured deposits by using the systemic risk exception and by arguing that the failure of these financial institutions could pose a wider systemic risk to the entire financial system.¹⁴ This

¹⁴ The Secretary of Treasury, in consultation with the President, approved the systemic exemption. See announcement through joint statement of the Treasury, Federal Reserve, and FDIC: <https://www.fdic.gov/news/press-releases/2023/pr23017.html>

allowed US regulators to sidestep the least-cost resolution requirements of the FDIC's Deposit Insurance Fund (DIF).¹⁵ While under the Dodd-Frank Act, such guarantees are explicitly prohibited to be extended to all banks, markets felt reassured that the US regulators would do “whatever it takes” to prevent broader contagion. As required by the Federal Deposit Insurance Act, and in connection with the systemic risk determination, the FDIC approved, on November 16, 2023, a special assessment to recover the losses to the DIF associated with protecting uninsured depositors from the closures of SVB and SB.¹⁶

A NEW FED FACILITY TO ENSURE MARKET FUNCTIONING AND SUPPORT THE DISTRESSED INSTITUTIONS.

To contain the funding stress stemming from the US regional banks, the Federal Reserve responded quickly and put in place a new temporary liquidity facility called the Bank Term Funding Program (BTFP), providing US depository institutions further support as the lender of last resort. This new program managed: (i) to provide emergency liquidity to institutions that may come under further market pressures, (ii) improve market sentiment and, (iii) contain future deposits runs.

Under this new facility, the authorized depository institutions could borrow from the central bank cash at par with no margin applied to the eligible collateral against a wide range of assets accepted in open market operations. The loans are longer dated than discount window operations and can be extended up to one year at an interest rate equal to the overnight index swap (OIS) rate plus 10 basis points (fixed for the life of the advance). This facility allowed banks to generate liquidity without selling securities and crystallizing mark-to-market losses caused by higher interest rates.

In addition, during peak times of stress, certain institutions opted for the use of credit through the discount window to fulfill immediate short-term liquidity needs (Figure 5, panel 1). Bank borrowing from the Primary Credit facility surged to an all-time high of US\$153 billion. Borrowing by one regional bank reportedly accounted for the lion's share of Primary Credit loans on that day. In parallel, the Department of the Treasury made available up to US\$25 billion from the Exchange Stabilization Fund as a backstop for the BTFP, should any losses happen.

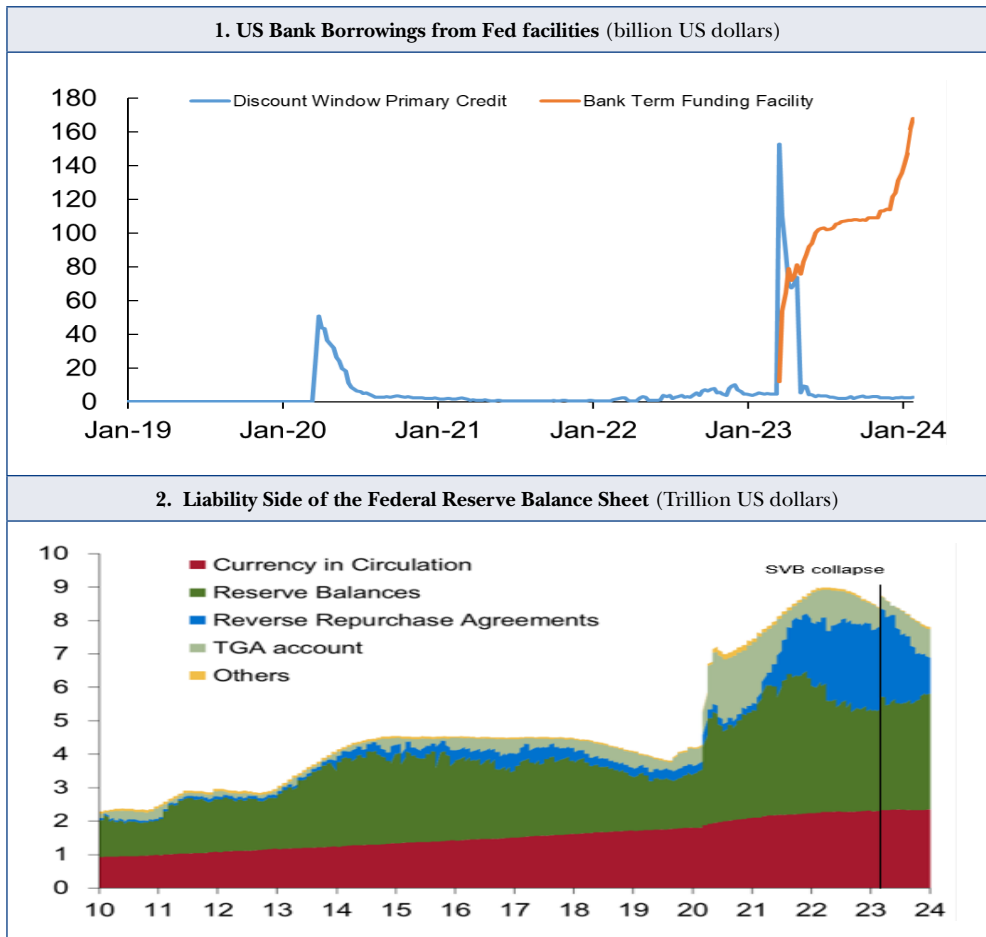
Since March, use of the BTFP had remained fairly stable at around US\$100 billion. However, the fast-approaching end of the program combined with the very attractive lending rate compared to the secured market (BPTF rate remains below the SOFR), led

¹⁵ Congressional Research Services, “Bank Failures: The FDIC’s Systemic Risk Exception”, IFI 2378, April 11th, 2023 and “Understanding the Components of Bank Failure Resolution Costs,” FDIC Center for Financial Research, WP 2014-04, April 2014, Understanding the Components of Bank Failure Resolution Costs (fdic.gov)

¹⁶ See: FDIC: Final Rule on Special Assessment Pursuant to Systemic Risk Determination. The President of the United State’s speech on March 13th explicitly laid out these two points; all deposits would be protected; and no losses will be borne by the taxpayer, Remarks by President Biden on Maintaining a Resilient Banking System and Protecting our Historic Economic Recovery | The White House

to a sharp increase in use since November (Figure 5). The additional take-up suggests arbitrage behavior by banks and might not reflect real liquidity needs from the banking system. The program will terminate in March 2024 after which no new loans will be accepted but banks will be able to continue paying back loans until the end of their initial term.¹⁷ Recent communications by FOMC members have confirmed that the facility will be allowed to expire on March 11, 2024.¹⁸ As of January 2024, BTFP borrowings reached the highest level since the inception of the facility, standing at US\$ 167 billion.

Figure 5. Borrowings from the Fed Facilities Remain Elevated, Reflecting the Precautionary Behavior of Banks since the SVB Failure.



Sources: Bloomberg Finance L.P.; Federal Reserve H.8., and IMF staff calculations.

¹⁷ On January 24, 2024, the Federal Reserve announced the end of the Bank Term Funding Program (BTFP) as scheduled on March 11, 2024. <https://www.federalreserve.gov/newsevents/pressreleases.htm>

¹⁸ See, Fed to allow emergency bank lending program expire on March 11 | Reuters.

Despite the ongoing quantitative tightening since the collapse of SVB, banks' reserves have increased significantly suggesting a precautionary behavior. As of January 25, 2024, reserves amount to US\$ 3.6 trillion—US\$ 500 billion more than before the US regional stress (Figure 5, panel 2).

4. A FORWARD-LOOKING ASSESSMENT OF THE US BANKING SECTOR

After the collapse of SVB, investors immediately shifted their attention to a wider group of banks that also faced challenges from the high interest rate environment. In this section we will document the evolution of the common set of characteristics that defined the weak tail of banks and made them more vulnerable to potential bank runs.¹⁹ We provide certain data points by asset size to highlight important differences in trends across bank categories, in particular how banks between \$10 billion and \$100 billion were disproportionately affected. We acknowledge that this split can potentially lead to a heterogenous group of banks with differing business models under the same “large bank” category.

Even small banks can become systemic under certain circumstances. In March 2023, after the failure of SVB and SBNY, depositors and investors became concerned first about liquidity and then about the financial soundness of banks matching a certain profile with various attributes: (i) sizable deposit outflows, (ii) high concentrations of uninsured deposits, (iii) reliance on other borrowing and higher use of liquidity facilities, (iv) substantial unrealized losses, and (iv) high concentration to commercial real estate (CRE).

DEPOSITS BECOME AN “UNSTABLE ASSET” LEADING TO ASSET AND LIABILITY MISMATCH.

Bank deposits surged in a period of low interest rates following the onset of the COVID-19 pandemic. In the first quarter of 2020, deposits recorded the largest quarterly growth since the early 1980s (Figure 4, Panel 2). Several factors contributed to the surge in deposits: (i) cash payments to segments of the population as part of fiscal stimulus measures to boost the economy; (ii) a high personal savings rate; (iii) the creation of deposits by the Federal Reserve's asset purchase program and the drawdown in commercial and industrial credit lines. By year-end 2021, deposits reached \$18.5 trillion and were \$3.85 trillion (or 38 percent) above pre-pandemic levels.

As interest rates increased, deposit costs rose slowly, and deposits declined in 2022.

¹⁹ Based on a dataset including 4,530 or 98 percent of deposit insured banks, accounting for 99.8 percent of total bank assets in third quarter of 2023. Smalls banks correspond to banks with less than \$10 billion in total assets, medium banks correspond to banks with assets between \$10 billion and \$100 billion, and large banks correspond to banks with assets above \$100 billion.

The effective federal funds target rate increased by 425 bps over the year, while the median of the average cost of interest-bearing deposits increased by 5 bps for small banks, 76 bps for medium banks, and 115 bps for large banks in 2022 (Figure 6, panels 1 and 2).²⁰

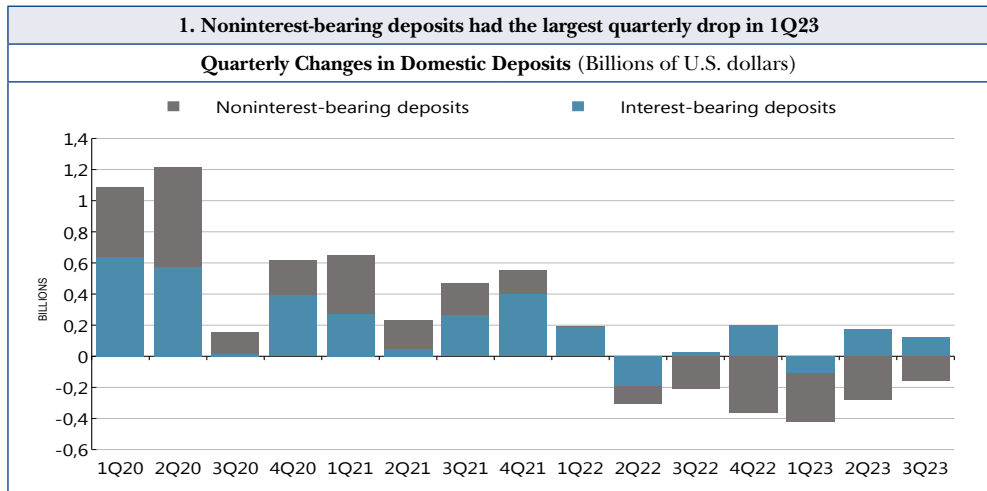
This trend accelerated in the first quarter of 2023 as the opportunity cost of holding deposits increased due to considerably better yields in money-market mutual funds (MMFs) (Figure 2, panel 1). Furthermore, as explained above, broader concern at certain institutions²¹ about the solvency, led to deposit outflows.

Forceful government intervention restored confidence in the banking sector by the third quarter of 2023. Deposit outflows stabilized at \$18.6 trillion as small and medium banks increased deposits. Deposits remained 28 percent above pre pandemic levels. (Figure 4, panel 2).

SHARE OF UNINSURED DEPOSITS

In first quarter of 2023, uninsured deposits at \$8.3 trillion reported its largest quarterly drop (-8 percent) since the early 1980s, after reaching peak levels in first quarter of 2022 (Figure 6, panel 3). During this period, medium banks reported the largest quarterly drop in uninsured deposits (-9 percent) compared to large banks (-2 percent).²² About 14 percent of banks experienced uninsured deposit outflows in the first quarter of 2023.

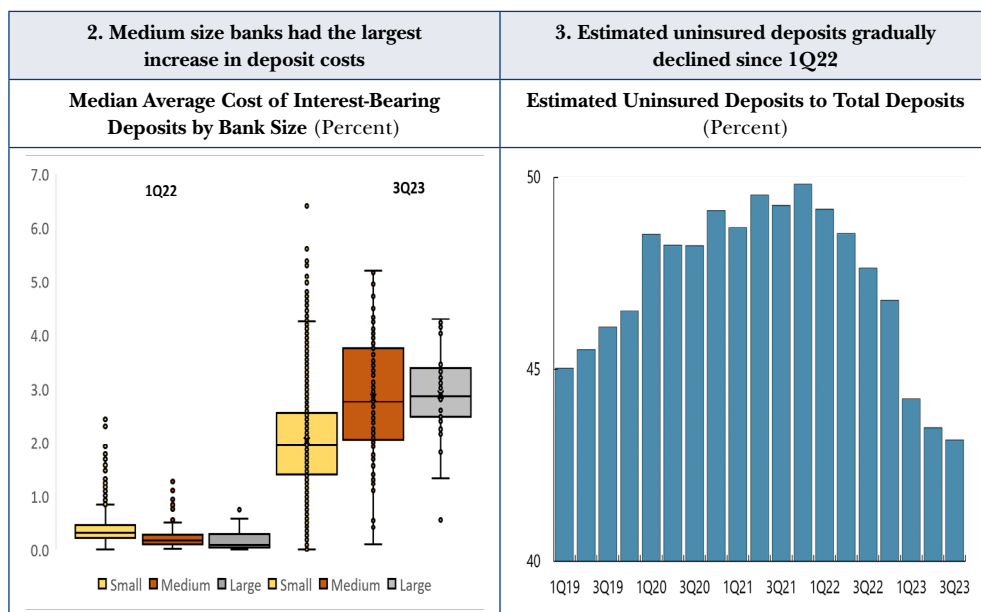
Figure 6. The banking system experienced sizable deposit outflows during the March stress in 2023.



²⁰ This number is based on each banks' average cost of interest-bearing deposits.

²¹ Banks above \$250 billion in total assets received inflows during the period.

²² Data not calculated for small banks since the estimates of uninsured deposits are only available for small subset of banks.



Sources: Federal Deposit Insurance Corporation, S&P Capital IQ, and IMF staff estimates.

Note: Panel 2 based on 4,530 or 98 percent of deposit insured banks, accounting for 99.8 percent of total bank assets in third quarter of 2023. Small banks correspond to banks with less than \$10 billion in total assets, regional or medium banks correspond to banks with assets between \$10 billion and \$100 billion, and large banks correspond to banks with assets above \$100 billion.

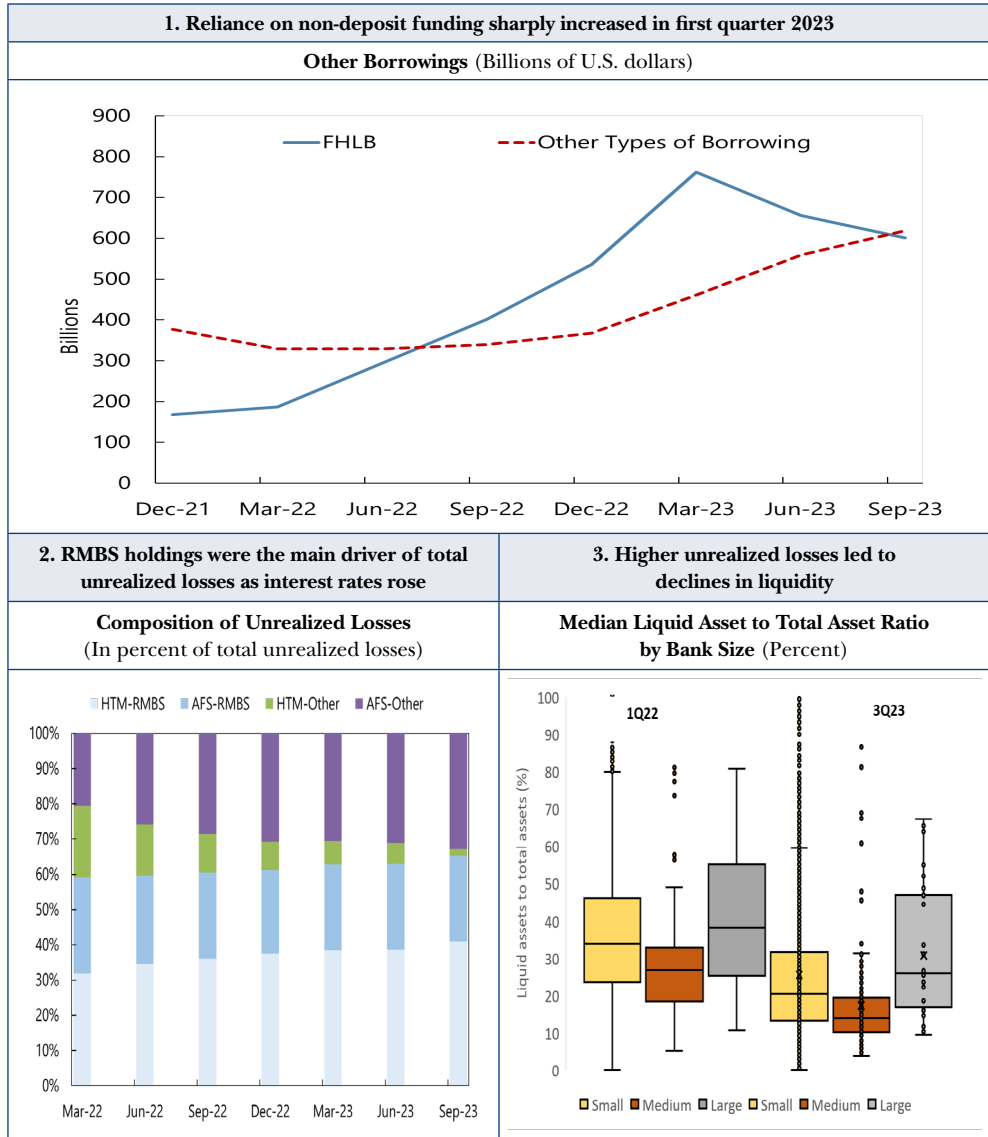
INCREASED RELIANCE ON OTHER SOURCES OF BORROWING

Given the deposit outflows detailed above, banks turned to other sources of borrowing as a precautionary measure to help address investors' concerns and to safeguard their liquidity against the possibility of increased volatile behavior from their deposit base. They resorted to advances from the Federal Home Loan Banks (FHLB), credit from the Federal Reserve discount window and emergency lending program and brokered deposits. Banks pledge mortgage and similar assets in exchange for FHLB advances. FHLB lending surged after SVB's collapse, increasing significantly more for medium banks (+48 percent) and large banks (+58 percent) compared to small banks (+7 percent) (see Figure 7, Panel 1). The FHLB system funds these advance by issuing discount notes and other debt securities, significantly curtailing its lending in the interbank and repo market. As a result, interest rates of FHLB discount notes and in repo markets moved up noticeably on the days immediately after SVB's collapse.

Similarly, other types of borrowings also increased as banks accessed other sources of funding such as the BTFP facility (see Section 3 for more details). In the first quarter of 2023, other sources of funding increased more for medium banks (+118 percent) than for small (+87 percent) and large banks (+16 percent), suggesting medium banks

were potentially the main users of the BTFP program. Brokered deposits, considered as another source of funding, at \$1.3 trillion in the third quarter of 2023, also increased sharply for medium banks (+118 percent) compared to small (+67 percent) and large (+71 percent) banks with respect to a year ago. On average, an estimated 88 percent of total brokered deposits were reported as insured.

Figure 7. Deposit outflows led to higher non-deposit borrowing, and higher unrealized losses led to less liquidity, for medium size banks in particular.



Sources: Bloomberg LP, S&P Capital IQ Pro, and staff estimates.

Note: Panel 2, based on 4,530 or 98 percent of deposit insured banks, accounting for 99.8 percent of total bank assets in third quarter of 2023. Small banks correspond to banks with less than \$10 billion in total assets, regional or medium banks correspond to banks with assets between \$10 billion and \$100 billion, and large banks correspond to banks with assets above \$100 billion. Federal Home Loan Bank (FHLB) advances; other types borrowings include all non FHLB debt; AFS = Available-for-sale, HTM = Held-to-maturity, AFS Other comprises securities other than RMBS, and RMBS = Residential mortgage-backed securities.

UNREALIZED LOSSES

Banks responded to the surge in liquidity from higher deposits following the pandemic by investing in longer-term securities, particularly RMBS. When interest rates rose sharply in 2022 and 2023, the market value of securities holdings depreciated significantly, leading to large unrealized losses on banks' balance sheets. Between the first and the third quarter of 2023, unrealized losses increased the most for medium banks (+58 percent) compared to small (+40 percent) and large banks (+38 percent). Securities usually represent a large share of a bank's balance-sheet liquidity because they can be sold for cash or pledged to obtain additional funding. Rising interest rates reduce the value of securities that yield a fixed interest rate and are classified as held-to-maturity (HTM) or available-for-sale. These valuation declines result in unrealized losses on securities for the HTM portfolio since losses would have to be realized in the event of a sale. HTM securities are reported at amortized cost, and unrealized losses are not generally reflected in equity or regulatory capital. In contrast, AFS securities are reported at fair market value, and unrealized gains and losses are reflected in equity and regulatory capital for some banks ²³

In first quarter of 2023, unrealized losses were US\$510 billion, of which AFS unrealized losses accounted for 55 percent of total and HTM losses accounted for 45 percent (Figure 7, Panel 2). Unrealized losses from holdings of RMBS represented nearly two-thirds of total unrealized losses and were driven by increases in mortgage rates, as the 30-year fixed rate national average increased 191 basis points from the first quarter of 2022 to the first quarter of 2023. As interest rates rose, unrealized losses also increased. By the third quarter of 2023 unrealized losses were US \$653 billion. The median ratio of unrealized losses to Tier 1 capital suggests large banks (34 percent) have a higher concentration of unrealized losses to Tier 1 capital compared to small and medium banks (28 percent).

THE SURGE OF LIQUIDITY RISK

Deposit outflows and rising unrealized losses on securities contributed to the decline in liquid assets, particularly for medium banks. Unrealized losses reduced liquidity as securities with lower values are a less favorable source of liquidity since losses would

²³ See, news release: FDIC: PR-55-2023 7/27/2023.

have to be realized in the event of a sale. Unrealized losses also hinder the bank's ability to pledge securities as collateral or meet margin requirements when searching for funding. Liquidity, as measured by the ratio of liquid assets to total assets, declined the first quarter of 2023; medium banks had the lowest liquidity ratio (15 percent) compared to small (24 percent) and large (26 percent) (Figure 7, Panel 3). In the first quarter of 2023, more than half of all banks in the sample recorded a decline in the liquidity ratio. Since then, liquidity has continued to decline across banks as unrealized losses remain elevated.

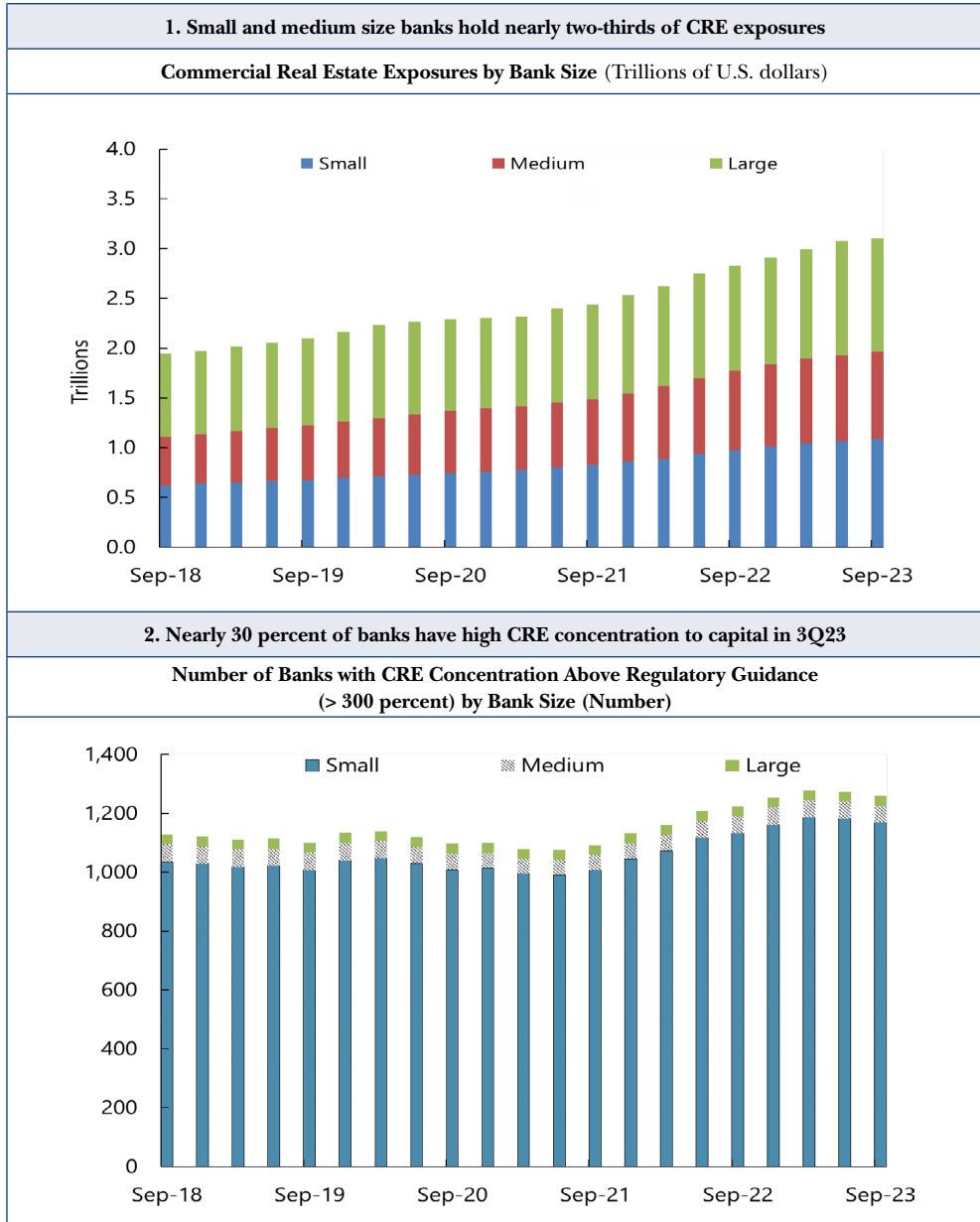
COMMERCIAL REAL ESTATE EXPOSURES

The high concentration of CRE exposures represents a serious risk to small and large banks amid economic uncertainty and higher interest rates, potentially declining property values, and asset quality deterioration. Small and medium banks hold nearly two-thirds of the US\$3 trillion in CRE exposures in the banking system (Panel 8, Panel 1). Non-farm non-residential loans represented the largest subcomponent, accounting for more than half of CRE loans. These loans include mortgages secured by real estate (accounting for 21 percent of CRE loans) and loans where the primary source of repayment is derived from the rental income associated with the property or non-owner occupied loans (accounting for 38 percent of CRE loans).²⁴ In the first quarter of 2023, roughly 28 percent of banks reported CRE concentrations above 300 percent of Tier 1 capital, with concentration measured as total CRE exposure to Tier 1 capital.²⁵ An estimated 48 percent of medium banks reported CRE concentrations above the 300 percent regulatory threshold compared to 27 percent for small banks and 6 percent for large banks. By the third quarter of 2023, the number of banks reporting CRE concentrations above 300 percent remained elevated at 27 percent of total banks (Figure 8, Panel 2).

²⁴ See Schedule RC-C Loans and Leases, Item 1.e of FFIEC 031 041 instructions for third quarter of 2023, FFIEC031_FFIEC041_202309_i.pdf

²⁵ Criteria developed following supervisory guidance that considers high concentration as the ratio of CRE exposure to total risk-based capital greater than 300 percent, according to regulatory guidance. See Managing Commercial Real Estate Concentrations, July 10, 2023. FDIC: Managing Commercial Real Estate Concentrations – Winter 2007 Vol. 4, Issue 2

Figure 8. Small and medium size banks have a high concentration to commercial real estate.



Sources: S&P Capital IQ Pro and Staff estimates.

Note: Panel 1 and 2 based on a dataset including 4,530 or 98 percent of deposit insured banks, accounting for 99.8 percent of total bank assets in third quarter of 2023. Small banks correspond to banks with less than \$10 billion in total assets, regional banks or medium banks correspond to banks with assets between \$10 billion and \$100 billion, and large banks correspond to banks with assets above \$100 billion.

DO ALL REGIONAL BANKS HAVE THE SAME VULNERABILITIES: CROSS-SECTIONAL ECONOMETRIC ANALYSIS

Between May 1 and May 4, 2023, regional banks experienced another large sell-off as Californian lender PacWest disclosed it was looking at strategic options (a buyer or to raise more capital), and culminated in PacWest merging with Bank of California on July 25, 2023.²⁶

We use this change in equity prices as a test to confirm the analysis of the key characteristics described above in section 4. Using a subset of 108 listed banks in the KRE bank regional index, we run a simple cross-sectional regression of bank stock performance between May 1 and May 4, 2023 on a number of potential drivers. Balance sheet and income statement data are lagged by one quarter, representing data from the first quarter of 2023.

As Table 1 shows, an increase in FHLB advances shows a particularly strong and significant negative impact on stock performance. A one percentage point increase of FHLB use (as share of total assets) is associated with a 1.07 percent decline in stock prices during the sell-off, all else equal. This suggests the use of these funding options didn't calm the market; rather, investors have taken it as a sign that the bank faced liquidity stress. Deposit outflows and larger CRE exposures were also associated with stronger selling pressures.

The share of unsecured deposits, as well as unrealized losses in HTM and AFS portfolios as of the first quarter of 2023, do not seem to have had a statistically significant impact on individual stock performance during the May sell-off. A potential reason is that the market had already priced-in most of this information ahead of May as the incremental losses during the quarter were not substantial.

Within this sample of regional banks, banks with assets less than US \$50bn seem to have more resilient stock prices, controlling for other factors, consistent with the market focus on US regional banks, rather than the smaller institutions with limited footprint.

We acknowledge certain limitations to this cross-sectional analysis and further econometrical work is warranted. For example, the analysis can be augmented by further data on use of the discount window and BTFP. Work on the impact of social media (proxied by the net negative tweet ratio from Bloomberg) is still a challenge given certain banks in the sample have little social media presence. In addition, a wider sample and time period could be broken into different stress events to obtain a broader picture since March 2023.

²⁶ Bloomberg, "Regional Banks Sins as PacWest weighs strategic options", May 3rd, 2023; and PacWest and Banc of California to merge, raise \$400 million in equity, July 25, 2023, Banc of California and PacWest to merge, raise \$400 million in equity | Reuters.

Table 1. Drivers of the US regional bank stock sell-off between May 1 and May 4.

Econometric test determines key characteristics of vulnerable banks.		
Cross-sectional regression analysis.		
	Stock price	May 1 - 4
Deposit outflows _{23Q1}	-0.385***	(0.095)
FHLB advances _{23Q1}	-0.071***	(0.271)
CRE exposurre _{23Q1}	-0.205***	(0.066)
Unsecures deposits _{23Q1}	0.058	(0.067)
Unr. losses _{23Q1}	0.023	(0.831)
Net. Int. Income _{22Y}	2.007	(1.295)
Net. neg. tweet ratio	-1.164	(1.681)
Bank assets < \$50bn _{23Q1}	0.077***	(0.024)
Constant	-0.198***	(0.067)
Observations	108	
R^2	0.382	
Adjusted R^2	0.332	
Standard errors in parentheses		
* p < 0.1, ** p < 0.05, *** p < 0,01		

Sources: Bloomberg Finance L.P.; S&P Capital IQ., IMF staff calculations.

5. A MARKET-BASED ASSESSMENT OF THE US BANKING SECTOR

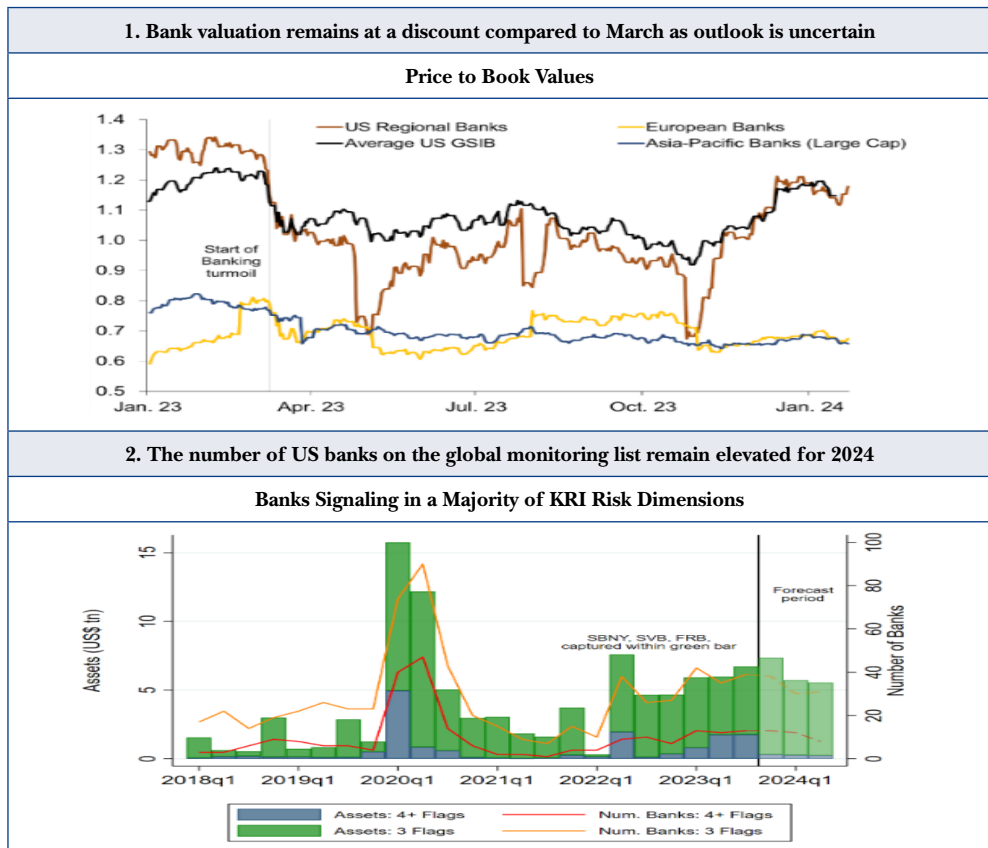
Bank equity has broadly recovered since the March 2023 turmoil (Figure 4, Panel 1.), but bank valuations remain at a discount. Price to book values for US regional banks (comprising small and medium size publicly traded banks)²⁷ have suffered as uncertainty around medium-term prospects for their current business models and the potential for heightened regulation and increases in required capital drive uncertainty and deter investors. Despite this, the market continues to pay a premium for US banks, and the wedge between price-to-book values for the US compared to Europe has expanded since the third quarter of 2023 and returned to pre-turmoil levels (Figure 9, Panel 1).

In the third quarter of 2023, a weak tail of banks remained as a relatively large number of small and medium banks still have high levels of unrealized losses, high CRE concentrations, higher reliance on other borrowings, higher funding costs, and lower profitability. To identify a weak tail of banks the key risk indicators methodology developed by the October 2023 Global Financial Stability Report chapter, “A New Look at

²⁷ KBW Regional Index currently comprises banks between c.\$10-110 billion. If you exclude NYCB, the second largest bank has c.\$75 billion in assets.

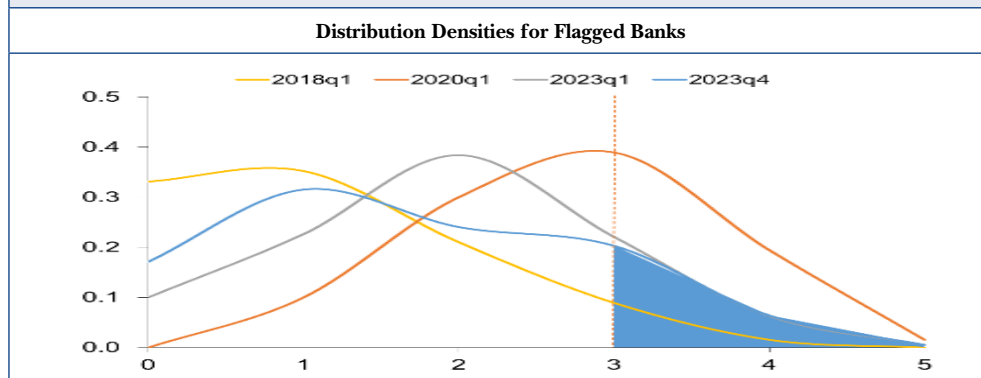
Global Banking Vulnerabilities” have been superimposed on a subset of publicly listed institutions is an indication that the number of banks in the monitoring list in the United States remains elevated, although it has shrunk since the onset of the pandemic (Figure 9, Panel 2 and 3). The pocket of weak banks signal across earnings, liquidity, and market KRI risk dimensions.²⁸ This analysis highlights that despite the lessons learned during the March turmoil and the recovery that took place since then, there remains a pocket of weak banks, mostly comprising small and medium banks (close to 40). These banks represent almost US\$ 5 trillion in assets, and they remain in in the IMF’s global monitoring list warranting further research (Figure 9, Panel 2).

Figure 9. There still remains a weak tail of banks signaling in a majority of KRI risk dimensions.



²⁸ Provided a methodology to develop a real-time monitor of forward-looking risks that incorporates balance sheet, income statement, valuation and consensus forecast metrics to measure financial stress of individual banks. Banks are measured along five key risk indicator (KRI) dimensions: Capital; Asset Quality; Earnings; Liquidity; Market metrics; See Global Financial Stability Report, October 2023: Financial and Climate Policies for a High-Interest-Rate Era (imf.org).

3. Distribution of weak banks has shifted to resemble a bi-modal distribution



Sources: Bloomberg LP, S&P Capital IQ Pro, Visible Alpha, and staff estimates.

Note: Panels 2 and 3 data include results based on historical data from the first quarter of 2018 to the fourth quarter of 2023, aggregate consensus forecasts for the fourth quarter of 2023 if actual data were not available, and aggregate consensus forecast data for the first and second quarters of 2024. FRB = First Republic Bank; KRI = key risk indicator; SBNY = Signature Bank; SVB = Silicon Valley Bank

6. POLICY RECOMMENDATIONS

Last year's bank failures in the United States have shown shortcomings in many dimensions that became a clear threat to the soundness of the banking sector and global financial stability. They also shed light on many other dimensions that policymakers, risk managers, supervisors and regulators should consider in strengthening the current regulatory framework especially in a context where technology advances play a critical role in bank transactions and liquidity management.

As critical as the regulatory framework is, though, it needs to be articulated by supervisors. The IMF paper, [Good Supervision: Lessons from the Field, Financial Stability Needs Supervisors with the Ability and Will to Act], reflects on both the turmoil as well as 10 years of Fund surveillance and capacity building work, and draws the attention to the role of supervisors in curtailing "irresponsible and excessive risk taking". Indeed, similar to the findings of the US authorities themselves, the IMF paper observes that, around the globe, vulnerabilities in supervision persist. Deficiencies include gaps in tools available and use of corrective and sanctioning powers. Supervisors need to be able to require banks to meet higher than minimum standards when risks require it; to allocate adequate resources to smaller banks where risks can reside; ensure that effective decision-making and escalation processes are in place; and be equipped with adequate reserves of expertise. Globally, more than half of the jurisdictions do not have independent bank supervisors with a clear safety and soundness mandate, with sound internal governance, or with resources appropriate to their assigned responsibilities. But supervisors cannot do it alone. The institutional architecture needs to be supported by other policymakers, including parliaments, if we are to achieve the vigilant, in-

dependent, well resourced, and accountable supervisory bodies needed for financial stability.

The turmoil also serves as a stark reminder of the impact that rapidly rising interest rates can have by interacting with underlying financial vulnerabilities. It also demonstrated how a group of weak banks, even if not individually systemic, can prompt emergency action by authorities to limit contagion to healthy bank organizations.

The analysis shows that vulnerabilities persist in a weak tail of banks. Beyond the unrealized interest-rate driven losses, the US banking sector is also grappling with higher credit risk derived from its exposure to CRE and the structural challenges brought on by the pandemic. The CRE sector is challenged by stressed market conditions for some property sectors as well as a growing number of defaults. Against this backdrop, continued vigilance is warranted to monitor vulnerabilities and concentrations in the CRE sector to minimize potential risks to lenders and financial stability risks. In the United States, the Federal Reserve has taken steps to strengthen supervisory efforts to address the lessons learned from the failure of large banks and its supervision of SVB. These efforts include improving supervision of liquidity and interest rate risks by conducting target reviews at banks exhibiting higher interest rate and liquidity risk profiles. The Federal Reserve is also monitoring for “potential credit deterioration” in CRE and consumer lending segments. In particular, US authorities have been monitoring very closely risks stemming from the CRE market (such as concentration risk, risk exposures, and risk management) and have emphasized the importance of adequate capital buffer to withstand potential future losses,

If financial stability is threatened, maintaining confidence is paramount. As highlighted in the April 2023 Global Financial Stability Report, policymakers should act swiftly and provide liquidity support to prevent systemic events that could undermine the resilience of the global financial system. In this regard the bold and swift action taken by the US authorities allowed it to contain an immediate threat to financial stability.

STRENGTHENING THE RESOLUTION FRAMEWORK IN THE EU: THE CMDI PROPOSAL AND NEXT STEPS

CARLA DÍAZ ÁLVAREZ DE TOLEDO¹

1. INTRODUCTION

In the aftermath of the financial turmoil caused by tensions in the banking sector in US and Switzerland in the Spring of 2023, and with July 2024 marking the ten-year anniversary of the landmark legislation that changed crisis management in the EU, this article looks back on the development of the European resolution framework since the approval of the Bank Recovery and Resolution Directive 2014/59/EU (BRRD) a decade ago. It highlights the achievements and decisive progress made in building a robust and flexible system that has successfully contributed to protect both financial stability and taxpayers these past years. At the same time, it also reflects on the key lessons learned from recent global experiences and puts forward aspects that have yet to be addressed to strengthen the crisis management framework in the Banking Union.

In covering these aspects, this article analyzes the European Commission proposal for reform of the crisis management and deposit insurance framework (CMDI) presented in April 2023 and currently under negotiation. This proposal, born with the main objective of finetuning and levelling the playing field in the resolution of smaller and medium-sized entities, is an important step forward in enhancing several areas of the current design. However, it still falls short of resolving certain weaknesses traditionally identified in the Banking Union and once again brought to light by recent events. The timeliness of the proposal serves as the perfect opportunity to undertake a profound debate on these pending issues and drive continued work on enhancing the framework.

¹ Director of Resolution at FROB, Spanish Executive Resolution Authority, at the time of writing this chapter. Currently Director General of the Treasury and Financial Policies. The views expressed in this chapter are exclusively my own and do not bind nor represent the official position of FROB nor the Treasury. With special acknowledgement to Paula Conthe for her contributions in a personal capacity.

2. 10 YEARS OF A CHANGE IN PARADIGM

Over a decade has passed since the *Key Attributes of Effective Resolution Regimes for Financial Institutions* were adopted by the Financial Stability Board in response to the global financial crisis. This agreement reflected the profound change demanded in the traditional way of managing banking crises around the world, which up to that moment had mainly fallen on taxpayers' shoulders. It led to a profound institutional and regulatory revolution worldwide that has made it possible, in recent months and years, for authorities to successfully face the crises of even systematically large entities, managing to protect financial stability and the economy while at the same time shielding public funds from bearing losses, an option unavailable only a few years ago.

THE NEW CRISIS MANAGEMENT FRAMEWORK IN EUROPE

In Europe, the new crisis management paradigm was implemented with the Bank Recovery and Resolution Directive (BRRD) and, for Banking Union countries, with the SRMR (Single Resolution Mechanism Regulation 806/2014/EU). As a key step in breaking the sovereign-bank doom loop and reducing the risk of contagion of problems in the banking sector to the public sector, the new regulation enshrined the principle of bail-in, according to which the shareholders and creditors of the entity are the first to bear losses in case of bank failure. For cases in which this absorption of losses by shareholders and creditors is not sufficient, the Directive also established a second line of defense in the form of national financing arrangements—which in the context of the Banking Union became a joint, gradually mutualized, Single Resolution Fund (SRF)—made up of contributions from the industry, reinforcing the principle that the cost of financial crises is borne by the private sector.

Further, to provide the framework with the necessary credibility and ensure preparedness for any crisis situation, the new regulation placed a significant focus on resolution planning and preparation in times of peace by entities and authorities, as well as on the establishment of a minimum requirement for own funds and eligible liabilities (MREL). This requirement, which was further refined with the implementation of the so-called BRRD II (Bank Recovery and Resolution Directive 2019/879/EU), is meant to ensure that entities have a sufficient level of resources on their balance sheets with the capacity to absorb losses and recapitalize the entity in a crisis.

Over the past ten years, the European resolution authorities, led by the Single Resolution Board (SRB) in the Banking Union, have worked hand in hand with banks in drafting and approving resolution plans and operationalizing resolution tools, reducing obstacles to resolvability on a wide range of dimensions (governance, liquidity, operational continuity, etc.), preparing and planning for an eventual crisis and ensuring adequate financing in resolution, both through the build-up of the necessary loss-absorption capacity as well as through the constitution of the Single Resolution Fund.

This January 2024 marks a turning point in the resolution framework in the Bank-

ing Union, with the end of an 8-year transition period. By this date the SRF should be fully built-up and mutualized, reaching its target of 1% of covered deposits (an amount close to 80 billion euros). Entities, on their side, should have met their final MREL targets and must comply with the SRB's Expectations for Banks (EfB) which set out the capabilities a bank should develop to demonstrate they are resolvable. As of end-2022, the cut-off date for the SRB's latest Resolvability Assessment Report, the vast majority of banks were well on track to complying with the EfB as well as with their final MREL target for 2024, including the Combined Buffer Requirement (CBR)².

But progress has not only been made in the planning and preparation dimension. The new framework was successfully put to the test for the first time in 2017 in Spain, with the resolution of Banco Popular. On that occasion, the shareholders and creditors of the institution assumed the cost of the failure of the 6th largest bank in the country. After implementing the sale of business tool, branches opened the following day in business as usual, without any impact to the markets or depositors, with the buyer providing the necessary liquidity to keep the bank operating.

Subsequently, the failure of several entities in other European countries such as Italy or Latvia took place. In these cases, the SRB concluded that resolution action was not warranted in the public interest, and as a result, the banks were wound up under national insolvency proceedings, in some cases with State aid to support the liquidation process. In February 2022, a new resolution took place, and the SRB again implemented a sale of business tool for the subsidiaries of the Sberbank group in Croatia and Slovenia, while the Austrian parent company of the group was wound up under normal insolvency proceedings. In this instance, the moratorium tool was also successfully used for the first time.

These first experiences already offered a number of key lessons, most notably the need to finetune the resolution legislation to more specifically address the failure of small and medium-sized entities and ensure a level playing field across the Banking Union. This prompted the European Commission legislation proposal covered more in-depth later in this article. All in all, however, in early 2023 there was widespread confidence not only on the progress achieved in reinforcing the resilience of the banking sector since the past crisis, with entities having survived largely unscathed the tensions derived from extremely grave and unprecedented circumstances such as a global pandemic and a war in Ukraine, but also on the capacity and ability gained to quickly and effectively confront any crisis, even very sudden ones.

2023: THE MOMENT OF TRUTH

It has to be said that the true test to the new global framework came in the first quarter of 2023, when the US and Swiss authorities once again faced a crisis of a dimension that dangerously evoked the events of fifteen years ago.

² 2023-09-10_SRB-Resolvability-Assessment-2022.pdf (europa.eu).

There are many important lessons to be learned for authorities from these recent cases. Certainly, traditional ones for supervisors, with regard to the sustainability of business models, governance and risk management. New ones as well, related to the impact technology now has on the liquidity position and evolution of an entity in the run-up to a crisis. Depositors' ability to withdraw deposits at extraordinary speed from any electronic device 24/7 and the amplification of bank runs that social media provides, with communications exponentially increasing in speed and scope of distribution, represent key challenges and materially influence the timing of a crisis.

In this article, however, I will focus on one of the most relevant aspects to be learned from a traditional crisis management perspective: all the spring crises were addressed by selling the entity in crisis, as had already been the case before with Banco Popular and Sberbank. In addition, given the abruptness and systemic dimension of the crisis, it was also necessary for authorities to provide:

- (1) ample guarantees to address the uncertainties that the balance sheets presented to buyers.
- (2) substantial liquidity support from Central Banks, also backed by national guarantees.

The fact that these guarantees ultimately came from the Treasury and, thus, the taxpayer and that, in the case of Credit Suisse, the situation was managed outside of resolution (without authorities formally declaring the entity as failing or putting it into resolution) initially generated a certain degree of mistrust in the framework, which was further aggravated by some controversial measures such as the write-down of AT1 instruments without a prior write-down of shares. Voices were heard putting the whole new crisis management paradigm into question and criticizing its lack of effectiveness. Indeed, more than a decade after the FSB Key Attributes, many interpreted that we were back to square one in managing crisis, once again resorting to massive government intervention to save the day.

However, time has shown that the decisions taken at the time were effective for preserving resolution objectives and that in the end, US and Swiss authorities successfully managed to stabilize the markets and the banking sector, protecting financial stability and the economy, at no ultimate cost to the taxpayer.

Indeed, it is important to highlight two key developments of the last months:

- In the US, the estimated cost of the resolution cases to the FDIC (around 16.3 bn USD), attributable to the protection of uninsured depositors, is expected to be recouped from a special assessment on the industry which

will start to be collected in 2024. The FDIC Board of Directors approved the final rule on its implementation in November 2023³.

- In Switzerland, UBS voluntarily terminated in August the CHF 9 billion Loss Protection Agreement and the CHF 100 billion Public Liquidity Backstop that had been granted by Swiss authorities in March⁴. These guarantees that kicked in following the absorption of losses by shareholders and creditors were necessary to restore confidence but ultimately the taxpayer did not have to bear any cost.

In fact, far from proving the failure of the framework, it can be said that events in spring actually demonstrated its relevance and effectiveness in helping manage a banking crisis, even if crises never unfold the way they were originally foreseen to. In the case of Credit Suisse, it is true that a resolution was not executed, but the fact that the framework was in place and that many years had been dedicated to resolution planning and building TLAC decisively contributed to finding a solution. To name only a few differential factors of the Credit Suisse case with regard to crises a decade earlier:

- The group held sufficient bail-inable instruments to absorb losses and recapitalize the entity in case of need. A clear alternative course of action was therefore prepared and readily available in case a sale to a third party, a solution which is always the preferred one for authorities but which can unfortunately never be guaranteed ex-ante, failed.
- This alternative to the sale left shareholders in a much worse situation, a factor which presumably was quite persuasive in helping pave the way to an agreement with a rival who appeared to only be willing to buy outside a resolution context.
- The crucial close cooperation and coordination between the many authorities monitoring the situation of a systemically global entity was made possible through the open lines of communication and collaboration built through the set-up of Crisis Management Groups and regular exchanges in other international fora established under the auspices of the FSB.

In short, it is fair to defend that the management of these latest crisis cases contributed to consolidating the paradigm shift illustrated in the FSB Key Attributes. Although no amount of preparation can provide full visibility on how a crisis will evolve and which solution will be implemented in the last instance, the work of recent years has endowed

³ FDIC: Final Rule on Special Assessment Pursuant to Systemic Risk Determination.

⁴ UBS Group AG voluntarily terminates Loss Protection Agreement and Public Liquidity Backstop guaranteed by Swiss government and Credit Suisse AG fully repaid ELA+ loan | UBS Global.

authorities and banks with the capabilities and tools to handle a crisis, being able to react flexibly to evolving circumstances.

LESSONS FOR THE BANKING UNION

In the case of the Banking Union, however, although key pillars of the framework are well established, recent experiences in the US and Switzerland also provide an opportunity for further reflection on certain aspects that have yet to be incorporated into the framework in order to allow us to manage bank failures with the same degree of effectiveness as our international counterparts.

I would highlight three key missing pieces:

- We have long been calling for a fully European and sufficiently powerful mechanism to address the liquidity needs of newly resolved entities. Despite their restored solvency, these entities may need time to regain the confidence of the market and will likely face liquidity tensions in the immediate aftermath of a resolution. The current framework relies on a Single Resolution Fund (SRF) and, if the new ESM Treaty is ever ratified, on a backstop provided by the European Stability Mechanism (ESM), but the unprecedented level of deposit outflows from an entity seen this spring (with 40 billion dollars being transferred out of Silicon Valley Bank in a matter of hours) stresses the need for an immediate and extensive access to funds, of a different magnitude than that available in the Banking Union (the SRF's approximate 80 bn EUR can increase potentially up to around 150bn EUR with a common backstop). The recent crisis cases clearly show that only Central Banks have the firepower to provide access to potentially unlimited resources to support liquidity and confidence in the aftermath of a resolution. Taking into account the expected depletion of collateral in the run-up to a crisis, some sort of public guarantee would be needed to support access to central bank facilities until confidence is restored and the entity regains access to private sources of funding. In the Banking Union it is paramount that this guarantee is provided at a European level, in order to avoid the damage of fragmentation, and to be consistent with the fact that the entity has been resolved according to harmonized European rules.
- Until such a solution is put on the table, given the lack of readily available liquidity sources post-resolution, both the sale-of-business tool and the guarantees required to facilitate this sale become increasingly important. Indeed, finding a buyer can ensure continued access to deposits, thus restoring confidence. But experience shows that, at the moment of crisis,

the time pressure and uncertainty over certain items of the balance sheet can discourage potential buyers. As we have learned in Spain through the success of APSs (Asset Protection Schemes) and guarantee programs granted in the past crisis, the capacity to cover certain liabilities can be instrumental not only in facilitating a sale but also in maximizing the price offered precisely in this context of high uncertainty. Developing the role that the Deposit Guarantee Schemes (DGSs) and the SRF can play in offering these guarantees, which is very limited in the current framework, is fundamental, so that these guarantees are preferably granted by industry funds rather than the taxpayer.

- Finally, and also very much related to liquidity, the recent cases have also illustrated one unintended consequence of the shift to the new paradigm, which is a potential increase in financial instability and contagion derived from the flight of uncovered deposits expected to contribute as creditors to the cost of a resolution. This has led to much analysis and debate at an international level, with several options being put forward, including the possibility of extending depositor protection to certain deposits depending on their nature and their importance to the real economy (for example, to protect all transactional deposits, as is currently the case in certain jurisdictions such as Japan). Finally, this aspect is closely linked to another long-called for reform in the Banking Union which is a European Deposit Insurance Scheme (EDIS) that would enhance the level playing-field in the Banking Union by ensuring exactly the same protection to depositors independently of their location in the Banking Union.

Admittedly, the complexity and highly political nature of these topics makes any progress on them slow and challenging. As chance would have it, however, when the events this spring unfolded, the Commission was getting ready to present its proposal on a review of the framework focusing on addressing the failure of small and medium sized entities and setting the scene for a profound debate.

3. THE CMDI PROPOSAL

Although its presentation coincided with the international spotlight shining on crisis management, the CMDI proposal presented on April 18 2023⁵ had already been several years in the making. In June 2022, the Eurogroup issued a statement on the future of the Banking Union, acknowledging, among other aspects, the need to reinforce this area and tasking the European Commission with a review and a proposal to adjust and

⁵ Reform of bank crisis management and deposit insurance framework - European Commission (europa.eu).

further strengthen the EU's existing bank crisis management and deposit insurance (CMDI) framework.

The proposal tackles all three of the main rules dealing with banking crisis management since 2014: the BRRD and SRMR that have already been mentioned before, as well as the DGSD (Deposit Guarantee Schemes Directive 2014/49/EU). The most significant changes are aimed at improving the crisis tools used to manage the failure of small and medium-sized banks, where practices appear to have not always been as harmonized as would have been desirable within a common framework, potentially generating an unlevel-playing field where bank creditors could be treated differently depending on their location in the Banking Union.

MAIN ELEMENTS OF THE PROPOSAL

Among the most notable elements of the proposal, concentrating much of the attention in Council and Parliament discussions in recent months, are the following:

Extension of the scope of resolution

The resolution framework is meant to be applied to any entity in difficulties, regardless of its size and business model, if national legislation does not have the appropriate instruments to adequately manage its failure through traditional bankruptcy procedures.

With the reform, the public interest assessment (PIA), which determines when a failing entity should go into resolution (instead of being wound up under normal insolvency proceedings) is intended to be expanded and harmonized.

To this end, the proposal revises the PIA introducing several relevant clarifications in the draft text (such as the consideration of the interruption of critical functions at the regional level, and not only at national level), while preserving the case-by-case assessment by the resolution authority at the time of resolution.

But the main factor in extending the scope of resolution is the proposed reversal in the “burden of proof” in the public interest assessment so that it is only negative when liquidation under the ordinary bankruptcy procedure achieves resolution objectives more effectively than in resolution (and not only to the same extent as in the current legislative text).

The main rationale behind this broader scope of resolution is twofold. On the one hand, achieving higher harmonization and level playing field given the wide diversity in insolvency regimes across Europe. On the other, recognizing that many national insolvency proceedings are ill-suited to manage the failure of even small banks, given their key deposit-taking role and potential risk to financial stability and the need to facilitate transfer strategies (sale of business and bridge bank) which are not always available in the different national systems.

For countries like Spain, without a bank-specific insolvency regime, where the liquidation of an entity may lead to very lengthy and complex processes, this change is par-

ticularly relevant, although one is left to wonder whether the reformulation of the PIA is sufficient to ensure a level playing field, given that it is still determined case by case relative to each national insolvency regime, which remains to be harmonized.

It is also important to note that being an entity earmarked for resolution also implies certain obligations in terms of resolution planning and MREL requirements that smaller entities may struggle to meet. Many have limited resources to devote to resolution planning and less access to capital markets than larger institutions. This raises the need to accompany this extension in scope with proportionate requirements and further reforms to ensure the necessary financing in resolution for smaller entities, while still fully respecting the key principles enshrined in the FSB Key Attributes.

These concerns on proportionality for the smallest institutions have led to an increasing consensus under the Spanish presidency of the Council whereby the extension of the scope of resolution would not affect the smallest institutions.

Increasing financing capacity in resolution through the use of DGS resources

As a crucial complement to the proposed increased scope of resolution, the proposal dwells on the critical question of funding and reinforces the role played by national DGSs in resolution and offers a bridge to access the SRF funds.

With regards to the role of DGSs to support resolution, it is extended in two ways:

- The DGS resources may be used to facilitate the transfer of all types of deposits (including non-covered deposits, although only under specific circumstances), and not only covered deposits;
- DGS support may take the form not only of cash (covering the difference in value of the assets and deposits being transferred), but also of guarantees. As illustrated by recent crisis cases, this possibility is particularly relevant to facilitate a sale and can achieve a more efficient use of DGS resources, since they do not have to be disbursed upfront.

Even more importantly, a key bridge function is introduced, with the contribution from the DGS counting towards the calculation of the minimum bail-in of 8% TLOF (including own funds) which is necessary to access SRF financing in resolution. This bridge function, however, is not automatic as it is subject to adequate safeguards:

- i) Only for banks earmarked for resolution (and therefore having to meet stricter MREL requirements as first line of defense);
- ii) Only where the resolution authority determines that non-covered deposits should be protected from losses. This would be the case where the exclusion is strictly necessary and proportionate in order to preserve the continuity of critical functions or where necessary to avoid widespread contagion and financial instability;
- iii) Only for the protection of depositors, which caps the DGS contribution

- to any shortfall in the value of the transferred assets in comparison to the value of the transferred deposits and liabilities with the same or a higher priority ranking in insolvency than those deposits;
- iv) Only up to the amount necessary to meet the 8% TLOF requirement to access the SRF only for transfer strategies with market exit of the resolved entity;
 - v) Finally, the contribution is capped by the amount of losses that the DGS would bear in insolvency if it paid out covered depositors and subrogated to their claims (least cost test).

The relevance of this bridge function lies in the fact that it limits the use of national resources to the amount necessary to unlock funds that are mutualized in the Banking Union, thus avoiding fragmentation in the management of banking crises along national lines.

Change of the depositor preference in the hierarchy of claims.

The proposal reinforces the role to be played by the DGS in resolution, but it maintains the conditions that must be met for its funds to be used, notably the so-called least cost test (LCT). In accordance with this test, the DGS can only intervene outside of its payout function if the estimated cost of its intervention is less than the cost it would incur in a hypothetical payout to depositors in the event of liquidation (net of recoveries).

To increase the probability of this least cost test being met in resolution, the proposal aims to remove the “super-preference” of the DGS enshrined in the current regime and create a single tier ranking for all deposits (covered deposits and deposit guarantee schemes' claims, non-covered but preferred deposits of households and small and medium enterprises, other non-covered, non-preferred deposits). If DGS claims rank *pari passu* with other depositors' claims, instead of preferred to them, their losses in liquidation would increase. This increases the amount available under the LCT.

Further, the proposal also establishes the preference of all deposits relative to ordinary unsecured claims, a situation that already exists in certain European countries but that changes the scenario of others like Spain where senior debt continues to rank *pari passu* to deposits. This enhances and harmonises the protection of depositors by clearly distinguishing deposits from senior liabilities that can bear losses in case of failure with a less material impact on financial stability.

The change in the creditor hierarchy of covered deposits has been one of the most controversial aspects of the proposal, together with the increased role of DGSs in supporting resolution. It is important to highlight that the creation of a single tier of deposits does not undermine the protection of covered deposits, since they remain protected by the DGS in any case: in case of insolvency, the payout by the DGS is triggered immediately, and the DGS surrogates in the position of covered deposits in insolvency. It is therefore the protection of the DGS in insolvency that the proposal changes, not that of covered depositors. In this respect, it is useful to recall that DGSs are funded by the industry and one may wonder why funds from the industry should benefit from a

super-preference against other types of deposits (from households, SMEs, corporations or other financial institutions, for instance).

Under the Spanish presidency of the Council, discussions on the hierarchy of deposits and the use of DGS funds in resolution have not led to any clear consensus. However, some progress has been made in identifying potential elements for a common ground, sketched out in the Presidency Progress Report. Among the most interesting proposals laid out, it is worth mentioning the possibility to define two tiers of deposits (with all deposits ranking senior to other senior debt), combined with a more flexible least cost test that could even include a systemic exemption. At the end of the article, I take the opportunity to further elaborate on this latter aspect.

OTHER CHANGES INTRODUCED BY THE PROPOSAL

The above changes have undoubtedly been the ones to attract the most attention and can perhaps be considered the most relevant (and controversial!) from among the many modifications introduced by the European Commission in its CMDI review.

But the proposal also introduces a number of other novelties in a wide range of areas, more technical in nature, building on experience acquired and lessons learned which are also of key importance for resolution authorities. Among these changes, I would highlight:

- Strengthened cooperation between authorities:
 - The proposal reinforces close cooperation and collaboration between supervisory and resolution authorities, strengthening information sharing mechanisms in the run-up to resolution, with the introduction of an early Failing or Likely to Fail (FOLTF) warning, among other measures.
 - Very importantly for resolution authorities from a legal point of view, the proposal also explicitly clarifies that the work to prepare the resolution may begin (sales process and request for information to the entity to prepare the valuation) without the need to activate early intervention.
- Adjustments to the MREL calibration of transfer strategies, essentially reflecting in Level 1 legislation the practices already in place at the SRB for calculating the recapitalization amount when setting MREL targets for entities with a transfer strategy.
- Within the scope of the SRB, the proposal introduces some changes in its governance:
 - Possibility for the Chair, Vice-Chair and permanent Board members

- of the SRB to serve a second term in office (at present, mandates are non-renewable).
- Voting rights are granted to the Vice-Chair, together with the full-time Members of the SRB Board having the right to vote.

4. WHERE DO WE GO FROM HERE?

Although it set out to simply finetune the crisis management framework, it must be said that, without any need for radical upheavals, the CMDI proposal takes bold steps in deepening and strengthening it. And even though it was not a direct answer to events earlier this year, it appears to already address many of the lessons learned.

In my personal view, there a number of positive elements to highlight:

- One of the main foundations of the proposal is recognizing the potential systemic implications of even smaller banks, given their vital role as deposit-takers, and the need to offer those countries without a bank-specific or agile bankruptcy regime with the necessary tools to effectively manage the failure of all types of banks, no matter their size or business model. Resolution appears no longer to be for the few, but for a more pragmatic as many as needed, in order to ensure bank insolvencies are managed through effective administrative regimes allowing for the quick transfer of deposits.
- This raises, however, the question of financing in resolution for the smaller entities, where issuing sufficient eligible liabilities to reach an 8% of TLOF to access the SRF may be unrealistic at the point of resolution. To fulfil their MREL requirements these entities usually rely on CET 1, which may have been largely depleted at the point of insolvency. Deposits usually stand almost next in line to absorb losses. Therefore, reaching an 8% TLOF at the time of resolution may require imposing losses on deposits with potential implications on financial stability. The CMDI proposal also addresses this issue head on proposing a greater use of DGS financing to support the transfer of all deposits in resolution. Importantly, however, at the same time, the proposal builds on and strengthens the key FSB principles, notably that shareholders and creditors must be the first to assume losses in a crisis. It stresses that MREL should continue to be the first line of defence, with all entities maintaining sufficient “skin in the game” to ensure the effective implementation of resolution tools. In my view, further reflections on instruments that would enable smaller entities to fulfil their MREL requirements without radically upsetting their business model would be warranted.
- Given the importance of ensuring liquidity post-resolution and the lack of

European sources of funding at present, it is worth noting that the proposal facilitates the implementation of transfer strategies as the preferred resolution tool for smaller and medium-sized entities. It takes decisive steps towards enabling mechanisms that can facilitate the sale, notably guarantees provided by DGSs, which have proven very effective in protecting taxpayers in past cases, even before BRRD; or in providing a sound legal basis for resolution authorities to start preparations for a sale process at an early stage.

However, the proposal could have been more ambitious on other elements to address long-standing issues in the Banking Union:

- Undoubtedly one of the elements that may raise most questions, in the context of a Banking Union, is the recourse to national funds (with impact on national accounts) in the resolution of an entity under the authority of the SSM and the SRB, which could be perceived to go in the opposite direction to the spirit of the Banking Union in terms of European financial integration. This means that the resolution of entities will be backed by their respective national financial sectors, a situation dangerously evoking spirits of doom loops past. The use of these national funds can only be understood as a second best, with DGSs assuming a first loss tranche ahead of the use of the fully mutualized resources of the SRF. This only highlights the importance of unlocking access to the SRF once the necessary amounts have been obtained from national resources. In the long term, however, EDIS should remain a goal to preserve the level-playing field in the Banking Union.
- Further, although one of the objectives of the reform was harmonization and levelling the playing field in the PIA, to ensure an equal treatment of entities and creditors across jurisdictions, this objective seems complicated to achieve with the proposed reform being still based on a comparison of the resolution framework against each of the national ordinary bankruptcy proceedings of the countries in the Banking Union.

Finally, it is important to stress that the CMDI proposal makes sense as a package, since it contains a number of inter-related elements that need to be put in place simultaneously for the reform to be successful. Discussions in the Council have shown a risk that some elements of the reform could be preserved without others, and we would strongly urge caution in altering a delicate balance. For instance, extending the scope of resolution to smaller entities requires mechanisms to support transfer strategies. Otherwise, resolution authorities could be left in an impossible situation, if they have to declare resolution for entities without the means to finance the necessary solutions.

The overall reform should be coherent and feasible for resolution authorities to implement.

The CMDI negotiations are currently underway and the final outcome of the review is still uncertain. What does seem to be clear is that reaching a common position will require not only maintaining a very technical perspective but also taking new and creative approaches and questioning long-established dogmas.

With this “disruptive” approach in mind, I would like to take this opportunity to make some suggestions to jumpstart discussions:

- Revisiting the need for a Least Cost Test (LCT) when using the DGS in resolution.

The LCT’s main objective is to safeguard the resources of national deposit guarantee funds, that is, industry funds. This test is useful in guaranteeing an efficient use of resources when faced with different alternatives to deal with the failure of an entity in insolvency proceedings. However, in the event of a larger crisis, the US and other jurisdictions do away with this test by invoking the systemic risk exception. This is safeguarded by a sound governance. The result is that authorities have the option to exceed the limits of the LCT to prevent a systemic risk. This systemic risk exception was precisely used by US authorities during the events in March to prevent wider contagion.

The European framework lacks a comparable tool. However, it already has in place a sound governance framework to assess whether a resolution would be in the public interest. It could be argued that the resolution decision itself in Europe is already a de facto systemic risk clause: when declaring an entity in resolution, authorities have already appreciated a risk to the financial system and that liquidation does not protect resolution objectives to the same extent, with higher potential cost for the economy, for financial stability, for bank clients... In this situation, if the LCT limits the use of the DGS and makes it impossible to access the SRF, we could end up in a potentially destabilizing situation with a very high cost to the economy, financial markets and ultimately with a high potential risk to the taxpayer, which seems counterintuitive when there are still unused industry funds available. Therefore, there is a strong case for considering whether in resolution DGSs should contribute above the limits of the LCT in order to safeguard financial stability, taking into account that there are strong conditions and a sound governance already in place for declaring an entity in resolution. It goes without saying that the amounts provided by national DGSs should be limited to the amounts necessary to unlock European funds provided by the SRF, to avoid fragmentation in the Banking Union.

This proposal would allow: (i) to have the necessary financing in resolution, avoiding higher costs for the economy, in line with the practice in other jurisdictions, (ii) to dispense with the debate on the hierarchy of deposits, where discussions are stagnant.

- The point made above does not mean that industry funds should be unlocked indiscriminately to support resolution. On the contrary, MREL should remain the first line of defence for financing banking crises. This is clear from the Commission proposal and there is consensus in this respect. At the same time, we should acknowledge that our framework places great emphasis on the capacity of an entity to issue debt or rely on own funds, which for the smallest banks may entail some challenges. The smallest banks may lack the capacities to access capital markets regularly (for instance, this requires a rating) and for volumes sufficient to ensure that their issuances have attractive liquidity. At best, they would be forced to issue at a premium. At worst, the resolution framework may impose disproportionate obligations on the smallest entities, with an impact on their profitability and therefore on their business model, pushing them towards riskier assets seeking higher returns. A framework designed to reduce risks in the banking system would be achieving the opposite.

The immediate option available for these entities to fulfil their MREL requirements is CET1, which is eligible under the current framework (while the TLAC standard requires that part of TLAC is made up of debt liabilities). In a solvency crisis CET1 is expected to have been depleted at the point of resolution, and thus not available to absorb losses. This illustrates that, rather than focusing on the quantity of MREL required, resolution authorities should focus on its quality and whether this MREL will still be available at the point of resolution.

While larger entities would have the capacity to issue subordinated debt that can easily be converted into capital without creating NCWO risks, for smaller entities alternatives need to be explored. I would like to suggest a reflection on possibilities to make funds available to authorities without necessarily forcing smaller banks to issue in the market. For instance, entities could constitute voluntary, pooled funds available to be used at the discretion of resolution authorities in case of resolution. These funds could replace part of the entities' MREL requirements. In defining the amounts that need to be available, authorities should take into account that these entities are expected to be resolved by using a transfer tool, preferably a sale of business, entailing their exit from the market, and that therefore no recapitalisation will be needed, only sufficient amounts to absorb losses and incentivise buyers. In addition, by pooling resources among various entities, some diversification benefits could be achieved, given that if the crisis is idiosyncratic not all entities would need to draw from the fund simultaneously.

- Finally, although as resolution authorities we must continue to prepare for any possible scenario, the practical experience in crisis management of the past decade clearly shows that the sale of business is ultimately the best solution in any situation, not only for small entities but even in the failure of a globally systemic one. At a later moment, there will certainly be time to address market and competition concerns and implement business reorganization and restructuring plans as required, but in the face of financial turmoil and contagion in this

highly technological world, the certainty a solvent buyer provides always appears to be the best alternative to protect financial stability. In addition, the sale of business addresses the crucial issue of liquidity after resolution, an aspect that is not satisfactorily addressed with the bail-in tool which only restores solvency. The recent crisis cases highlight the relevance of liquidity in accelerating a crisis and restoring confidence, so the capability of a buyer to provide liquidity is also a relevant aspect to take into account.

Therefore, how can authorities attract buyers in a crisis or how to incentivise them into submitting offers in the midst of high uncertainty? Crucial for the success of a sales transaction is the capacity of authorities to launch a competitive and transparent sales process under the extreme time pressure of a crisis. Sometimes, authorities may be fortunate to be able to rely on a sales process already launched in the recovery phase. Other times, they may have to start from scratch. This is why a stronger legal basis that enables resolution authorities to start preparations in advance is so relevant. The more time authorities can be granted to prepare, the greater the options for launching a competitive process that maximizes the price. At the same time, authorities will have to thread carefully, balancing the need to start preparations on time with the risks of accelerating a crisis if confidentiality is jeopardized. In this respect, the capabilities of the institutions to provide complete, reliable and accurate information on time and to upload it into a virtual data room become fundamental for the success of the transaction. These capabilities on the side of the institutions provide most optionality for authorities, both to switch between resolution tools (for instance, implementing a sale of business instead of a bail-in) and to be able to even change the resolution strategy (entities earmarked for liquidation may need to be resolved depending on the circumstances of the crisis). This would call for ensuring that all entities have a minimum set of capabilities, with the necessary proportionality for the smaller entities, especially those earmarked for liquidation.

With respect to mechanisms that facilitate the execution of the transaction, we have already referred to the necessary mechanisms for not only the DGS but also the SRF to offer guarantees, as already pointed out before. In a context of extremely high uncertainty, these guarantees may prove to be the defining factor that determines the success of a transaction. These guarantees would be provided by industry funds. However, as we have pointed out before, should public guarantees be required for systemic crises or to support access to sufficient liquidity, these should be used only as a last resort, for solvent institutions following a European, harmonised resolution process, and be provided at the European level in order to avoid fragmentation in the Banking Union and ensure consistency with decisions taken at the European level. Recent experience shows that these guarantees can go a long way in restoring confidence in the midst of a crisis, with ultimately no cost to the taxpayer, and in the unlikely event that costs are incurred by public funds, these should be recouped from the banking industry that ultimately benefits from the restored confidence.

Finally, in order to facilitate transfer strategies, it may be necessary to consider potential changes to the framework providing Boards of Directors with the competences to submit binding offers for an entity in resolution (as a general rule, purchases are the competence of the Board of Directors, but they become a shareholder decision if the assets bought exceed a certain value or relative size). It is crucial that before markets open authorities can announce the transaction with sufficient certainty and there may not be sufficient time to call for a shareholders' meeting to approve the transaction during a resolution. The Board should therefore be empowered to assess the purchasing opportunity in a resolution and submit binding offers without risks that at a later stage the buyer can backtrack from the transaction.

5. CONCLUSION

There is a lot to be proud of when looking back at the work done over the past decade in developing a new crisis management framework. Events in recent years have shown that we have built a robust and flexible system with the capacity to quickly and effectively confront banking crises of different magnitudes, successfully managing to protect financial stability and taxpayers.

But the episodes the financial sector experienced this last spring also served as a reminder of how quickly crises can evolve and how important it is to continue learning from experience and applying those lessons to further strengthening and improving the framework. In the case of the Banking Union in particular, there are still some missing pieces that are necessary to complete the reform that began over ten years ago.

The CMDI proposal is not a reaction to the recent banking crises and was originally intended to fine-tune some aspects of the resolution regime. However, its timing provides an excellent opportunity to discuss more far-reaching reforms. As we have noted in this article, the proposal provides a very good basis for progress, but discussions in the Council have shown that any agreement will require an openness to more creative solutions. We have sketched out some proposals that may contribute to strengthen the resolution framework, focusing on the importance of enabling authorities to respond to systemic risks with the necessary tools and adapting the framework to different types of entities, with different sizes and business models.

By enhancing the credibility of the resolution framework, crisis management in the Banking Union would become more predictable, thus preserving the level-playing field with a harmonized framework. Experience shows that banking crises cannot be fully avoided, but it is possible to manage them in order to prevent them from wiping out the prosperity gains achieved in periods of greater stability. This ultimately supports the goals of the EU of increasing levels of sustainable prosperity for its citizens, and it is important that this goal can be achieved consistently across all jurisdictions in the EU.

GLOSSARY

ABS	Asset-Backed Securities
AIReF	Spain's independent Fiscal Authority
ALMPs	Active Labor Market Policies
AMC	Asset Management Companies
AML/CFT	Anti-Money Laundering/Combating the Financing of Terrorism
APP	Asset Purchase Programme
AT	Additional Tier
ATM	Automated Teller Machine
BCBS	Basel Committee on Banking Supervision
BdE	Banco de España
BIS	Bank of International Settlements
BLS	Bank Lending Survey
BRRD	Bank Recovery and Resolution Directive
BTFP	Bank Term Funding Program
CA	Comprehensive Assessment
CAP	Common Agriculture Policy
CB	Central Bank
CBAM	Carbon Border Adjustment Mechanism
CBBP3	Third Covered Bonds Purchase Program
CBDC	Central Bank Digital Currencies
CBR	Combined Buffer Requirement
CCyB	Countercyclical Capital Buffer
CDP	Carbon Disclosure Project
CECL	Current Expected Credit Loss
CESEE	Central, Eastern and Southeastern Europe

CFC	Central Fiscal Capacity
CFSP	Common Foreign and Security Policy
CMBS	Commercial mortgage-backed securities
CMDI	Crisis Management and Deposit Insurance
CMU	Capital Markets Union
CNMV	Coision Nacional del Mercado de Valores, Spanish Securities and Exchange Commission
COM	Communication from the Commission
CPFF	Commercial Paper Funding Facility
CRD	Capital Requirement Directive
CRE	Commercial Real Estate
CRR	Capital Requirement Regulation
CSDP	Common Security and Defense Policy
CSPP	Corporate Sector Purchase Program
DIF	Deposit Insurance Fund
DFR	Deposit Facility Rate
DGSD	Deposit Guarantee Scheme Directive
DLT	Distributed Ledger Technology
DSA	Debt Sustainability Analysis
EA	Euro Area
EBA	European Banking Authority
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECB	European Central Bank
ECFR	European Council of Foreign Relations
ECL	Expected Credit Loss
EDC	European Defense Comunity
EDF	European Defence Fund
EDIS	European Deposit Insurance Scheme
EDP	Excessive Deficit Procedure
EEA	European Economic Area
EFB	The European Fiscal Board
EFTA	European Free Trade Association
EIB	European Investment Bank
EMU	European Monetary Union
EP	European Parlament
ERDF	European Regional Development Fund

ERTEs	Spanish Temporary Support Work Schemes
ESBR	European Systemic Risk Board
ESCB	European System of Central Banks
ESFS	European System of Financial Supervision
ESM	European Stability Mechanism
ESMA	European Securities and Markets Authority
ETS	Emissions Trading System
EU	European Union
EUBS	European Unemployment Benefit Schemes
EUC	EU Council
EUTEGSF	EU Technical Expert Group on Sustainable Finance
FAQs	Frequently asked questions
FDI	Foreign Direct Investment
FDIC	Federal Deposit Insurance Corporation
FHLB	Federal Home Loan Banks
FOLTF	Failing or likely to fail
FOMC's	Federal Open Market Committee
FSB	Financial Stability Board
FSI	Financial Stability Institute
GACS	Italian Securitization Scheme for non-performing loans
GDP	Gross Domestic Product
GDPR	General Data Protection Regulation
GFANZ	Glasgow Finance Alliance for Net-Zero
GFC	Great Financial Crisis
GHG	Greenhouse-gas
GNI	Gross National Income
G-SIBs	Globally Systemically Important Banks
HICP	Harmonized Index of Consumer Prices
HQLA	High-quality liquid assets
HRVP	High Representative and Vice-President of the Commission for Foreign and Security Policy
ICO	Instituto de Crédito Oficial
ICT	Information and Communications Technology
IEA	International Energy Agency
IFIs	Independent Fiscal Institutions
IFRS9	International Financial Reporting Standards
ILO	International Labour Organization

IMF	International Monetary Fund
IRA	Inflation Reduction ACT
KRE	Bank Regional Index
KYC	Know Your Customer
LCR	The Liquidity Coverage Ratio
LCT	Least Cost Test
LSE	London School of Economics
LTROs	Longer-term Refinancing Operations (LTROs)
MDA	Maximum Distributable Amount
MFF	Multiannual Financial Framework
MIP	Macroeconomic Imbalances Procedure
MMT	Modern Monetary Theory
MREL	Minimum requirement for own funds and eligible liabilities
MRO	Main Refinancing Operations
MRR	Minimum Reserve Requirements
MS	Member State of the European Union
MTBF	Medium Term Budgetary Framework
MTFs	Multilateral Trading Facilities
MTO	Medium-Term Budget Objective
N ₂ O	Nitrous Oxide
NCWO	No creditor worse off
NFCs	Non-Financial Corporations
NGEU	Next Generation European Union
NGFS	The Network of Central Banks and Supervisors for Greening the Financial System
NIR	Negative Interest Rates
NNRPs	National Recovery and Resilience Plans
NPEs	Non-performing exposures
NPLs	Non-performing loans
NRP	National Reform Program
NSP/NCP	National Stability /Convergence Programs
NZBA	Net-Zero Banking Alliance
OSA	Open Strategic Autonomy
PBOC	People's Bank of China
PD	Probability of default
PELTROs	Pandemic Emergency Longer-term Refinancing Operations
PEPP	Pandemic Emergency Purchase Program

PFCs	Perfluorocarbons
PMI	Purchase Managers Index
PRA	Prudential Regulation Authority
PRTR	Spanish Recovery, Transformation and Resilience Plan
PSPs	Payment Service Providers
QE	Quantitative easing
QT	Quantitative Tightening
R&D	Research and Development
REACT-EU	Recovery Assistance for cohesion and the territories of Europe
RMBS	Residential Mortgage-Backed Securities
RRF	Recovery and Resilience Facility
RRP	Recovery and Resilience Plans
RRP	Recovery and Resilience Program
RTSE	Regulatory treatment of sovereign exposures
RWAs	Risk-weighted assets
SARS	Severe acute respiratory syndrome
SBBS	Sovereign bond-backed securities
SGP	Stability and Growth Pact
SIB	Systemic risk buffer
SME	Small and Medium-sized Enterprise
SRB	Single Resolution Board
SREP	ECB's Supervisory Review and Evaluation Process
SRF	Single Resolution Fund
SRM	Single Resolution Mechanism
SSM	Single Supervisory Mechanism
SURE	Support to mitigate Unemployment Risks in an Emergency
SVB	Silicon Valley Bank
TCFD	Task Force on Climate-related Financial Disclosures
TEU	Treaty on European Union
TFEU	Treat of Functioning of the European Union
TLTRO	Targeted Longer-term Refinancing Operations
TTC	US-EU Trade and Technology Council
UNCTAD	United Nations Conference on Trade and Development
UTP	Unlikely To Pay
VAT	Value Added Tax
WEU	Western European Union
WTO	World Trade Organization

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