

Sailing in all weather conditions the next 25 years: challenges for the euro



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Abstract

Over the past 25 years, the euro faced various crises, prompting a reassessment of its governance. Concerns arise regarding the ECB's exposure to risk and the necessity of deep reforms for managing growing ecological, financial, and geo-economic risks. Despite initial achievements like the banking union, challenges persist, such as financial instability and economic fragmentation. Policymakers must address these risks through enhanced monetary and macroprudential policies, fiscal coordination, and supply-side fiscal measures to navigate digitalisation and environmental challenges effectively.

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LIST OF ABBREVIATIONS

APP	Asset purchase programme
CRMA	Critical Raw Materials Act
EBA	European Banking Authority
ECB	European Central Bank
EGD	European Green Deal
EMU	Economic and Monetary Union
EP	European Parliament
EU	European Union
GDIP	Green Deal Industrial Plan
GDP	Gross domestic product
GFC	Great Financial Crisis
HICP	Harmonised index of consumer prices
IRA	Inflation Reduction Act
NGEU	Next Generation EU
NRRP	National Recovery and Resilience Plan
NZIP	Net-Zero Industry Act
PEPP	Pandemic emergency purchase programme
QE	Quantitative Easing
RRF	Recovery and Resilience Facility
SSM	Single Supervisory Mechanism
TLTRO	Targeted longer-term refinancing operations
TPI	Transmission protection instrument

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EXECUTIVE SUMMARY

- **Over the past 25 years, the euro has been exposed to many risks.** Since the economic and monetary governance of the euro area was forged for a stable macroeconomic environment, **the role of some institutions has had to change.** This is notably true for the role of the ECB, the usual first line of defence against crises, which has encompassed the (secondary) objective of financial stability.
- **The development of new tools at the disposal of the ECB, like macroprudential policies, has raised new concerns.** While the ECB manages monetary *and* macroprudential policies, how the ECB takes into account their strong interactions remains unclear. Making this clarification may be reconsidered in the next strategy review.
- **Despite the setup of the banking union, cross-border spillover effects are insufficiently taken into account. The vicious circle between banks and governments has not been fixed.** The role of the European Banking Authority (EBA) and its relationships with national supervision authorities and the ECB should be clarified and better institutionalised. Regarding deposit insurance, the establishment of a European authority is not necessary insofar as banking markets are highly segmented on a national basis. But the heterogeneity of the bank customer pool needs to be better addressed and the rising digitalisation of the financial system calls for a quick and transparent communication between competent European authorities.
- **NextGenerationEU (NGEU) entailed a radical change** as for the first time in its history the Union has made a joint effort to boost growth, and accepted the principle of debt mutualisation, albeit temporary. **Nevertheless, a genuine common fiscal capacity financing European public goods seems unlikely and, with it, a significant common policy answer to the ecological challenge.**
- **Both fiscal and monetary instruments have an impact on multiple objectives (inflation, growth, financial stability, green transition, etc.) at different time horizons.** They should therefore be more closely integrated into a unified analysis and coordinated, especially during crisis periods.
- **Regarding the huge needs to finance the environmental and digital transitions, the European policy mix should be more balanced.** Monetary and fiscal policies should be better coordinated not to jeopardise the medium- and long-term objectives of environmentally-friendly and digitalised economies. Structural policies need to be supported. The ECB may notably play a role in the implementation of climate policies, in accordance with its secondary objective.
- **Over the past 25 years, European economies have experienced heterogeneous productivity, inflation and unit labour costs patterns, with some evidence of convergence in recent years.** These heterogeneous developments are reflected in the current accounts and are not well monitored at the European level. Inflation rate differentials are difficult to address in the monetary union. The bulk of the practical implications of these divergences pertains to fiscal policy, labour market reforms without deflationary pressures, and industrial policy. These policies should be monitored in the European Semester, focusing on nominal imbalances. For monetary policy, the implications are more indirect; however, inflation targeting must be flexible enough to accommodate such policy measures.

1. INTRODUCTION

Over the past 25 years, the euro has been exposed to a wide range of financial, economic and social risks, as it has weathered a series of crises: a financial crisis, a debt crisis, a health crisis and a geopolitical crisis. This succession of crises has led to a rethink of the overall governance of the euro area and, in particular, the role and strategy of the European Central Bank (ECB), including its involvement in macroprudential and microprudential policies.

The ECB's exposure to risk has increased quite substantially as a result of its role as the first line of defence against shocks, most notably via the development of new unconventional tools that have left scars to its balance sheet¹. Is the central bank's exposure to risk inevitable? And more important: how can the euro area's overall governance, encompassing economic and macroprudential policies, cope with growing ecological, financial, and geo-economic risks and does this require deep reforms?

Let us take stock of the first 25 years of the euro. The adoption of the single currency in 1999 marked a crucial step in European integration, establishing the European and Monetary Union (EMU) outlined in the Maastricht Treaty. The treaty created an independent European Central Bank to address inflation, that was followed by fiscal rules in the Stability and Growth Pact (1997 and 1998). The 2007-2009 Global Financial Crisis (GFC) exposed weaknesses in the Maastricht framework, as it revealed Member States' vulnerability to external shocks, rising debts, and internal competitiveness issues. While the ECB performed reasonably well, persistent inflation divergence and financial fragmentation indicated the need for institutional redesign to ensure nominal convergence².

The EU's political authorities reacted with relative swiftness, pragmatically putting in place elements of a Banking Union (Busch and Ferrarini, 2015; Kempf, 2023)³. Various institutions and prudential intervention procedures have been put in place. The Single Supervisory Mechanism (SSM) aims to enable a better assessment of banking risks.

The Maastricht institutional framework was forged for a stable macroeconomic environment where GDP would smoothly tend towards some equilibrium level at a stable inflation rate. This conceptual framework is not adapted to heterogeneous economies undergoing frequent crises. This is clear from the latest three shocks endured by the euro area (and beyond) which have had substantial asymmetric effects: the pandemic, the inflation surge and the Russian invasion of Ukraine. The three crises have shown that it might be needed to increase the ECB balance sheet beyond what had already been done during the former crises; they have also shown the necessity of enlarging the toolkit of fiscal policies beyond the requirements of the Stability and Growth Pact (e.g. via the Recovery and Resilience Facility, RRF).

¹ By the end of 2022 (last available data, <https://www.ecb.europa.eu/pub/annual/balance/html/index.fr.html>), total ECB consolidated assets/liabilities remain almost 8 times higher than before the Great Financial Crisis (GFC). In contrast, according to Eurostat data, the euro area nominal GDP has increased by 54% between 2006 and 2022, including the fact that the euro area was enlarged to 7 new countries over the period.

² Interestingly enough, Blot et al. (2019) concluded their assessment of the euro at 20 by emphasising the imperative for a meticulous redesign of institutions to oversee and navigate the essential process of nominal convergence within the euro area. They underscored that, despite the relatively commendable performance of the ECB in pursuing its objectives, persistent challenges such as inflation divergence and financial fragmentation among euro area Member States had persisted. The recognition that the ECB alone cannot rectify all imbalances in the euro area highlights the necessity for comprehensive changes in the existing institutional framework. As the rest of the paper will show, while some improvements were made to cope with new challenges (pandemic, inflation, war), euro area economic governance remains stuck in the Maastricht era.

³ A banking union is defined as the common regulatory framework for the member countries of a monetary union covering the mode of operation and supervision of the activities of banks operating within the union, the resolution of banking crises and deposit insurance (Véron, 2015; Kempf, 2022, chapter 10).

Meanwhile, the steep rise in policy rates has revived the risk of financial instability, thus harshly revealing the need for completion of the Banking Union. Indeed, the frequency of financial crises has shown that financial stability cannot be taken for granted; nor is it the consequence of price stability, as was somewhat implied in the Treaty on the Functioning of the European Union⁴.

Beyond banking and financial stability, major structural challenges facing European countries cannot be faced relying on the functioning of markets alone. The digitalisation of economies and the ecological transition call for public intervention, through regulation, incentives (taxation or subsidies), support to productive activity (guarantees) and investment. In this respect, the recent reform of the Stability and Growth Pact is only a very partial fit as it does not increase substantially domestic fiscal margins for manoeuvre. In parallel, the creation of a European fiscal capacity, like a Next Generation EU (NGEU) 2.0, has lost traction in the European policy debate.

Finally, the return of inflation has been tamed by a mix of monetary restriction and fiscal responses that again led to an increase of public deficits and debts. The fact that a fiscal expansion can contribute to a *reduction* in inflation is at odds with the predictions of economics textbooks. Nevertheless, price caps and subsidies have actually alleviated the cost of inflation on the households' purchasing power while limiting the second-round effects of inflation on, e.g. nominal wages.

This brief overview reveals three risks that the EMU may potentially face in the future. The first risk concerns financial instability and the risk of financial fragmentation of the euro area, the mitigation of which depends on the interaction between monetary policy - now being normalised -, macroprudential policy and uniform access for each Member State to European capital flows. The latter requires European harmonisation of banking practices coupled with the completion of the Banking Union.

The second risk relates to economic fragmentation within the euro area, which can be mitigated by macroeconomic stabilisation tools to deal with shocks that take better account of their cross-spillover effects. The interdependence of national fiscal and tax policies calls not just for tighter surveillance of a more flexible Stability and Growth Pact, but also for tools to coordinate these policies (a revamped European Fiscal Board). The debate on these coordination tools is taking place against a backdrop of unprecedented levels of public debt, which limit the fiscal space of Member States.

Finally, the last kind of risk is multifaceted: the risk of losing competitiveness in the face of the digitalisation of the economy, the risk of geo-economic fragmentation (trade tensions) and the risk of climate warming and environmental damages, the mitigation of which relies on supply-side fiscal policy to steer private choices towards an accelerated dual transition, coupled with a coherent ECB policy in terms of collateral.

⁴ See Blot et al. (2015) for an assessment of the disconnection between price and financial stability in the US and the euro area.

2. INTERACTIONS OF MONETARY POLICY AND FINANCIAL REGULATION IN A MONETARY UNION

2.1. Monetary policy and financial stability

Financial stability was a concern in European countries prior to the setup of the monetary union. It rested on microprudential measures with banks supervised by domestic authorities. The regulatory framework was inherited from the Basel I agreement where the main focus was on the adequacy of the ratio of capital to risk-weighted assets.⁵ The creation of the ECB aimed at conducting monetary policy for the euro area with a main objective, if not the only, of price stability, which was supposed to yield financial stability. The prevailing consensus – named the Jackson Hole consensus – was that monetary policy should not target asset prices nor try to deflate asset price bubbles. Former ECB President, and at the time the governor of the Banque de France, Jean-Claude Trichet in 2001 stated for instance that “Price stability is the bedrock on which financial stability is built” echoing a conventional wisdom, which found its origins in Schwartz (1995).⁶

The 2008-2009 Global Financial Crisis has not only challenged the existing institutional framework but also questioned the role of monetary policy on financial stability. The microprudential tool has shown severe shortfalls reinforcing its need to be complemented by a macroprudential approach, which was notably fostered by Borio et al. (2001). As claimed by White (2006), price stability was not enough. This is not only a lesson from the GFC, as we should have known it from financial history. Financial crises could occur even if not preceded by inflation. The empirical evidence presented by Blot et al. (2015) also illustrated the instability of the correlation between price stability and financial stability in the euro area since 1999. A new consensus has not yet fully replaced the old one. A new tool – macroprudential regulation – has emerged but the role of monetary policy has not changed fundamentally. Besides, this additional instrument raises new issues as it may interplay with monetary policy. Three main challenges arise: i) What are the interactions between monetary policy and macroprudential policy? ii) Is macroprudential policy enough to deal with the risk of financial crisis? iii) If not, what should be the role of monetary policy?

The transmission of monetary policy on prices and economic activity crucially hinges on its effect on financing conditions and credit growth. Changes in the policy rates are passed-through asset prices, retail banking interest rates and credit supply. Macroprudential policy is implemented with several tools: some measures may target banks’ capital requirements (e.g. time-varying requirements, additional buffer for systemic financial institutions) while others aim at limiting loan-to-value and debt-to-income (leverage) ratios. Whatever the tool, the aim is to curb the financial cycle, notably the credit cycle. Consequently, there are obvious interactions between the two instruments, raising potential conflicts but also complementarities indicating that there may be a need for more coordination.

In the euro area, the implementation of macroprudential policy is decentralised and under the responsibility of national authorities, either national central banks or another authority. However, the ECB is responsible for assessing the measures taken by domestic authorities and the Governing Council has the possibility to require additional action. This institutional design may not only provide a simple coordination mechanism between the two instruments but also allow for some fine-tuning as macroprudential measures may be adjusted by the ECB in countries when risks for financial stability are identified.

⁵ The capital requirements are calculated according to a weighting of the different type of assets held by banks. A higher weight is given to riskier assets such that the more risk a bank has, the more capital it needs on hand.

⁶ See his [speech](#) at the European Financial Markets Convention in June 2001.

It is not clear yet whether the ECB explicitly takes into account the interactions between its monetary policy stance and the macroprudential measures taken at the euro area level. For instance, if some (or most of) euro area countries have decided to tighten macroprudential policies, so that the ECB expects credit growth to slow down and affect economic activity and its final inflation objective, it may decide that there is no need to increase interest rates.

Whereas microprudential regulation aims at supervising individual banks, the role of macroprudential policy is to mitigate systemic risk that could arise from asset price bubbles or excessive lending. At the end, the probability of a financial crisis is expected to decrease. The benefits of macroprudential regulation are theoretically well established and there is growing empirical evidence suggesting that macroprudential policy is effective in dampening credit growth (Cerutti et al., 2017; Basten, 2020), asset (house) prices (Damen and Schildermans, 2022) and the probability of crises (Fernandez-Gallardo, 2023). However, it is not clear whether macroprudential policy is a sufficient condition for addressing financial instability. As a consequence, it might be argued that central banks should adopt a “leaning against the wind” strategy, which entails to adjust the stance of monetary policy to prevent financial instability. In that case, the ECB would for instance increase the policy rate even if inflation is below the target because it assesses that there are growing financial risks. It is now indeed recognised that monetary policy is transmitted through risk premia and the risk-taking of financial institutions: it may therefore affect financial vulnerabilities. But to what extent should this change the monetary policy strategy? As emphasised by Smets (2014), it depends on how monetary policy and financial stability are interconnected. While the Jackson Hole Consensus view has been forsaken, the role of financial objectives in the conduct of monetary policy is not yet fully established. The “leaning against the wind” strategy may yet not be optimal as it entails some macroeconomic costs (Svensson, 2017) and it may even increase the probability of financial crises (Schularick et al., 2021). Even if there should not be an automatic response of the ECB monetary policy to financial imbalances, financial stability may not be overlooked by the ECB when implementing monetary policy.

In its 2021 strategy review, the ECB clearly rejected a “leaning against the wind approach” and claimed that macroprudential policy should be the main instrument to deal with the financial stability objective, not monetary policy *per se*. But it also mentioned that financial stability is a precondition for price stability and vice versa. In practice, the ECB now provides an in-depth assessment of the interrelation between monetary policy and financial stability where it explicitly communicates its views on financial vulnerabilities, while sticking to the view according to which financial imbalances are first addressed by macroprudential policy.⁷

2.2. Rethinking the Banking Union

Macroprudential policies, the launch of the Banking Union and the rescue decisions taken by the European authorities in charge of macroeconomic policies, in particular those of the ECB, have helped to contain the financial crises in the euro area. As far as the future is concerned, it is impossible to deny the possibility of banking and financial crises in the euro area. Hence, the Banking Union, currently in place, must be adapted to tackle the future risks and uncertainties that might affect the euro area.

However, the Banking Union is not yet completed, and it has created coordination issues between the national and the federal levels. The Single Resolution Mechanism, under the supervision of the Single Resolution Board, was meant to settle the case of a bank in serious difficulty by orderly liquidation or bankruptcy. Within the framework, European procedures must be coordinated with national

⁷ It boils down to a “Modified Jackson Hole Consensus” according to Smets’s (2014).

procedures, which have not disappeared. In particular, the Single Resolution Mechanism Regulation⁸ aims to harmonise national procedures where these are still in force. Moreover, the discussions about the European Deposit Insurance Scheme have stalled and the full convergence of national procedures is still missing, making the Banking Union incomplete.

In the light of the specific risks and of the principles of a proper supervision of banking and financial activities also in a Monetary Union (see Appendix 1), it is possible to put forward a few ideas concerning the European Banking Union and its possible transformation over the coming years. It is convenient to use the tri-partition of functions that a Banking Union must ensure.

2.2.1. Enhancing supervision

Banking and financial supervision, endorsed in the European System of Financial Supervision, is essentially prudential in nature. It aims to improve the information available to financial and banking parties, by designing regulations that are often complex but unambiguous, and by certifying accounts at regular intervals. Applying the principle of subsidiarity, as has been done so far, is reasonable. For institutions with significant spillover effects, supervision is better entrusted to a central supervisory body. Other institutions can be supervised by local supervisory bodies. That said, a distinction must be drawn between the supervision of banks and that of financial institutions operating on stock markets.

a. Financial supervision

As stock markets are largely integrated, spillover effects (via arbitration procedures) are essential, and moral hazards (e.g. in the creation of subsidiaries) are significant. It is logical that a central vision of stock market supervision should prevail, which is not currently the case.

In addition, the issue of climate change must be properly integrated into financial supervision. It relates to the link between a company or a corporation and its lenders, either a financial institution or a bank. A company's sensitivity to climate change (i.e., the sensitivity of its share price to an accident directly or indirectly linked to the climate) is just as important as the company's demonstration of its actions to combat it. Its exposure to climate change (and more generally environmental hazards) reflects on the financial soundness of investors and lenders. It is therefore clear that, in line with the European Union's Green Deal, financial supervision must equip itself with the necessary tools to prevent the risks arising from climate change. Steps in this direction are still too timid and insufficient (European Parliament, 2022).

It must be recognised that these risks are predominantly “black swan” risks. It means that they are hard to be dealt with ex ante through insurance schemes. They are likely to have a global impact either because they will affect a series of sectors or because of sudden fear phenomena gripping the financial actors or savers. A purely microeconomic perspective for the supervision of these risks is therefore insufficient. The European regulatory authorities, in particular the ECB, must also consider and reflect on the global externalities of climate risks.

b. Banking supervision

In the banking sector, the principle currently applied is that of subsidiarity. But the Silicon Valley Bank (SVB) precedent calls for caution (see Annex 2). Spillover effects can appear very suddenly. Moreover, national prudential regulations may contain clauses that in fact call into question the single market and give a relative advantage to resident banks.

⁸ [Regulation No 806/2014](#)

Finally, the vicious circle between banks and governments needs to be dealt with more effectively than it is at present.⁹ Without calling into question the current framework, several additional recommendations can be made.

The role of the European Banking Authority (EBA) and its relationships with national supervision authorities and the ECB should be clarified and be better institutionalised. It is particularly important that national regulatory authorities transmit the results of their auditing analyses to the EBA for analysis. This authority should act with respect of supervision authorities as an advisory agency and have a "power of observation". We define a power of observation as the capacity to comment on auditing reports made by national authorities. It is uniquely placed to take into consideration the spillover effects of financial fragilities observed in a given country of the Union. The notes resulting from this power of observation would be forwarded to the ECB's prudential authority. A non-executive European authority must be able to analyse national regulations in detail and identify those that have no other reason than to distort competition in favour of local banks. Hearing teams, even those under national responsibility, should include non-national European experts.

The solution to the vicious circle probably does not lie in a supranational body that is responsible for managing the damage the vicious circle creates in the event of a crisis, but is also incapable of preventing it. At that stage, the response would come too late, and it is doubtful that such a body could intervene without causing a major political crisis in the EU. The use of incentive mechanisms to induce banks in a Member State to diversify their portfolios of public assets appears to be a (logically) simple solution to this problem.

The issue of the regulatory treatment of sovereign exposures (RTSE) is still controversial and the object of opposed views. It looks like these debates are focused on very technical issues (types of indicators, measures of concentration, types of public bonds held by banks, etc.). These discussions are not such that they should hinder the implementation of a diversification regulation imposed on banks. They are more likely to mask differing views on the extent of bond-financed public deficits. Actually, the two issues are logically distinct and should be distinct insofar as the break-up of the vicious circle is concerned. The ECB and the EBA should jointly study a system of bonus-malus on banks' borrowing rates, depending on their portfolios (so as to penalise an excessive share of domestic government securities in this portfolio).

In connection with climate risk, supervisory authorities must strengthen their vigilance on environmental, social and governance (ESG) criteria and be in capacity to ask banks to modify their lending strategy in line with these criteria.

Finally, the system of remuneration of top executive managers in the banking sector as well as of financial dealers should be drastically revised with the aim of making them more responsible for the fate of the banking system and less tempted by short-term profits made through derivative operations. There is no real advance in financial supervision if the incentives for profiting with more risk-taking deals, independently of their future success are still in place. The ingenuity of financiers is such that they shall always find a way to bypass a regulation if their remunerations are not linked to the risk of failures. Public opinions in Europe will not tolerate a new financial crisis of the size of the 2008 crisis and will consider European authorities as co-responsible for the crisis if they will have proven to be lenient on the banking community.

⁹ See the recent report by European Court of Auditors <https://www.eca.europa.eu/en/publications/sr-2023-12>.

2.2.2. Enhancing resolution

The idea of concentrating the orderly liquidation of a bank or financial institution at European level seems premature, insofar as banking and financial markets remain largely segmented on a national basis. This is implicitly recognised by the Commission's proposal for reform on the management of financial crises and deposit insurance (CMDI). This is partially due to the current Banking Recovery and Resolution Directive (BRRD)¹⁰. Confronted with bank failures, national authorities have usually preferred bypassing the constraints of this directive. The innovations that would be introduced by the CMDI revision are well-taken.

If truly pan-European banks were to develop in the future, it would then be relevant to question the appropriateness and the adequacy of the relying on national procedures. It is likely that the same division of competences as for supervision would be adequate. As long as markets and banking entities remain differentiated on a national basis, the principle of subsidiarity must be applied, leaving primary responsibility for orderly liquidation to national authorities, backed by appropriate financial capabilities. This is the lesson to be learned from the collapse of *Crédit Suisse*, taken over by *UBS* at the instigation of the Swiss government.

However, care must be taken to ensure that this does not create opportunities for rent-seeking or distortion of competition. The ability of European authorities to supervise, or even approve, a liquidation package is therefore desirable.

It is with regard to the financing of these operations that the European entities created in the previous decade are likely to intervene. The amount of funding currently available is probably insufficient to deal with a major turmoil. There is still no clearly identified European lender of last resort.

Attempts to apply bail-in by creditors should be handled with care, as they can lead to results contrary to those sought, by increasing the cost of a bank's indebtedness. In any case, it is essential that the rules governing a bailout procedure are known to all, and are not open to change according to circumstances. In other words, they must be as credible as possible.

On this account, the use of funds aimed at deposit insurance for the resolution of a failing bank is an idea which cannot be pushed too far as it may undermine the credibility of the whole scheme and may increase the probability of bank runs. Hence, the current proposal on the matter contained in the CMDI should be handled with care. They are likely to be only temporarily useful. An upgrade with a proper funding for bank resolution is preferable. The possibility for a Member State to borrow from a European-funded financial institutions should be seriously considered.

This reinforces the need of a clarification on how a bank's commitments in a Member State other than the one on which it is legally dependent are to be taken into account.

2.2.3. Completing depositor insurance

In the event of bank failure, the question of compensation for depositors arises, particularly non-financial ones. Here again, the principle of subsidiarity must be applied. Insofar as banking markets are highly segmented on a national basis, and in the absence of a significant and discretionary European budgetary capacity, the establishment of a European authority in this field may not be necessary.

Nevertheless, several recommendations can be made to enhance national systems of deposit insurance:

¹⁰ [Directive 2014/59](#)

- The heterogeneity of the bank customer pool needs to be better addressed. Some types of depositors are riskier than others, have a higher capacity to withdraw their deposits, but also have structurally larger deposits. Deposit insurance regulations must take into account the differentiation of depositors who do not have the same exposure to the risk of bank failure nor the same ability to withdraw their deposits precipitously. The same rules cannot apply to individual depositors, legal entities such as companies or administrations. It is necessary to consider modulating banks' contributions to depositor compensation funds according to their panel of customers. Insurance regulation needs to differentiate itself to limit or even eliminate the risk of loss and thus bolster a bank's viability.
- Given the digitisation of our financial systems, care must be taken to ensure that information concerning the modalities of a depositor compensation procedure by a national authority is communicated as quickly as possible via the competent European authorities (ECB and EBA) to all equivalent national authorities to avoid surprise effects and minimise the risks of contagion.
- If a depositor coverage procedure occurs in a country of the Union, it may be difficult for that country to take over the full and immediate responsibility of rescue. Temporary loan agreements in principle involving the Single Resolution Mechanism should be put in place. It is worth noting that the principle of deposit insurance is that it should be credible so that it cannot be used. This is how an external rescue intervention is justified.

2.2.4. Endorsing systemic risk

Finally, there is one type of risk that is not covered by the previous trilogy, because it is macroeconomic in nature: systemic risk, that is the risk of an accident affecting all banking and financial institutions almost simultaneously, as happened during the 2008 crisis. In the EU, this risk is likely to take two forms in the future:

- The risk of contagion and herd behaviour. This risk is permanent and can affect any financial system. Only a lender of last resort can stop it. In the future, this task will fall on the ECB, as in previous euro crises.
- The risk associated with the transformation of payment systems and technologies. Currently, the ECB is concerned about the microeconomic aspect of the issue: how not to destabilise the banking sector in Europe, from a corporate point of view. There is also a macroeconomic issue which must be tackled. The ECB is right in expressing regularly that it is vigilant in the irreversible and accelerating process of digitisation of means of payment to ensure that the banking system is not destabilised and that a crisis of confidence does not develop among non-financial agents in the European Union.

In any case, the simple idea that it is enough to standardise rules and transfer all public responsibility for prudential policy to a supranational European body must be abandoned. Not only is such a concentration not a panacea for all the problems posed to European Banking Union (we need only recall that financial and banking crises occur in the most centralised sovereign states), but it is also conceivable, in the event of failure or accident, to create widespread distrust and fuel a massive, even general, rejection of the single currency – exactly what needs to be avoided. Presently, the euro seems to benefit from a high confidence rating by the European public opinions. This is an asset which should be preserved.

3. 25 YEARS OF DIVERGENCE AND CONVERGENCE

Over the past 25 years, European economies have experienced heterogeneous economic paths. It is very challenging, and perhaps futile, to assess whether divergences were the result of the creation of the euro. Indeed, the counterfactual scenario is rigorously impossible to assess: what would have happened during the financial or COVID-19 crises without the euro? Nonetheless, these heterogeneous trends, such as persistent differences in inflation and productivity, must be acknowledged because they affect the conduct of both fiscal and monetary policy.

3.1. Productivity

The most concerning divergence in trends is that of productivity. One type of divergence can be observed between the US as a whole and the euro area. Another set of heterogeneous dynamics occurs among euro area countries. Over the period 2000-2022, the average annual growth rate of hourly labour productivity is 1.6% in the US, 1.0% in Germany, 0.6% in France, and only 0.1% in Italy, for a mean of 0.9% in the euro area, according to OECD data¹¹. These heterogeneous trends create a problem for monetary policy. For a constant labour share in GDP, the growth rate of labour productivity is the growth rate of nominal wages minus inflation. Hence, for heterogeneous productivity trends, either the growth rate of nominal wages is different across countries, creating a problem for the mobility of workers, or the inflation rate differs, then creating heterogeneous real interest rates across countries (as the nominal interest rate is the same). Hence, the effect of the same monetary policy would be heterogeneous. Heterogeneous productivity trends are thus a threat for the single monetary policy. As shown below both nominal margin (price and wages) evolved heterogeneously in face of heterogeneous productivity trends.

3.2. Inflation trends

The second form of heterogeneity experienced in the European countries concerns inflation rates. These nominal imbalances are more difficult to address in a monetary union without a fiscal union, as they would otherwise be absorbed by nominal interest rate adjustments and heterogeneous monetary policies.

Distinct subperiods can be identified. The first spans from the creation of the euro area to the GFC of 2008 and the subsequent European debt crisis. During this time, Spain, for instance, experienced a high inflation rate and a current account deficit reaching almost -9.4% in 2007 before a significant correction in the housing market. The second period, up until 2015, saw rapid fiscal consolidation and a constrained monetary policy due to the zero lower bound. The third period began after 2015, when fiscal consolidation slowed, unemployment decreased, and the inflation rate in the euro area began to gradually rise. The COVID-19 and energy crises following the Ukraine war are recent macroeconomic shocks that generated short-term inflation divergences, as studied by Blot et al. (2022), among others.

3.3. Unit labour costs

These heterogeneous inflation trends (measured by the Harmonised Index of Consumer Prices, HICP) were also associated with differences in trends in hourly wages. However, differences in nominal wages may reflect differences in productivity growth and may not necessarily indicate an unsound economy. For this reason, economists prefer the unit labour cost (ULC) as a measure of relevant trends in the

¹¹ The OCDE data are GDP per hour worked : <https://data.oecd.org/lprdy/gdp-per-hour-worked.htm>

labour market.¹² Labour-cost competitiveness is only a proxy for the broader notion of competitiveness, which we discuss below. The analysis of nominal hourly ULC clearly shows three periods of European convergence and divergence, focusing here on the main countries of the euro area.

The first period extends from 2000 to 2008. During this period, the German nominal ULC remained constant, growing at an annual rate of 0.11%, thus well below inflation for eight years. The French ULC grew by 2%, aligning with European inflation. The Italian ULC increased by 3.5%, whereas the Spanish ULC grew by 3.9%. This period was marked by European imbalances: wage moderation in Germany and, in contrast, more rapid dynamics in Italy and Spain.

The second period, from 2009 to 2015, is the period of significant readjustment. During this time, the French and German ULCs grew at an annual rate approximately similar, 1.1% for France and 1.3% for Germany. The Italian ULC increased by 0.6%, while the Spanish ULC decreased by -0.8%.

The third period is the post-austerity period. The nominal ULC grew at 1.9% in France, at 2.4% in Germany, at 1.3% in Italy, and finally at 2.8% in Spain. This is a slight correction of the German low dynamics from the early 2000s in a period of high inflation.

These divergences in the early 2000s were the outcome of market forces and global financial imbalances. The re-convergence period is mostly a political outcome of the introduction of a minimum wage in Germany, fiscal measures in France like the CICE (*Crédit d'impôt pour la Compétitivité et l'Emploi*, a tax credit), and wage moderation in Spain. The third period is mostly a moderate convergence period where the national policy reaction to macroeconomic shocks (such as the COVID-19 and energy crises) did not generate nominal wage divergence, indicating that maybe non-divergence across European labour markets is partly internalised in national policy making.

These heterogeneous developments in ULC are now recognised at the European level¹³. However, the recommendations to foster convergence are often not stated in concrete terms, maybe for lack of an obvious policy tool to change the ULC. For instance, the Country-Specific Recommendations (CSRs) barely refer to the need for nominal wage adjustment considering the general European dynamics. This lack of general equilibrium analysis generates a deflationary bias. Countries with negative current accounts are asked to do internal adjustments generating wage moderation, but countries with a positive current account are never asked for higher wage developments.

Based on this observation, Ragot (2017) proposed to introduce a "wage stance" in the monetary analysis of European developments. This wage stance would be a euro area assessment of desirable country-specific nominal wage growth rate, based on simple economic analysis. The desirable wage growth rate should be consistent with the inflation target of the ECB and the gradual correction of ULC imbalances reflected in current account imbalances of euro area Member States. This growth would be the basis of CSRs. The discussion of this recommendation at the country level would allow the internalisation of a euro area externality (affecting inflation) at the country level.

3.4. Current account

The next assessment of convergence and divergences in Europe relies on the analysis of the current account. For many economists, the current account is the key summary statistic of external imbalances. The first report of the French National Productivity Council proposes measuring the vague notion of

¹² A measure of a country's cost-competitiveness, the ULC is the nominal wage divided by the price level and by labour productivity, capturing in a synthetic way the relationship between the three forms of divergence mentioned above (productivity, inflation, and nominal wage).

¹³ See for instance recital 11 of the European Commission's draft [Euro Area Recommendation](#) of 21 November 2023

"competitiveness" by the current account. The history of the current accounts of European countries confirms the three periods identified through the ULC. For this reason, the EU should do more than simply pay lip service to the Macroeconomic Imbalances Procedure, introduced during the sovereign debt crisis and *de facto* never really used to assess and possibly monitor destabilising behaviours (current reforms do not seem to go in the right direction; see below). The proposal is thus to include the current account analysis in the assessment of the wage stance mentioned above (on top of recommendations to foster productivity growth made the National Productivity Board).

3.5. Unemployment

The current account is a relevant measure of external imbalances, whereas unemployment directly reflects internal imbalances. The evolution of European unemployment rates is tied to the macroeconomic trends identified in the three phases.

Between 2000 and 2008, we observed an illusory convergence of the European unemployment rate, as internal demand was mostly financed by divergent current accounts.¹⁴ From 2008 to 2015, these rates diverged significantly. The Spanish unemployment rate soared to 26% in 2013, while the French and Italian unemployment rates climbed to 10% and 12%, respectively. After 2015, a new era of modest convergence of unemployment rates began, albeit at higher levels. Throughout the entire period, the German unemployment rate decreased from 11% in 2005 to less than 4% in 2022.

There is an ongoing economic debate regarding the relationship between labour market imbalances (measured by the ULC and by unemployment) and financial imbalances (measured by the current account). On the one hand, capital inflows could lead to economic overheating and inflationary pressures. On the other hand, wage inertia might result in high internal demand and an investment boom supported by external lending (see Delatte and Ragot, 2016). The direction of these causalities remains an unresolved question. Regardless, monitoring both nominal and financial trends is the most reliable method to prevent the accumulation of imbalances. The introduction of a wage stance is thus a useful tool to observe nominal imbalances. For monetary policy, it is thus useful for the monetary authority to analyse wage inflation (not only the HICP) in order to internalise the effect on the current account. By construction, the very notion of the output gap does not internalise this external constraint.

3.6. Implications for the European (and national) policy mix

The narrative of European divergences carries significant economic implications:

- The existence of a single market and currency is insufficient to ensure supply-side convergence. Notably, Member States may experience divergent productivity trends, and thus wage and price inflation.
- Swift fiscal consolidation can suppress internal demand and exacerbate unemployment. A reduction in imports may aid in the balancing of external accounts.
- Unemployment and growth rates are inadequate measures of economic health. An apparent convergence in unemployment may be underpinned by volatile external financing.
- Persistent divergence in nominal trends, particularly in the labour market, may necessitate policy intervention to facilitate convergence, especially regarding nominal ULC.

¹⁴ Economic activity was sustained through internal demand financed by the lending of the rest of the world (which is measured by a negative current account). This created upward wage and inflation pressure, and a reduction of unemployment (thus a "fake" convergence), which is not sustainable if the return on the investment financed by the rest of the world is low (what was the case in Spain after the burst of the housing bubble).

The bulk of the practical implications pertain to fiscal policy, labour market reform and industrial policy aimed at enhancing productivity. For monetary policy, the implications are more indirect; however, inflation targeting must be flexible enough to accommodate such policy measures.

Indeed, the recent inflation episode has shown that inflation has been partially dampened by price caps and tax rebates that have raised public deficits and debts. These fiscal expansions have saved the ECB from raising its policy rates further. One lesson that we may retain from this recent experience is the strong interaction between monetary and fiscal policies to safeguard the euro.

The implication of the Economic Governance Reform for monetary policy should not be underestimated. Fiscal rules have initially developed in the EU as a protective instrument for monetary policy. Limiting the scope for fiscal expansion was meant to ease the fulfilment of its price stability objective by the ECB. It happens now that expansionary fiscal policy financing investment or price reduction can have a disinflationary effect.

Thus, an important challenge stemming from the analysis on economic and social convergence relates to the architecture between fiscal surveillance and macroeconomic imbalances surveillance. The acknowledgement of a thinner relationship between both in the reform package of the Stability and Growth Pact¹⁵ is an important step in the right direction¹⁶. Fiscal policy and macroeconomic imbalances are intertwined, as the former analysis has shown.

However, the current proposal, although going in the right direction, will not make a decisive difference. While the domestic specificities of euro area Member States are accounted for, the introduction of new safeguards may limit the scope of fiscal rooms for manoeuvre¹⁷.

On the side of governance, the reform has implications for independent fiscal institutions (IFI) like the European Fiscal Board (EFB). IFIs and the EFB would be more involved in monitoring the debt sustainability analyses that will be at the core of the European Commission's surveillance of public finances (e.g. to providing useful independent analysis in the European fiscal framework).

To summarise, the implications for monetary policy are twofold. The monetary authority could provide some guidance of desirable nominal dynamics, such as wage stance, which could be made more operational in the Commission's CSR. Second, flexible inflation targeting should recognise that the mean inflation target of 2% can allow for flexibility used to foster nominal and real convergence. The ECB should be more lenient for deviations facilitating convergence (such as high inflation in Member States having a low price level), than for deviations increasing imbalances. Euro area nominal imbalances may have a first-order on welfare compared to small deviations from the inflation target (small deviations of 1% or even 2% from the 2% target). The flexible inflation targeting doctrine gives this freedom without threatening central bank credibility.

¹⁵ See European Commission's [proposals](#) to amend Regulation 1467/97, to repeal Regulation 1466/97 and to amend Directive 2011/85/EU. We also refer to the [negotiating mandate](#) adopted by the Council of the European Union on 20 December 2023.

¹⁶ For instance, the Commission, when preparing a report under Article 126(3) TFEU, shall take into account the progress in the implementation of reforms and investments, including in particular policies to prevent and correct macroeconomic imbalances. This would be part of the conditions for an extension of the adjustment period towards a lower public debt to GDP ratio. See [Council's negotiating mandate](#) for further details..

¹⁷ According to the [provisional political agreement](#) reached on 9 February 2024, under the preventive arm of the Stability and Growth Pact, Member States with a public debt above 90% of GDP will have to reduce it by 1 percentage point on average per year. Meanwhile, their primary cyclically-adjusted balance will have to improve by 0.4 percentage point per year or 0.25 percentage points in case of extension of the adjustment period to achieve a deficit level that provides a resilience margin in structural terms of 1.5% of GDP relative to the 35 of GDP reference value.. While an unexpected improvement in the rate of growth of the economy may well help fulfil the first safeguard via the direct impact on the denominator of the public debt to GDP ratio, spending cuts and/or tax hikes will be necessary to fulfil the second safeguard whatever the rate of growth.

4. UPGRADING FISCAL POLICIES FOR A BETTER COORDINATION WITH MONETARY POLICY

Recent events (the pandemic, Russian war in Ukraine and the return of inflation) have also made clear that symmetric shocks could put a heavy burden on EU economies and institutions, thus requiring new policy tools. These new tools may serve as a benchmark to match the major common challenges ahead like the ecological and digitisation transitions.

4.1. NGEU as a new tool to accelerate the double transition

The EU strategy for the ecological transition was shaped a few months before the pandemic by a Commission Communication (2019), setting the objectives of the “Green Deal”.

The first operational instrument that effectively integrated elements of the Green Deal is the NextGenerationEU programme (NGEU) designed and approved in a few weeks during the pandemic. The EU economy faced and faces quite substantial challenges, from providing global public goods, to the transition to (environmentally and socially) sustainable growth, the revival of public investment, digitalisation, and the rethinking of welfare systems. It was clear from the outset that not even the largest European countries could hope to meet these challenges alone: the greater effectiveness of coordinated investment, economies of scale, and externalities are all factors that militated in favour of policies conducted, or at least financed and coordinated, at the European level (Cerniglia et al., 2021; Cerniglia and Saraceno, 2020).

While the main purpose of NGEU was a reaction to the pandemic, the twin (digital and green) transitions inspired the program, which supplemented the EUR 1 trillion 2021-2028 European Multi-Annual Financial Framework (MFF) with a EUR 675 billion 'Recovery and Resilience Facility' (RRF) and other extraordinary mechanisms, for a total of EUR 750 billion. There has been much discussion about the innovative aspects of the instrument: it was the first time that the Commission issued debt for such significant amounts, to finance a vast investment and reform programme aimed at reconciling the recovery from the COVID-19 crisis with the Union's long-term programmes. In addition, resources were allocated to Member States according to the needs linked to the costs of the pandemic and to the severity of the crisis; this created for the first time some sort of risk sharing that had until then been fiercely opposed by Germany and other core EU countries. Debt will be repaid starting in 2028 (until 2058), with new European own resources such as a carbon border tax. If no progress is made on this side, each country's contribution to the EU budget will have to increase (by quite a modest amount).

Member States had to prepare National Recovery and Resilience Plans (NRRPs) following strict guidelines both on the destination of funds, such as at least 37% of investment in the green transition and 20% in digitalisation, and on the definition of targets and milestones to facilitate ex-post assessment (European Commission, 2020). The NRRPs were submitted in the Spring 2021 and approved by the Commission and by Council. With inflation, many countries were forced to revise their plans and to renegotiate with the Commission deadlines and milestones. This process of renegotiating so far was quite smooth.

4.1.1. NextGenerationEU: A radical change but not yet a Hamiltonian Moment

There is little doubt that NGEU presents a radical change. What makes the agreement even more significant is the position of Germany, which had never before agreed to introduce elements of risk sharing into European policies and which, this time, has put its full weight behind the Commission's initiative from the outset (Saraceno, 2021). Nevertheless, the enthusiasm of those who spoke of a

Hamiltonian moment – i.e., of a founding act for a federal Europe - was not entirely justified, as we are still very far from a genuine common fiscal capacity.

For several reasons, it is unlikely that NGEU could be used as a blueprint for other EU objectives and/or for the creation of a central fiscal capacity (as advocated by Buti et al., 2023). First, Germany's position. Chancellor Merkel's historic green light to NGEU was conditioned by the one-off nature of the instrument, which does not take over existing debts. Consistently with this position, the German government opposed in 2022 the proposal by Commissioners Breton and Gentiloni (2022) to create a SURE for energy¹⁸. Even more significantly, Germany managed to obtain a minimalist [reform](#) of the Stability and Growth Pact that, will still mostly be centred on yearly debt reduction targets (Saraceno, 2024). Moreover, except for the plastic tax and a the Carbon Border Adjustment Mechanism (CBAM), there is no agreement among Member States on the other common sources of revenues currently discussed (that would make it possible to avoid an increase in the contributions of the Member States to the MFF), such as the taxation of multinationals or the tax on financial transactions ("Tobin tax"). Finally, the Facility operates by transferring resources for investment programmes that will nevertheless remain national, as the Union does not currently have a spending capacity comparable to that of a federal state (Creel et al., 2020). Therefore, a truly European investment programme is very far from being reality yet.

However, highlighting the grey areas of the NGEU should not lead to neglect its innovative aspect, nor to forget that the EU has been effective in the face of the pandemic, supporting Member States in their emergency effort and launching a common programme to govern recovery in the medium term.

4.1.2. A tool for structural transformation

It is too early for an assessment of the macroeconomic impact of NGEU. Nevertheless a few studies have attempted an ex ante assessment of its short-term macroeconomic impact, and they all concur that it will not be extremely large (Watzka and Watt, 2020; Codogno and Van Den Noord, 2020; Pfeiffer et al., 2021). In the studies, the euro area average hides a very heterogeneous distribution between countries, with the Member States most affected by the pandemic, and the poorest ones in particular, benefiting from a larger increase in production and employment than core countries. This is not surprising, given that peripheral countries have suffered major disruptions and have a larger share of the programme's funds.

The value of impact (i.e., short-term) multipliers, while positive, was not really found to be significant from a macroeconomic perspective. Far from being a surprise, this is consistent with the nature of the programme, whose main objective is to boost potential long-term growth through the financing of investment and reforms. This allows to highlight what is probably the most significant criticism of the programme, which is that it mixed the short-term objective of lifting the economy out of COVID-19 (the "Recovery") and the one of triggering structural change (the "Resilience"). The "Recovery" aspect led to the very short delay for preparing the NRRPs, to the frontloading of expenditure (that should be over by 2026), and ended up weakening the "Resilience" part, as countries had a hard time in developing long-term investment program in just a few months. Italy is a good case in point, having had to formulate a EUR 200 billion NRRP that necessarily led to selecting ready-made projects at the detriment of the overall consistency of the program (Viesti, 2023). Many forecasters at the time expected a V-shaped recovery that would make it unnecessary further short-term support coming from NGEU. It

¹⁸ The Support to mitigate Unemployment Risks in an Emergency (SURE) instrument is a temporary support introduced to help EU countries to face labour market related expenditure facing the pandemics. It borrowed 100 billion euros that were then lent to countries at favourable rates, to finance job retention schemes, active labour market policies, etc.

would have been more reasonable to allow more time for the investment and reform plans for the ecological and digital transitions by explicitly dropping the “Recovery” from the facility.

4.2. Inflation and the policy mix

Since 2021 and the upsurge in production and consumer prices, part of it compensating for below-trend inflation since 2014, the ECB has steeply increased its policy rates, from -0.5% in June 2022 to +4% in September 2023, and yes, disinflation has occurred. However, as Figure 1 shows, until September 2022, the actual increase in consumer prices could be interpreted as a catch-up process vis-à-vis a situation where prices would have increased at a constant 2% inflation rate since 1999, hence satisfying very strictly the ECB inflation target¹⁹. Since October 2022, despite the pursuit of inflation at a lower pace (disinflation), consumer prices arrived to a level *above* their long-term value under a constant 2% inflation rate. In December 2023, consumer prices in the euro area were still 1.4% *above* their long-term value, compared with November 2020 (lowest point) when consumer prices were 9% *below* their long-term value²⁰.

It would be an exaggeration to attribute all the benefits of disinflation to the ECB. First, because it is well known that it takes 9 to 18 months before the effects of policy rate changes materialise²¹. What evidence shows is a *steep* decline in inflation rates across euro area countries since October 2022, hence at a period when policy rates had been raised only mildly and only for a few months. This inflation decline is concomitant with the sharp decline in the prices of Brent oil and Title Transfer Facility (TTF) gas contracts that may have a rapid impact on production and consumer price indices. It is also worth acknowledging that commodity prices are not very sensitive to policy rates (see, e.g. Kilian and Zhou, 2022, on the impact of a US monetary contraction)²²: it would not be right to argue that a monetary contraction in the euro area can explain the bulk of the decline in commodity prices. Second, many other policy tools than monetary policy have also been used to tackle inflation, mainly via price caps and subsidies on energy prices and price caps on goods and services²³.

Despite the differences in policy measures which were put in place by euro area governments to shield consumers and firms from the direct impact of increasing prices, fiscal costs have been far from negligible. According to Sgaravatti et al. (2021), they range from 0.6% (Finland) to 6.8% (Malta) of GDP between September 2021 and January 2023. They could amount to 1.8% (Spain), 2.6% (Italy) and 3.4% (Germany and France) of GDP from 2022 to 2024, according to Figure 2.

¹⁹ Of course, the ECB does not follow a catch-up strategy. Figure 1 is merely a striking illustration of how low the inflation process has been in the euro area *before* 2021.

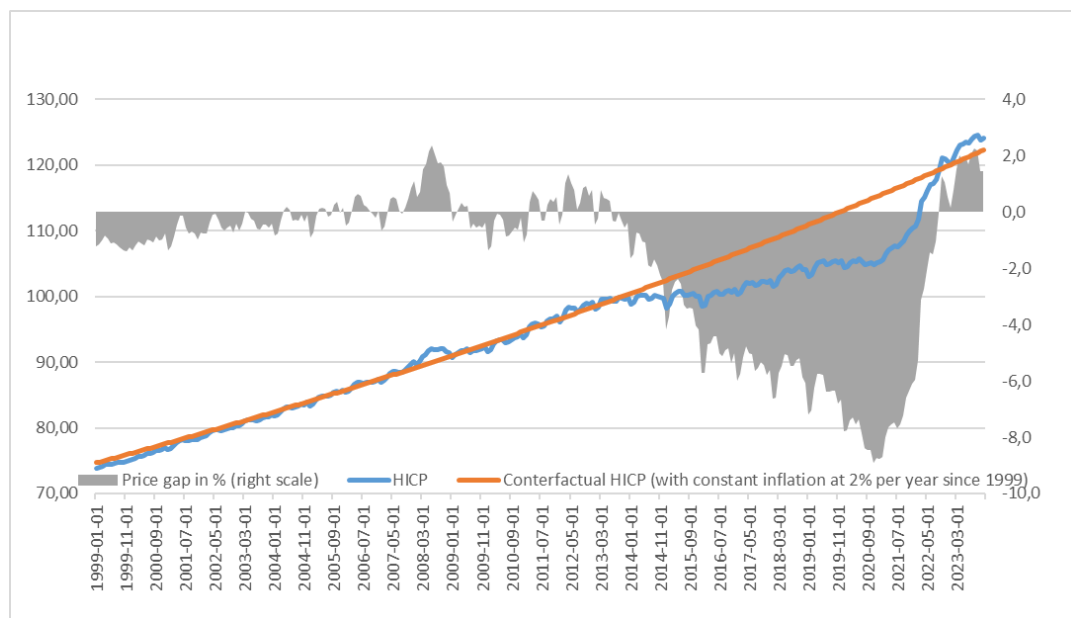
²⁰ It may be worth recalling that this long period of below-trend inflation (from 2014 to 2020) occurred despite the development of unconventional ECB policies like Quantitative Easing and despite the rise in public debts.

²¹ It may even be longer according to Romer and Romer (2023), who find a peak effect 24 to 30 months after the shock.

²² Degasperis et al. (2023) find contrasting though weakly significant results.

²³ See Galgóczi (2023) for an overview of policy measures in 7 European countries and their link with climate policies, or Sgaravatti et al. (2021) who created a tracker of all the temporary policy measures implemented by European countries, including non-EU ones.

Figure 1: Headline HICP inflation in the euro area



Sources: FRED database, authors' computations.

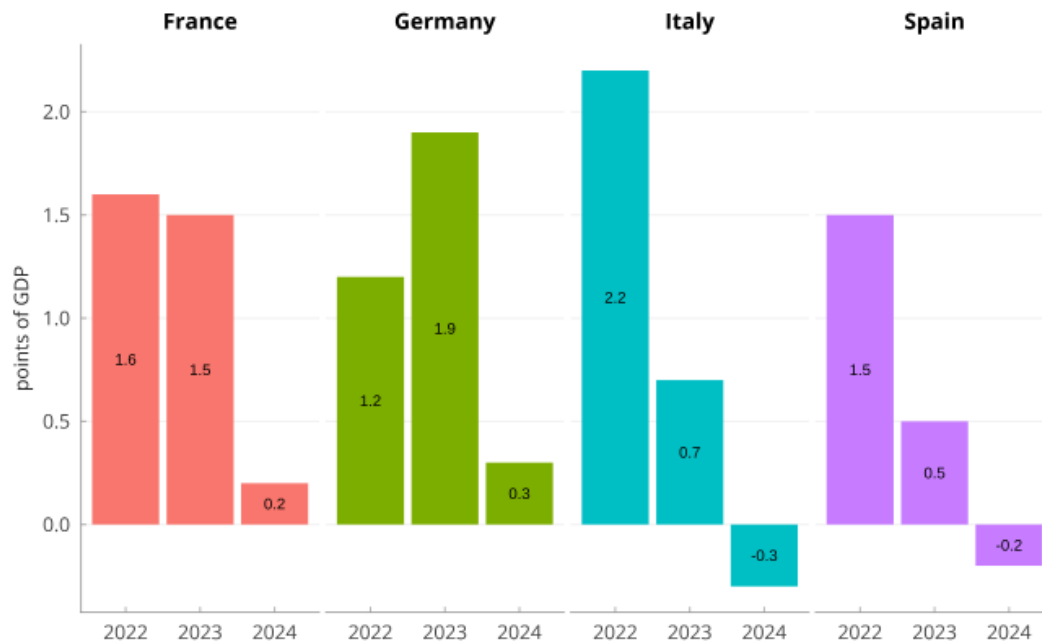
Notes: HICP is the actual Harmonised Index of Consumer Prices; the counterfactual is the computed Harmonised Index of Consumer Prices imputing at month t a monthly rate of increase of 0.165% to the computed HICP at month $t-1$; the price gap is the difference in % between the actual HICP and the counterfactual HICP.

These data show an increase in spending which, at given tax rates, yields larger deficits and debts. However, these policy decisions must be understood as either diminishing inflation, via price caps on energy, or alleviating the costs of inflation to households and firms. In the latter case, they would reduce the risk that workers might be tempted to demand higher incomes and wages (wage-profit-price spiral) and thus leading to higher final prices because of the pass-through from their costs to their final prices or because of opportunistic behaviours of firms profiting from temporary monopoly power²⁴.

The increase in public deficits to dampen an inflation shock reveals two interesting elements for the future management of the euro area. First, fiscal policy cannot be understood as exclusively demand-related like in textbook analysis. While a fiscal stimulus may prompt a rise in investment (via, e.g. higher climate-neutral investments when it comes to NGEU), fiscal policy can be supply-driven, reducing the pass-through of an external shock on households' budget constraints and firms' costs. Second, higher public deficits can complement monetary policy in curbing inflation, thus giving rise to an unconventional policy mix of fiscal expansion and monetary contraction.

²⁴ For a seminal work, see Weber and Wasner (2023).

Figure 2: Domestic fiscal policy responses to the energy crisis



Source: ECFIN on the basis of the April 2023 Stability Programs

Sources: OFCE Département Analyse & Prévisions, ECFIN computations based on Stability Programmes of April 2023. Data include all measures used by governments to mitigate the impact of the energy price shock, mainly price caps, tax rebates, discounts on fuel prices, and energy cheques.

4.3. Beyond NGEU: supply-side policies to meet future challenges

4.3.1. The EU's environmental and digital transitions in a changing global economic and geopolitical order: the big picture

The EU faces huge financing needs for the environmental and digital transitions, both in the current period as well as in the coming decades (Speck et al., 2023; Baccianti, 2022). While it is almost impossible to quantify the exact amount of funding needed, there is a consensus of clear benefits of early action, particularly in the case of environmental transition: the short-term costs of transition pale in comparison to the medium- to long-term costs of unchecked climate change (Carton and Natal, 2022; Braga and Ernst, 2023; IPCC, 2022).

These financial needs come in the context of a changing global economic order, with growing competition between China, Europe and the United States for developing clean energy and technologies. Over the past 15 years, the Chinese government has massively subsidised green industries, giving it a head start in key sectors (such as solar power, see Bloomberg, 2024) and in critical raw materials (extraction and refining) which are essential for the environmental transition (e.g. lithium-ion batteries for electric vehicles). More recently, the United States have embarked on the so-called "subsidy race", culminating in August 2022 with the Inflation Reduction Act (IRA), which incentivises domestic production in clean energy and technologies to reindustrialise the country, secure its energy supply and reduce its reliance on China (Jansen et al., 2023). By comparison, the EU entered the race later, not necessarily with lower funds, but more importantly with a less appropriate design for fuelling green investment. As Braga and Ernst (2023) point out, "climate change mitigation is not only about funding but also about coordination, both across jurisdictions and within countries".

Last, but not the least, the increase in defence spending, as a response to Russia's invasion of Ukraine, is putting further fiscal pressure on the public budgets of EU countries as they are also NATO members and currently below their political commitment of spending 2% of GDP on defence (Speck et al., 2023).

In such a context, it is important that the policy mix is more balanced, i.e. that monetary policy is better coordinated with fiscal policy so as not to jeopardise the medium- and long term objectives of environmentally-friendly and digitalised economies, with the twin transition aiming at working together to help reduce greenhouse gas emissions. In other words, structural policies, and in particular industrial policy, need to be supported by fiscal and monetary policies, not discouraged or hampered. Crucially, the policy mix should favour a (massive) reallocation of funds, leading to a (significant) financial burden on carbon-intensive producers and consumers (Brada and Ernst, 2023; Batten et al., 2021). In particular, as fiscal policy will also have to mitigate the social consequences of such a transition (in terms of job redistribution and loss of purchasing power), it is crucial that monetary policy helps to ensure what must also be a "fair transition", not fighting against relative price adjustment generating transitory inflation pressure.

As the recent inflation episode has shown, price caps and tax rebates can be useful instruments for smoothing the impact of energy shocks on the more vulnerable agents (households, firms) while helping the ECB to achieve its price stability objective (see Section 3.6). However, as these budgetary instruments are tantamount to supporting brown energies (via a distorted price signal), they can only be used sparingly and occasionally, at the risk of compromising the transition to green energy. It is therefore the supply of clean energy that needs to be promoted so that it becomes abundant as quickly as possible. In this context, price caps and tax rebates has to be viewed as temporary (not permanent) instrument, only to ensure a socially fair transition.

Similarly, the social consequences of the transition for workers currently employed in polluting industries or threatened by digitalisation will have to be mitigated (through unemployment benefits and training to acquire new skills). All these costs will be borne by public finances.

4.3.2. The current EU responses to deal with the double transition: almost budgetary²⁵

Faced with the need to manage the twin transition, any government (whether national or supranational) has different tools to deliver on its goals: regulations (e.g. to set emission standards or to guarantee data security and safety), carbon pricing (e.g. to make traditional fossil-based more expensive), subsidies or tax incentives (e.g. to make low-carbon technologies cheaper), soft loans and de-risking instruments (to take over public support of the risk associated with green technologies and digital innovations; Baccianti, 2022; Braga et al., 2021). As argued by Baccianti (2022), because of political economy considerations, politicians prefer to offer generous financial support to green investments, shifting the burden to public finances. Others go further: the scale of the challenges and the uncertainty related to investment return are such that public funding is needed (Hanna, 2018; Stöllinger, 2023). For example, all the key technologies that make the phone so smart were government funded: Internet, GPS, touchscreen display and the voice-activated personal assistant (Mazzucato (2013), cited in Hanna, 2018).

In all parts of the world, subsidies for environmental and digital transitions are growing, as discussed by Van Heuvelen (2023), and the EU is rightly involved in this race to the top, the design of which, however, deserves to be improved. In particular, following the adoption of the IRA by the United States, the EU's response has been epidermal (Crawford, 2022), as it threatens the reindustrialisation of the EU,

²⁵ This section takes up some elements from Creel et al. (2024, forthcoming). It considers mainly the environmental transition, for which there is more evidence.

because the US domestic content requirement could incentivise European firms to cross the Atlantic to do business there and access the US market.

Then, in February 2023, the EU activated a loosening of state aid rules until at least 2025, coupled with a “Green Deal Industrial Plan” (GDIP), thus signalling the rebirth of an EU-level industrial policy. The GDIP was subsequently enshrined in two key pieces of EU legislation, the Net-Zero Industry Act (NZIA) and the Critical Raw Materials Act (CRMA), and further funding was added to support the new EU industrial policy. In total, the sum of all European funds aimed at the green transition (from NGEU to the Cohesion Funds and including state aid funds) would provide roughly the same amount of subsidies as the IRA for the United States if we consider its lower range of USD 400 billion²⁶. However, some estimates of the IRA are twice or even three times as high, ranging from USD 800 billion to USD 1,200 billion (Creel et al., 2024). Perhaps more important than the amount of subsidies on the table to finance green investment, the current framework suffers from three main flaws:

- i) The loosening of state aid rules tends to favour rich (and large) countries to the detriment of the poorest (and smallest) EU members. This creates inefficiencies, as some nature-based solutions for carbon removal or some useful endowments of critical raw materials for the environmental transition can be found in less advanced EU countries or in fiscally-constrained countries where financial resources are not always available or are insufficient in scale (European Court of Auditors, 2023; Braga and Ernst, 2023). Moreover, recourse to state aid is the opposite of coordinated policies, and may lead to a loss of public resources;
- ii) Many different sources of funding, coupled with lengthy notification and application procedures, create unnecessary complexity for investors and, in turn, inefficiencies (Jansen et al., 2023);
- iii) The time horizon remains relatively short, subject to either a 7-year Multiannual Financial Framework and/or the 5-year mandate of the European Parliament and the Commission.

Finally, a better framework should solve (i)-(iii), or at least tend to decrease inefficiencies arising from (i)-(iii). In particular, a European sovereign fund, which unifies the existing EU funds, could be a part of the toolkit, allowing for a longer time horizon, decoupled from rigid multiannual calendars, functioning in a one-ticket manner, and solving more easily the problem of coordination (Heimberger and Lichtenberg, 2023).

To sum up, and drawing on the recent US experience, fiscal policy should incorporate more supply-side (long-term) elements alongside its demand-side (short-term) elements. Budgetary policy also calls for a fine-tuning with monetary policy, to avoid the financing of long-term investment to be hampered by an inappropriate interest rate policy. Moreover, the current standby of some offshore wind projects on both sides of the Atlantic constitutes a good example of why the ECB should operationalise its secondary objectives, in particular those related to climate mitigation.

4.3.3. The possible action and objectives of the (future) monetary policy

As put forward by Ferrari and Landi (2023), “while elected governments are primarily responsible for helping in this goal [of mitigating climate warming], central banks may also play a role”.

Several options have been proposed so far:

- Prioritising bonds issued by market participants that respect sustainability criteria for (conventional) open market policies (Schoenmaker, 2021; Brada and Ernst, 2023). By paving the

²⁶ This is based on the assumption that all EU countries will take up the maximum amount of grants and loans allocated to them, which does not appear to be a realistic assumption at this stage, unless appetite for European loans increases swiftly.

way for a more liquid market for sustainable securities, it would reduce capital costs for green firms (Brada and Ernst, 2023). The monetary policy would become truly more “market-neutral” than currently, when almost all bonds used as a collateral are from brown industries (Matikainen et al. 2017);

- Launching an (unconventional) programme of green asset purchases or a so called Green quantitative easing (QE) (Ferrari et Landi, 2023). It would work similarly to a capital subsidy, reducing the capital cost for green firms relative to brown ones. It may however be noticed that launching a Green QE would counteract the current – restrictive – stance of monetary policy and the phasing out of unconventional measures. In that case, the ECB would indeed increase its holding of green bonds but reduce the size of its balance sheet. It would entail to decrease more rapidly the holding of other assets, public securities for instance. The ECB would thus face a communication challenge. Besides, a Green QE in a period of tightening would clearly reinforce the quasi-fiscal nature of this kind of asset purchase programmes. As it cannot be motivated by the need to amplify the monetary policy easing, the legality might be brought to the European Court of Justice. Even if a green QE could be motivated by the secondary objectives of monetary policy it remains that according to the Treaty, these secondary objectives should not be detrimental to the price stability objective.

In both options, a lower capital cost would lead to lower prices in green firms. The demand would then shift from the brown to the green sector, and emissions would decrease.

It is worth noting that these two options are fully consistent with the ECB's secondary objective of supporting general economic policies in the EU, as set in the EU Treaty.

Central banks have also other tools at their disposal for integrating environmental considerations into their operations as:

- Taking climate change risks into account in their financial stability assessments;
- Encouraging financial institutions to integrate environmental risks into their lending decisions.

It should be emphasised again that scaling up investment in clean energy should make it possible to secure energy supply and thus lead to lower and more stable energy prices in the medium to long term, a feature that is included in the IRA and is used to justify very large subsidies for the production of clean energy on US territory. By encouraging such an upscaling of investment in clean energy on EU territory through an appropriate (coordinated) policy response, the ECB may even find it easier to achieve its primary objective of price stability. This point was made clear by Schnabel (2023), recognising that *“our economies will remain exposed to the risks of “climateflation” and “fossilflation” – that is, persistent inflationary pressures associated with more frequent natural disasters and a continued dependency on gas, oil and coal”* if insufficient investments are made in clean energy. Last but not least, European companies would gain in competitiveness vis-à-vis their US counterparts. Currently, there is a consensus among economists that European companies are suffering from higher energy costs, perhaps even much more than from the generous subsidies for clean energies and technologies of the Biden administration (see e.g. CAE-SVG, 2023; graphs in Jansen et al., 2023).

Where do we stand? From 2021, the ECB (2021, 2022) has been committing to integrating climate change considerations into its monetary policy considerations. As a first attempt to show how the greening of financial institutions' balance sheets is evolving, the ECB has been publishing new indicators since 2023, albeit still on an experimental or analytical basis. In addition, the European Parliament and the Council adopted the “Regulation on European Green Bonds” (EuGB Regulation) in October 2023, which will become directly applicable 12 months after publication.

By setting a standard for what constitutes a “green bond” and thus avoiding “greenwashing” that undermines investor confidence, the EuGB Regulation is expected to encourage further private capital to flow into green projects, thereby complementing public funding.²⁷

Inevitably, the question arises as to whether bonds that meet the standards set out in the EuGB Regulation should benefit from specific macroprudential regulation. It is clear that a lower capital requirement for green bonds would risk over-stimulating demand for green assets at the expense of other assets, which would become problematic at least because banks might not find enough green bonds. This example suggests that, on the face of it, a differentiated regulation policy between green and non-green bonds should be applied with due caution.

As far as the conduct of monetary policy is concerned, it should be emphasised that although green bonds are growing very rapidly, they are likely to remain a small share of outstanding debt for a long time to come²⁸. The greening of monetary policy, at least within the actual definition of “green bonds” possibly used as collateral, is likely to remain quite limited.

²⁷ By the end of the third quarter of 2023, green bonds had recorded cumulative volumes of USD 110.6 billion, according to the [Climate Bonds Initiative](#). Germany is the largest source of green debt, with USD 17.7 billion, or 16.1% of the total, followed by the United States with a green bond volume of USD 15.5 billion.

²⁸ Green bonds accounted for 3 to 3.5 % of overall bond issuance in 2020.

5. CONCLUSION

Against the backdrop of the unconventional policies that the ECB pursued during the sovereign debt crisis (partially to compensate for the inertia of fiscal policies) and by EU governments during both the pandemic and the recent inflation episode, the current European institutional framework of policy separation between monetary and fiscal policy seems ill-designed. Sticking to the Maastricht institutional architecture may hinder both the return of inflation towards 2% inflation and the needed green and digital investments. A new institutional framework (see Creel et al., 2024) should emerge positing that:

- (i) fiscal policies can be powerful at affecting both the dynamics of public debt and inflation; their impact on economic activity goes beyond the standard textbook demand management, as it can impact supply as well;
- (ii) both fiscal and monetary instruments are affecting multiple objectives (inflation, growth, financial stability, green transition, etc.) and at different time horizons;
- (iii) European institutions should acknowledge the role of supply-driven fiscal policies and amend economic governance in accordance with this role and with the new urgent challenges, mostly the digital and environmental transition.

With policy rates on the rise, investing in new infrastructures to accelerate the energy and digital transitions is becoming costlier, hence intensifying the trade-off between achieving price stability and meeting structural challenges like climate change mitigation. Higher interest rates might even increase the inflationary pressures in the medium term by curbing the accumulation of productive capacity and delaying the transition out of fossil fuels. This trade-off has been better managed in the US than in the euro area so far. The Inflation Reduction Act, despite all the uncertainties it contains about the allocated budget and the macroeconomic effects it may have, has paved the way for a supply-driven fiscal policy aimed at redirecting the economy towards low-carbon industries, in a kind of rebirth of industrial policy.

In contrast with the separating principle embedded in the Maastricht institutional architecture, the EU should recognise the many interactions between all the policies which are implemented (fiscal, macroprudential, monetary policies) and the regulations which are imposed, e.g. supervision, both at the national *and* at the federal levels. This is a prerequisite to redesigning European institutions and to helping the euro sail the next 25 years under all weather conditions.

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ANNEX 1: GUIDING PRINCIPLES FOR THE FUTURE

In the face of the risks, both old and new, faced by the Eurosystem, we need to reiterate certain methodological principles concerning the supervision of banking and financial activities by public authorities, particularly when these activities are plural, as is the case in the monetary union.

1. Information plays a crucial role in financial and banking matters. It is multifaceted. Even more than in other economic sectors, asymmetric information plays an essential role in contract negotiation and regulation in the financial and banking sector. The transmission of information is subject to multiple regulations that are likely to reduce its effectiveness, even as information channels multiply. Under these conditions, it is reasonable to assume that agency bias increases with the multiplication of stakeholders, and their possible hierarchy in a federative form.

2. The circulation of means of payment, and the negotiation and management of financial contracts, depend fundamentally on the confidence of the holders of these means of payment and the contracting parties. The primary concern of the public authorities in charge of a monetary union must therefore be to reinforce this trust as far as possible. This trust cannot be dissociated from the political functioning of the union, insofar as the means of payment are entirely dematerialized.

3. It is legitimate for the public authorities of a monetary union to seek to limit, or even eliminate, the rents from which such and such institutions may benefit, thanks to the asymmetries of information that are multiplied in a monetary union. But these authorities must bear in mind that the banking-financial sector is not an industrial sector like any other, and that the objective of standardising rules in the hope of achieving a "single market" is secondary to the previous objective of guaranteeing the confidence of non-financial agents in the system.

4. Cross-border banking and financial spillover effects are heightened in monetary union by the disappearance of foreign exchange. In addition to the increased complexity of the system that this implies, the modification of potential moral hazards must be one of the primary concerns of the public authorities in charge of the banking union.

5. The authorities' positions on banking and financial risks, and therefore their prudential role, differ according to their level. Let us distinguish between "local" (national in the case of EMU) and "central" (or "European" in the case of EMU) levels. Local authorities have better information on resident institutions, but are more subject to local political pressures, legitimate or otherwise. Central authorities have poorer information, but take better account of cross-border spillover effects and are subject to less political pressure, except in the event of a systemic crisis (Colliard, 2020).

6. Finally, it should be remembered that a banking union might involve disbursements, in the event of liquidation of a failing institution or compensation of depositors. Ultimately, the soundness of a banking union lies in the soundness of the mechanisms for financing these outlays. These mechanisms, whether private or public, must be credible if non-financial agents are to have confidence in the system.

ANNEX 2: SOME LESSONS FROM THE SILICON VALLEY BANK BANKRUPTCY (MARCH 2023, CALIFORNIA).

As far as new risks are concerned, the Silicon Valley Bank (SVB) collapse is rich in lessons. At least five are important for the European Banking Union.

1. A bank's clientele is heterogeneous, and the figure of the "depositor", supposedly representative of a clientele, must be abandoned. Depositors' levels of risk to the bank, their need for protection and their capacity to act are all different.
2. Digital means considerably increase the speed of reaction to negative or pessimistic messages about a bank's liquidity.
3. The distinction between liquidity and solvency is rendered obsolete.
4. The risk of contagion, again due to the flow of information and the speed of arbitrage operations, is extremely high.
5. Public authorities reacted swiftly to curb the crisis, but at the cost of a widespread questioning of their credibility in meeting their commitments.

Over the past 25 years, the euro faced various crises, prompting a reassessment of its governance. Concerns arise regarding the ECB's exposure to risk and the necessity of deep reforms for managing growing ecological, financial, and geo-economic risks. Despite initial achievements like the banking union, challenges persist, such as financial instability and economic fragmentation. Policymakers must address these risks through enhanced monetary and macroprudential policies, fiscal coordination, and supply-side fiscal measures to navigate digitalisation and environmental challenges effectively.

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