

# The shortfall in European investment

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Since Robert Solow's early work, we have known that long-term economic growth does not come from a larger capital stock or increased employment, but from technical progress, identified as the unobserved part of growth. This unobserved element – the Solow residual – explained 87% of US growth in the first half of the 20th century. Since then, theories of endogenous growth have shown that it is above all intangible investment, particularly investment in R&D or human capital, which, as a source of positive externalities, ensures long-term growth.

Information and communication technologies (ICT) have focused the attention of researchers and statisticians since the late 1990s. Although they have not always lived up to their promise of productivity gains – the Solow paradox – they are undeniably the lifeblood of all the technologies of the 21st century, and are the weapons of competitiveness for all sectors, especially digital services. Taking an interest in investment in these technologies is an essential part of any discussion of growth and living standards.

In this post, we focus on three types of investment, one tangible, and the other two intangible, which may be at the root of the European economic backwardness relative to the United States analysed in greater detail in our Policy brief "[Documenting the widening transatlantic gap](#)". We are looking at investment in ICT equipment (servers, routers, computers, etc.), investment in research and development (R&D), and

investment in ICT services such as software, programs and databases.[\[1\]](#) These three types of investment stand out from other tangible investments (in transport equipment, machinery, buildings, farmland) and intangible investments (in training, intellectual property, organisation) because of their particular dynamics, revealing a growing and sometimes spectacular lag between the eurozone and the United States.

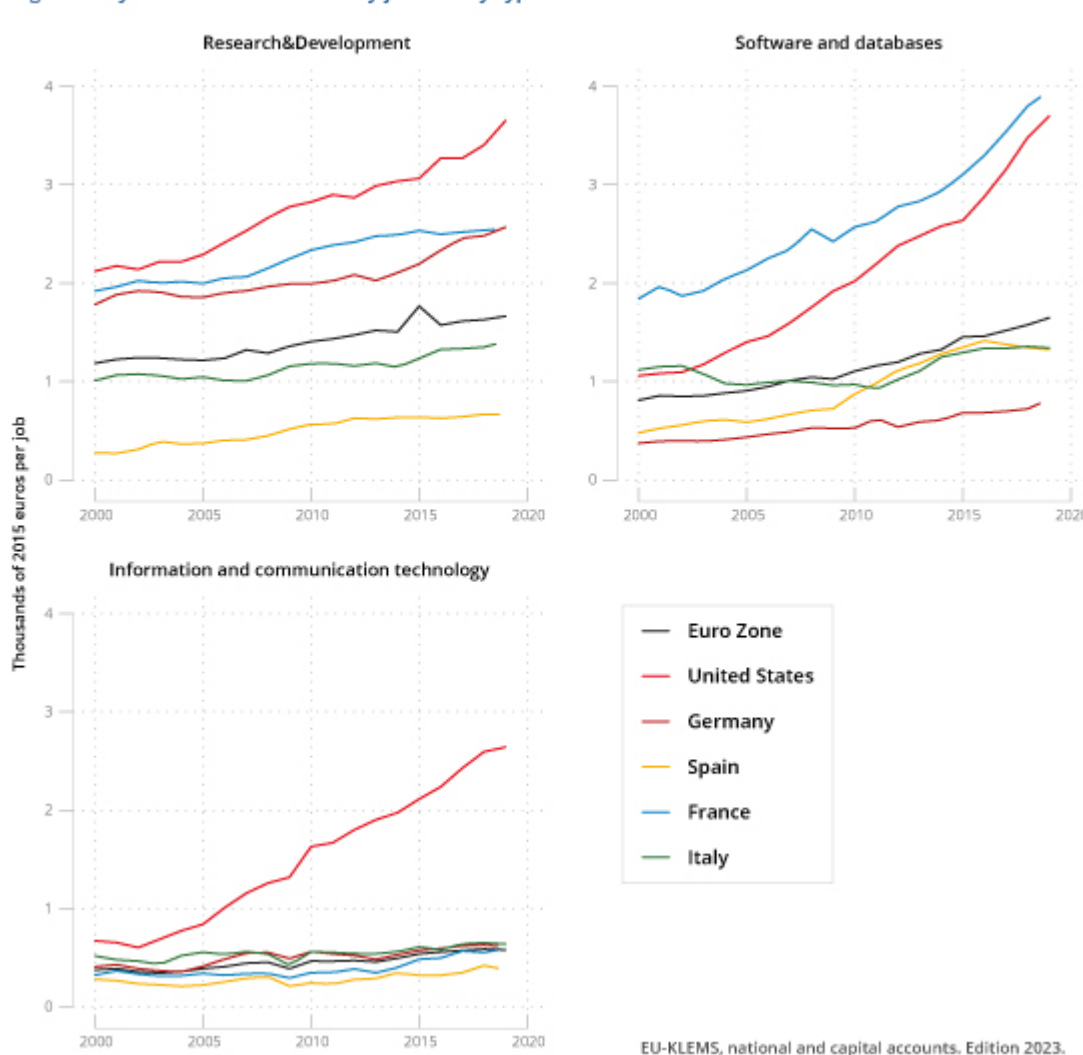
Let's first look at the dynamics of investment.

Figure 1 shows investment per job for these three types of investment in the United States, the eurozone and the four major eurozone countries from 2000 and 2019. It appears that the investment effort in the United States is greater for each of them.

- In terms of R&D investment, the gap between the United States and the eurozone, which was already wide in the early 2000s, is widening in absolute terms (from €1,000 to €2,000 per job over the period) to represent more than twice the European effort in 2019. What we find most worrying is that this widening gap is the result of uniform behaviour on the part of the main European economies. For both Germany and France, this gap, which was rather small until 2005, is multiplied by 10 for France and by 5 for Germany at the end of the period.
- Concerning investment in software and databases, and leaving aside the French case[\[2\]](#), there is no reason to be optimistic. The US-EZ gap in investment per job in software and databases has increased 12-fold, from €200 to €2,400 over the two decades. France stands out in terms of volume, but the trend is for French investment to double while US investment triples.
- Concerning investment in ICT equipment, the American singular achievement is even more impressive. Initially close to European levels, this investment is growing steadily in the United States, while remaining constant

in the eurozone. The comparison is eloquent here, since investment per job remains at between 500 and 700 euros per year over the entire period in the eurozone, whereas it reaches 2,500 euros in the United States, a nearly five-fold increase over the period in question.

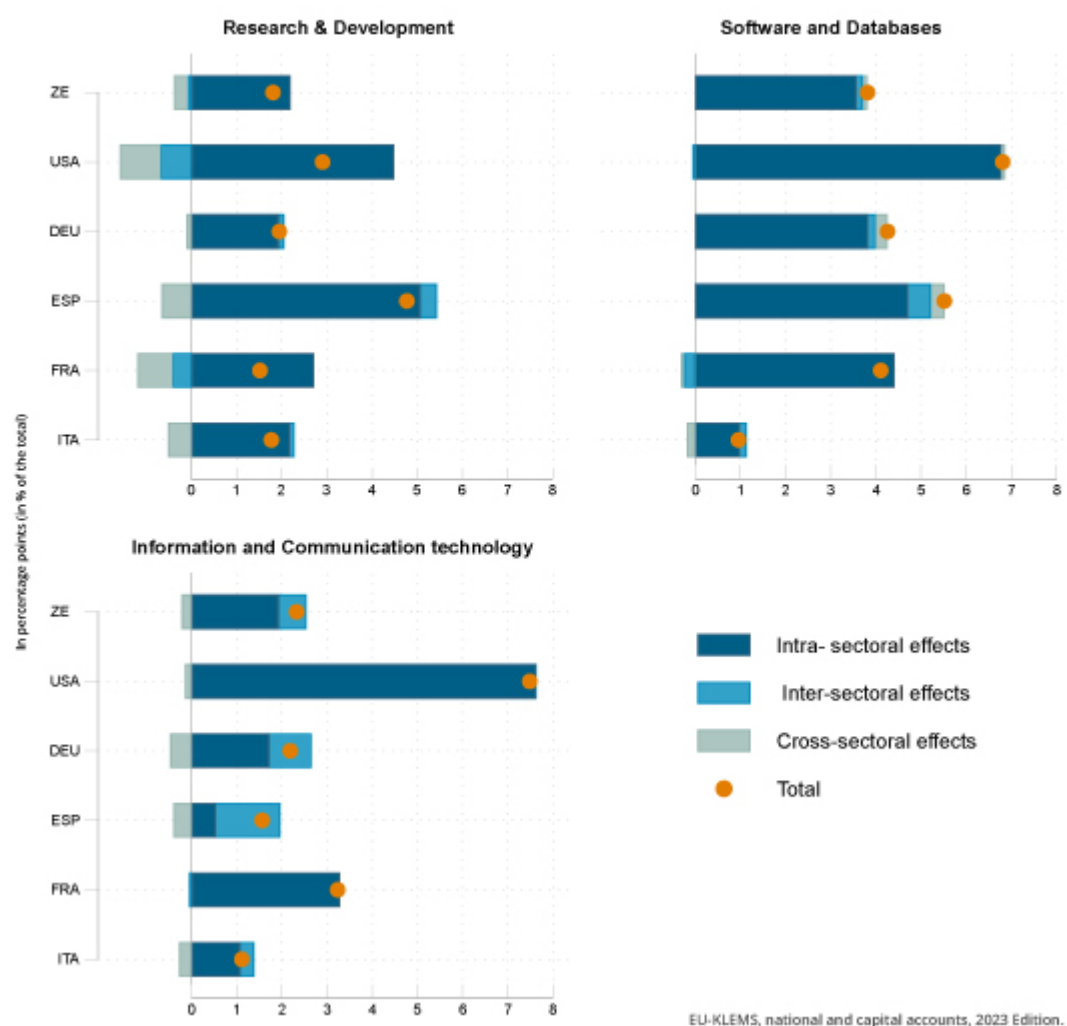
Figure 1. Dynamics of investment by job and by type of investment



Overall, the private investment gap between the eurozone and the United States stood at around 150 billion euros in 2000, rising to over 600 billion euros in 2019. Where does this US vigour come from, and above all, how can we explain Europe's apathy? The first question we might ask is the role of the productive specialisation of economies. After all, if the sectors that are growing in the US are those that invest the most in R&D, software and ICT equipment, we should see greater composition effects in the US than in the eurozone. This would imply that the growth observed is not the result of American

behaviour that is increasingly inclined towards investment but is above all the result of an advantageous sectoral positioning for the United States. Let's now decompose investment growth by distinguishing between intra- and inter-sectoral effects.

Figure 2. Intra- and inter-sectoral contributions to the average annual growth rate of investment per job (by type of investment, 2000-2019) (in % of the total)



By positing aggregate investment per job as the sum of investment per job in each sector weighted by the share of employment in those sectors, the growth rate of aggregate investment per job can be decomposed as the sum of intra-sectoral effects, inter-sectoral effects and cross-sectoral effects over the period.

The first effect captures the source of change linked to the increase in investment (per job) taking place within each sector. This internal effect may be the result of companies

increasing their investment between 2000 and 2019, market share reallocations within sectors, or firms entering and leaving the market. The second effect, the cross-sectoral effect, is the result of structural change in economies, understood as changes in the sectoral structure of economies. The cross-sectoral effect is the combination of the first two effects.

Figure 2 presents the results of this decomposition, distinguishing between the effects within each sector and those between sectors. We can immediately see that it is the intra-sectoral effect that explains the growth in per capita investment, and this applies across all economies and all types of investment. In other words, the explanation that structural change is taking place in such a way as to favour growth in investment per job in the United States and not in Europe can be rejected. Not only are the sectoral structures of the economies not that far apart, but above all the investment growth is clearly the result of an investment intensification within sectors. We therefore need to understand the origin of the US-EZ investment gap as the result of investment behaviour that changes over time.

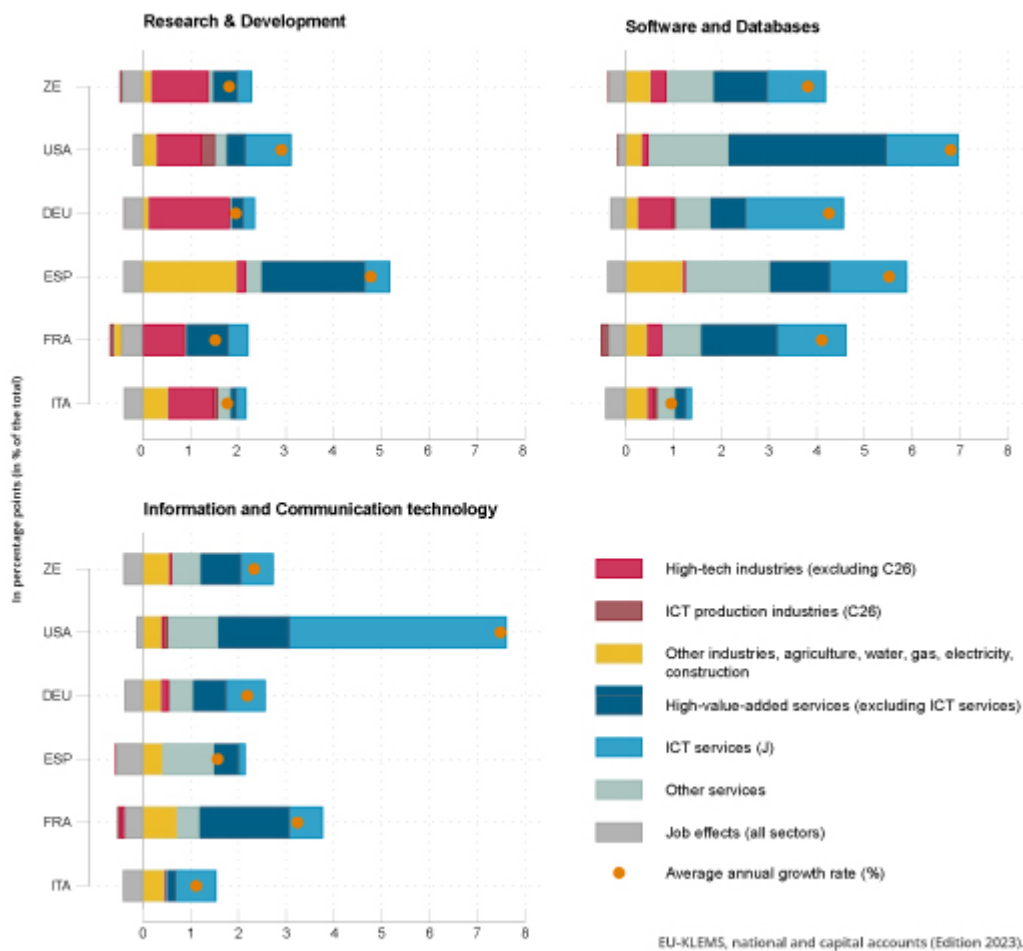
To reveal them, we use another decomposition, where the growth rate of investment per job is the result of the growth rate of investment minus the growth rate of employment. Next, we decompose the investment growth rate as the sum of the sectoral growth rates, weighted by each sector's share of total investment, at the start of the period. We classify all the sectors that make up the market economy by type of sector as follows: (i) high-tech industries (excluding ICT production); (ii) ICT production industries; (iii) other industries, agriculture, water, gas, electricity, construction; (iv) high-value-added services (excluding ICT services); (v) ICT services; (vi) other services. This classification seems relevant to us because it distinguishes ICT production activities (whether manufactured or services)

from other sectors that use ICTs as inputs in their production.

Figure 3 shows the results by type of investment. Let's look first at R&D investment. The case of Spain may seem surprising in terms of the growth observed, but this is above all the result of a catch-up effect. Indeed, as figure 1 shows, it is in Spain that investment per job is the lowest throughout the period under consideration. This growth is essentially driven by high value-added services and 'low-tech' industries. In the other countries, growth in investment per job is mainly driven by high-tech industries. This is particularly true of the eurozone in general, and Germany and Italy in particular. The differential between the US and European growth rates (excluding Spain) is mainly the result of major investment by the ICT services sectors. Here we see above all the famous GAFAMs.[\[3\]](#) The exploitation of gigantic databases combined with the rise of artificial intelligence – and the impressive possibilities it offers – are prompting the GAFAMs to invest massively in R&D in order to make the most of these new technologies.

Growth in investment in databases and software is mainly due to the services sector in general, whatever the country. What distinguishes the US from other countries is the significant contribution made by high value-added services. This suggests that ICTs are spreading more rapidly throughout the economic activities in the United States than in Europe. Italy stands out for its low growth rate, with services making virtually no contribution to the growth of this investment. The case of Spain is, once again, the expression of a catch-up effect, as shown in Figure 1.

Figure 3. Sectoral contribution to the average annual growth rate of investment per job (by type of investment, 2000-2019)



Finally, the US-EZ comparison of the sources of growth in investment in ICT equipment is particularly enlightening. Over and above the difference in growth rates, we note that the contribution of the sectors is relatively similar between the two regions of the world, except for ICT services. In the eurozone, the contribution of ICT services to growth in investment in ICT equipment remains low, whereas in the United States it is 4.5 percentage points, which alone explains the difference observed. Our interpretation is that the specific dynamics of investment in ICT equipment observed in Figure 1 is the result of massive investment by ICT services, i.e. essentially by GAFAMs and sisters (Intel, Nvidia...). In other words, intangible investment in R&D and software/databases is evolving in tandem with tangible investment in ICTs, which complements it and makes it operational or even productive.

Three results to remember :

1. The investment effort in the United States is greater than in the eurozone for the three types of investment considered: R&D, ICT equipment and ICT services (software and databases).
  - a. The gap between the United States and the eurozone is widening for all types of investment.
  - b. In 2019, investment in ICT equipment per job will be five times higher in the United States than in the eurozone.
  
2. It is the intra-sectoral effect that explains the growth in investment per job, in all economies, and for all types of investment.
  - a. The gap between the United States and the eurozone is therefore not because of changes in specialisation (over the last 20 years), but rather to changes within sectors.
  - b. The origin of the investment gap the contribution of ICT services to growth in investment in ICT equipment is the result of investment behaviour that changes over time.
  
3. There are significant differences between countries in terms of sectoral contributions to growth in investment per job.
  - a. In the eurozone, growth in R&D investment is being driven mainly by high-tech industries. In the United States, it is mainly ICT services that are driving this growth;
  - b. What distinguishes the United States from other countries is the significant contribution of high value-added services to the growth in investment in databases and software;
  - c. The difference in investment in ICT equipment is



mainly due to investment by the services sector.

It is as if, in the United States, the ICT services sector – including the five American giants – was responsible for the observed differential, with its heavy investment in R&D and digital equipment. The other service sectors (essentially high value-added services) are integrating these innovations into their production processes by investing in software and databases. The US case thus offers a high degree of coherence through the complementarity between sectors that produce and sectors that use ICT services. The overall impression is one of rapid digitisation of the economy, driven by GAFAMs and spreading to the entire US production base.

The European case does not offer the same picture, and is worrying for two reasons. Firstly, the lack of investment in ICT services means that the economy is digitised more slowly. Secondly, the absence of a leading company in the field of digital services limits investment in R&D and digital equipment. With the future promises of artificial intelligence and quantum computing, there is every reason to believe that, without the combination of upstream sectors supplying ICT services and equipment and downstream sectors adopting these innovations, Europe will find it more difficult to capture the fruits of the announced digitisation of the economy.

The challenge is therefore immense. Catching up would mean increasing private investment [\[4\]](#) in Europe by €630 billion a year (or more than 5% of the eurozone's GDP), for the assets considered here alone (ICTs, R&D, software and databases), and assuming that US investment remains constant. This is equivalent to an increase in investment of €61 billion for France, €57 billion for Germany, €28 billion for Italy and €16 billion for Spain. But this is not just a quantitative problem, far from it. Without a radical change in the investment behaviour of public and private players, and

institutional innovation in European governance[\[5\]](#) , this paradox is likely to persist in Europe, which, by remaining anchored in the productions of the 20th century, is clearly at risk of technological decline.

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[\[1\]](#) It should be remembered that these investments may result from in-house production or be purchased from external suppliers.

[\[2\]](#) Guillou and Mini have highlighted the enigmatic French peculiarity in software and databases, which persists despite the differences in accounting between countries. See "[A la recherche de l'immatériel : comprendre l'investissement de l'industrie française](#)", La Fabrique de l'industrie (2019).

[\[3\]](#) As a reminder, the GAFAMs are : Google (now Alphabet), Amazon, Facebook (Meta), Apple and Microsoft.

[\[4\]](#) The private sector corresponds to sectors with NACE codes from A to N.

[\[5\]](#) On this point, see the recent report by Fuest, D. Gros, P.-L. Mengel, G. Presidente and J. Tirole, "[EU Innovation Policy: How to escape the middle technology trap](#)", April 2024, A Report by the European Policy Analysis group.

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## **2024-2025 World Economic Outlook: EUROPE TAKES OFF**

OFCE Analysis and Forecasting Department, Éric Heyer (dir.) and Xavier Timbeau (dir.) [\[1\]](#)

*This text is the summary of the Outlook for the World Economy realized in the spring of 2024 by the international team and published in a French version ([OFCE Policy brief, n° 125](#)). Concerning the analysis and forecast for the French Economy, the 2024-2025 Outlook is published in an [English version](#) .*

While the United States still escapes the slowdown, the economic situation in the European countries remains deteriorated, accentuating the gap that has appeared from the start of the Covid crisis. Beyond the differences in potential growth between countries, these differences are notably linked to the impact of the energy crisis, which is greater in Europe than in the US, and to the direction of fiscal policy since 2020. These differences are not expected to narrow in the short term. Surveys and the first economic data available at the start of the year draw a picture of contrasts between the major industrial countries, leading us to forecast a further contraction in Germany's GDP for the first quarter (-0.2%), a slightly positive growth in the United Kingdom. At the same time, Spain and the United States are likely to remain on course in the short term.

In industrialized countries, particularly in Europe, growth is set to rebound to 1.7% in 2025, Activity would be supported by the easing of monetary policy. The convergence of inflation towards the 2% target would effectively lead central banks to cut interest rates from mid-2024. Conversely, the level of budget deficits and public debt will lead many governments to take consolidation measures.

In emerging countries, growth will remain stable in 2024 and 2025. In China, growth should resist despite the crisis in the real estate sector. The economic indicators point to some acceleration in production, and we forecast annual growth of 4.7% in 2024. In India, activity would slow down compared with

2023, rising by around 6.5%. In emerging Asian countries (excluding China), growth is expected to continue at the same pace as in 2023. In Latin America, we forecast a slowdown to 1,1 %, before a rebound to 2 % in 2025. Global growth would reach 2.8% in 2025, 0.2 point above its 2024 level.

**Table. Global GDP Growth**

Annual %	GDP in volume		
	2023	2024	2025
DEU	-0.1	-0.2	1.4
FRA	0.9	0.5	1.2
ITA	0.9	0.4	0.9
ESP	2.5	1.7	1.9
EUZ	0.5	0.5	1.5
GBR	0.1	0.3	1.4
USA	2.5	1.8	2.1
JPN	1.9	0.4	0.9
Industrialized countries	1.5	1.1	1.7
CHN	5.2	4.7	4.6
Rest of the World	4.0	3.7	3.8
<b>World</b>	<b>2.9</b>	<b>2.6</b>	<b>2.8</b>

IMF, OECD, national data. Calculations and forecast OFCE April 2024.  
*Note: Weighting calculated from GDP in dollars, 2011 PPP.*

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[\[1\]](#) This analysis is based on the work of the international team, which is led by Christophe Blot and composed of Céline Antonin, Amel Falah, Sabine Le Bayon, Catherine Mathieu, Hervé Péléraux, Christine Rifflart, Benoît Williatte. The forecast is based on information available as of 5 April 2024.

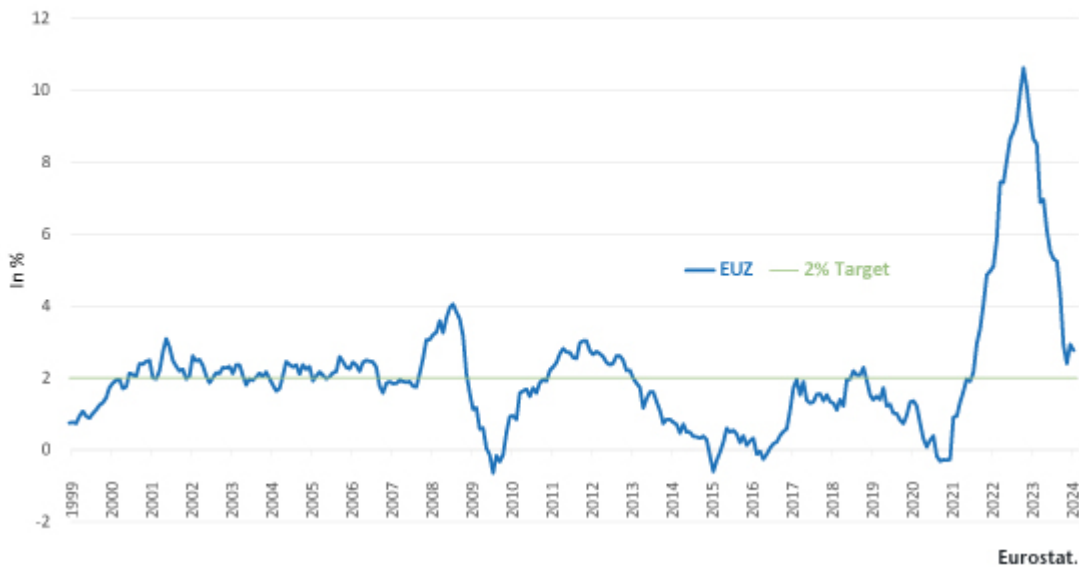
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# Should the ECB Revise its inflation target?

[Christophe Blot](#) and [Francesco Saraceno](#)

The inflation rate in the Eurozone continues to decline. In February, it dropped to 2.6%, more than two percentage points lower than the August figure (See Figure). The inflation rate is still above the ECB 2% inflation target despite the monetary policy tightening implemented since Summer 2022. Since then, the deposit facility rate has increased from -0,5 % to 4 %. Over the past year, the reduction in inflation has been largely due to the disappearance of the factors that had fueled the inflationary spike in the first place (bottlenecks, energy, post-pandemic recovery), which no longer have a significant impact today. There is indeed a broad consensus among economists that monetary policies take several quarters to influence demand, growth, and price dynamics<sup>[1]</sup>. Therefore, the tightening started to be felt only in 2023, and the peak is still to be reached. Rising interest rates are starting to weigh on consumption, investment, and public spending, contributing to the decline in inflation through a cooling of aggregate demand. It may be noticed that the current situation contrasts with the pre-Covid period where inflation remained below the target for a sustained period despite the expansionary measures – and notably unconventional ones – introduced by the ECB. Such difficulty in reaching the inflation target raises the issue of the appropriate numerical value for the target. Is the current 2% figure too high or too low?

Figure. Eurozone inflation rate and ECB target



According to the latest forecasts of the Eurosystem staff, inflation would still remain above the 2% target in 2024 (2.7%) and would not be in line with the target before 2025. The slow convergence to the target and the economic slowdown would lead the ECB to stop tightening monetary policy but no interest rate cuts have been contemplated so far (even if markets expect one in the next few months) [21]. Nevertheless, in spite of the high uncertainty surrounding economic activity and inflation, the overall consensus of forecasters is that the inflation episode is largely behind us. Therefore, it is time to start drawing lessons not only from the recent increase in prices but also from the previous long period, between the Global Financial Crisis of 2008 and 2019 when the ECB faced the opposite problem, unsuccessfully trying to raise an inflation rate that remained stubbornly close to deflation.

A meaningful discussion on the central banks' objectives would have been unwarranted while inflation was not under control. They would have been accused of shifting the goalposts. However, once their credibility is preserved by demonstrating that they have been able whatever it takes to bring inflation back to close to 2%, central banks should take stock of the recent experiences with inflation and with deflation and proceed with a review of their objectives.

# Drawing lessons from multiple crises

Some economists, including Nobel laureate [Paul Krugman](#) and former IMF Chief Economist [Olivier Blanchard](#), argue that the central banks of advanced economies should reconsider the inflation target, raising it from 2% to 3%[\[3\]](#). It is worth noting that the 2% inflation target, introduced in New Zealand in 1980 and subsequently adopted by nearly all major central banks (and notably the Federal Reserve, the Bank of England and the Bank of Japan), has no particular basis; it was simply believed, when adopted, to be low enough to reassure the markets about price stability and minimize the economic cost of inflation, while allowing for some margin for adjustment: in the event of negative shocks, inflation could fall without going into negative territory and triggering dangerous deflationary spirals.

There are essentially two arguments in favor of increasing the desired inflation target. The first is contingent: while inflation has dropped relatively painlessly from double-digit levels a year ago to values close to the target today, bringing it from the current level to 2% may prove much more difficult. We could remain stuck with inflation rates fluctuating between 2% and 3%, or even slightly higher. These levels do not create significant instability problems (in terms of de-anchoring expectations, for example), so it may not be worth paying the price in terms of growth and unemployment of forcing inflation to return to 2%.

The second reason for a revision of the desired inflation rate is more structural. The 2% target may have seemed reasonable during the long period of the Great Moderation when stable (though not stellar) GDP growth was accompanied by limited fluctuations in the inflation rate. However, that period of apparent macroeconomic stability concealed growing imbalances, such as a chronic tendency toward excess savings and,

consequently, increasingly lower equilibrium (“neutral”) real interest rates[\[4\]](#).

Since 2008, we have entered a new phase where imbalances have come to light, and macroeconomic shocks have become more severe. In a context of greater instability, central banks may find themselves in need of significantly reducing interest rates. If these rates are initially moderate, the risk of hitting what economists call the effective lower bound (interest rates that cannot be lowered below zero or slightly negative values) increases. This is the situation in which the Fed and the ECB have found themselves for the whole decade of the 2010s, having to resort to unconventional policies such as asset purchases to stimulate the economy. A higher inflation target would allow for higher interest rates under normal conditions and more room to lower them when necessary. This additional margin could prove valuable in the likely event that the coming years bring increased macroeconomic and geopolitical instabilities. Andrade et al. (2021) for instance show that while a 1.4% inflation target was consistent with a pre-crisis estimation of the short-term interest rate that would prevail when the inflation rate is stable and the economy at full employment ( $r$ -star) of 2.8%, a one-point decrease of  $r$ -star should lead the central bank to revise upward its inflation target by 0.8 point[\[5\]](#). According to the revised estimates of [Holston, Laubach and Williams](#) (2023), the current  $r$ -star in the Eurozone would be negative (-0.7%) entailing an optimal target at 2.8%.

Furthermore, structural factors such as the ecological transition [could lead to structurally higher inflation rates in the coming years](#), e.g., due to higher costs associated with fossil fuels (notice though, that [some argue](#) instead that secular stagnation might not be over). Insisting on aiming for 2% inflation could require long periods of monetary tightening, hindering investment in renewables and paradoxically perpetuating the inflationary tensions related



to the transition.

To these reasonable arguments in favor of a higher inflation target, those against revising it oppose equally reasonable ones. The most significant one is that, in a world like that of central banks, where credibility is everything, changing the inflation target in the process of bringing inflation down could be devastating, essentially a confession of impotence: shifting the goalposts during the game. Moreover, how credible can a central bank be that announces a 3% inflation target when, between 2008 and 2020, it was unable to move from 1% to 2%? Another argument, recently made by [Martin Wolf](#) concerning the UK, is that central banks have an implicit bias, being more reluctant to tighten when inflation increases than to loosen when it drops. This leads to an overall level of inflation somewhat higher than the target and makes calls for higher targets dangerous. This argument hardly seems to apply to the current situation. If anything, the experience of the 25 years of existence of the euro points to a deflationary bias.

The solution, therefore, seems to be only one. For this round of the merry-go-round, unfortunately, there is little to be done, and we must resign ourselves to paying the costs of central banks' ill-advised commitment to an inflation target of 2% through a monetary restriction, instead of resorting to a more multitool policy mix. Governments and fiscal policies should be prepared to mitigate these costs with income policies and fiscal redistribution to protect the most vulnerable economic agents.

## **Do central banks control inflation precisely?**

This discussion should not overlook the question of the ability of the ECB to control inflation. The recent surge of inflation and the difficult task for central banks to bring it

back to 2% echoes the already mentioned difficulties of the same central banks to increase inflation to 2% when it was persistently low during the last decade. Many have argued from the outset of the current inflationary episode that addressing inflation with monetary tightening was the wrong approach ([here](#), or [there](#)); other, more targeted, microeconomic tools would have been more effective (among other things because monetary policy is characterized by long lags) and less painful for addressing a structural inflation resulting from sectoral imbalances rather than from generalized overheating. However, whether due to the inertia of governments, as usual happy to delegate unpopular decisions to the ECB, or to the old monetarist reflexes, which, although minoritarian in academia unfortunately remain influential in public debate ("inflation is always caused by too much money chasing too few goods"), central banks have been the main characters in the fight against inflation.

Said it differently, demand and supply, micro and macro elements interact, in determining an average inflation rate that has multiple causes. Inflation and deflation are complex phenomena that are better tackled with a plurality of instruments and monetary policy alone may not be powerful enough. This may have two implications. First, coordination of monetary and fiscal policies may help to better achieve the target. Second, if the central is not all-powerful in fighting a phenomenon that depends on other causes, it may be more reasonable not to target a point of inflation but a target zone.

Announcing a range is certainly more realistic as central banks cannot reach the 2% with complete precision. There are always many sources of uncertainty related to the effectiveness of monetary policy, its transmission delays, future shocks, the relation between activity and prices (the slope of the Phillips curve). Furthermore, the measure of inflation relies on some ad-hoc indicators and is inevitably

subject to measurement errors, which may stem from the breakdown of quality and price effects, the inclusion of all the dimensions of the cost of life, which are not accounted for by a point target.

These uncertainties affect inflation and may eventually challenge the central bank's credibility. Finally, a range would also provide the ECB with more leeway to handle tradeoffs between its objectives. Of course, a criticism against a target range is that it is less precise, which could undermine its credibility[6]. But the credibility argument can be used in the other direction. How credible is a central bank that systematically misses its very specific target?

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[1] See [OFCE Blog](#) for a brief review.

[2] In the press conference, following the 25 January Governing Council, Christine Lagarde stated that “it was premature to discuss rate cuts”.

[3] It is useful to remind that the 2% target for the inflation rate has been adopted by several of central banks and notably the Federal Reserve, the Bank of England and the Bank of Japan.

[4] See [Chapter 2](#) from the April 2023 IMF World economic outlook.

[5] See Andrade, P., Galí, J., Le Bihan, H., & Matheron, J. (2021). Should the ECB adjust its strategy in the face of a lower  $r^*$ ?. *Journal of Economic Dynamics and Control*, 132, 104207.

[6] Ehrmann (2021) shows that inflation anchoring is not reduced in countries which have target zones but conversely that credibility is improved. See “Point targets, tolerance bands or target ranges? Inflation target types and the

anchoring of inflation expectations.” *Journal of International Economics*, 132, 103514.

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# Where does the European Union stand?

By Robert Boyer, Director of Studies at EHESS and the Institut des Amériques

Speech at the “European Political Economy and European Democracy” seminar on June 23, 2023, at Sciences Po Paris, as part of the ‘Théorie et Economie Politique de l’Europe’ seminar, organized by Cevipof and OFCE.

*The aim of the first study day of the Theory and Political Economy of Europe seminar is to collectively engage in a work of overall theoretical reflection, following on from the thematic sessions of 2022, by continuing the multidisciplinary spirit of the seminar. The aim is to begin outlining the contours of the two major blocks of European political economy and European democracy and to identify the points of articulation between them. And to prepare for multidisciplinary writing with several hands.*

## **An apparent paradox**

During the various and rich interventions pointing out the shortcomings, dilemmas, and contradictions that characterize the processes of European integration, a central question seems to emerge:

“How has a politico-economic regime in permanent disequilibrium, which has become very complex, been able, until now, to overcome a large number of crises, some of which threatened its very existence?”

A brief review of the current situation is enlightening and makes it more necessary to seek out the factors likely to explain this resilience, which never ceases to surprise researchers and specialists, foremost among them many economists. In the face of a succession and accumulation of poly-crises and rising uncertainties, is it reasonable to anticipate that the European Union (EU) will continue its current course, protected by the mobilization of the processes that have ensured its survival, not least thanks to the responsiveness demonstrated by both the European Central Bank (ECB) and the European Commission since 2011?

### **Baroque architecture full of inconsistencies**

The various speakers highlighted many of them:

- The European Parliament is a curiosity: it is an assembly with no fiscal powers. Would giving it this power be enough to restore the image of democracy on a European scale?
- The EU issues a common debt even though it has no direct power of taxation: isn't this a call for an embryonic federal state? Is there a political consensus on this path?
- This debt corresponds to the financing of the Next Generation EU plan, which recognizes the need for solidarity with the most fragile countries, in response to a common “shock” that does not lend itself to the moral hazard so feared by the frugal countries of the North. Yet it is the result of an ambiguous compromise, with two opposing interpretations: an exception that must not be repeated for the North, and a founding, Hamiltonian moment for the South.

- It is not very functional or democratic for the European Parliament to vote on Community expenditure, but for national parliaments to vote on revenue.
- Does it make sense to have a multiannual program adopted by an outgoing assembly of the European Parliament, which will then be binding on the next one?
- The ceiling set for the European budget limits the financing of European public goods, which should compensate for and go beyond the limitation on the supply of national public goods in the application of the criteria governing national public deficits and debts.
- At the European level, the quest for more democracy tends to focus on the question of political control over the Commission and the ECB, whereas social democracy has in the past been a critical component in the legitimacy of governments at the national level.
- The same applies to the question of corporate governance in Europe, a forgotten issue on the European agenda that is regaining a certain interest in the face of the transformations brought about by digital technology and the environment.
- Competition policy is often perceived by economists as one of the Commission's key instruments since it is an integral part of the construction of the single market. Yet legal analysis shows that competition is not a categorical imperative, defined finally, but a functional concept that evolves over time. So much so, that the Commission can declare that today it is at the service of the environment.
- The Commission is usually criticized for its role as a defender of the *acquis*, its taste for excessive regulation, its technocratic approach, and its inertia. And yet, since 2011, it has continued to innovate in response to successive crises, to the point of having relaunched European integration.
- The ECB was founded as the embodiment of an independent,

typically conservative central bank, with a monetarist conception of inflation. And yet, without changing European treaties, the ECB has been able to innovate and effectively defend the Euro.

- The EU Court of Justice and national constitutional courts do not have the same interests and legal conceptions, but so far, no head-on conflict has produced a blockage in European integration. Is this sustainable?
- Is the distribution of competencies, fixed by the treaties and de facto adjusted as problems and crises arise, satisfactory and up to the challenges of the industry, the environment, public health, and solidarity in a dangerous and uncertain international environment?
- The “European Constitution” is not a constitution, because integration has proceeded via a series of international treaties. How can we explain the fact that these treaties have been imposed when member countries could have coordinated through the OECD, EFTA, the IMF, or ad hoc agreements (European Space Agency, Airbus, Schengen) with no overall architecture?

### **Reasons for surprising resilience**

We need to identify the factors that can account for the perseverance that lies at the heart of continental integration and ask ourselves whether they are sufficiently powerful to overcome the current multi-crises.

- From the outset, the project was a political one, aimed at halting Europe’s decline in the wake of the two world wars. But in the absence of political agreement on a common defense, the coordination of economic reconstruction was seen as a means to this end. In this respect, Russia’s invasion of Ukraine has strengthened ties between governments, even if it means inverting the hierarchy between geopolitics and economics and bringing back to the forefront the possibility of Europe as a

power.

- Conflicts of interest between nation-states are at the root of a succession of crises, which are overcome by ad hoc compromises that never cease to create further imbalances and inconsistencies, which in turn lead to another crisis. In a way, the perception of incoherence and incompleteness is a recurring feature of European construction. However, the configuration can become so complex and difficult to understand that it can overwhelm the inventiveness of the collectives that are the various EU entities and their ability to coordinate. By way of example, a genuine EU macroeconomic theory has yet to be invented, and this is a major obstacle to the progress of integration.
- European time is not homogeneous. Periods when new procedures are put in place after a breakthrough give the impression of bureaucratic, technocratic management at a distance from what citizens are experiencing. By contrast, open crises forbid the status quo, as the very existence of institutional construction is at stake, with the stratification of a large number of projects and their incorporation into European law. This experience of trial and error is the breeding ground that enables the Commission, for example, to devise solutions to emerging problems. As a result, the equivalent of an organic intellectual seems to have emerged from this collective learning over an extended period. This is one interpretation of the paradoxes mentioned above.
- European Councils, the Court of Justice, the ECB, and the European Parliament all play their part in this movement, but it is undoubtedly the European Commission that in a sense represents the European, if not the general, interest. The fact that it has the power to initiate regulations and manage procedures gives it an advantage over other bodies. Indeed, many governments would be satisfied with inter-state negotiations, with



no common ground to build on, and would go it alone. Failure to find a compromise solution would mean the simple disappearance of the EU. Similarly, without the “whatever it takes” approach, the ECB would have disappeared with the Euro. The major crises offer a strong incentive to move beyond dogmatic posturing in favor of a re-hierarchization of objectives and the invention of new instruments.

- Finally, there are two sides to the proliferation of regulations, procedures, and European agencies attached to the Commission. On the one hand, they give rise to the diagnosis of poorly controlled management and the harsh judgments of defenders of national sovereignty. On the other hand, they are also factors in the reduction of uncertainty and the creation of regularities that coordinate expectations in a context where financial logic generates bubbles and macroeconomic instability. In a way, a certain redundancy in a myriad of interventions is a guarantee of resilience. The European Stability Mechanism (ESM), for example, was a way of circumventing the ECB’s delay in recognizing the need for vigorous intervention. So the complexity of the EU can also mean redundancy and resilience.
- Political power plays a crucial role in the development of European institutions. It intervenes in the framework of councils and summits. So far, in the national political arena, governments favoring further integration have prevailed: this is sometimes one of the only markers of their policy that survives the various periods. As a result, a collapse of the EU could mean the loss of their credibility. It would be dramatic for a government to be held responsible for the failure of a project that has been built up over decades. This is perhaps a hidden source of the permanence of European institutions. What is more, “Brexit” far from marking the end of the EU has rather closed ranks, especially as the expected benefits for the UK have not manifested

themselves. Beware, however, that the polarization and division of societies between the winners and losers of trans nationalization has favored the breakthrough of parties defending strong national sovereignty, i.e. a countertrend that forbids prolonging the hypothesis of a lasting hegemony of pro-European parties.

- Finally, the succession of financial crises, the return of pandemics, the harshness of the confrontation – not only economic – between the United States and China, the growing awareness of the environmental emergency, and the installation of a new inflation generated by recurring scarcities, which risks being aggravated by the transition to a war economy, are all factors in a dual awareness. On the one hand, common interests tend to outweigh disagreements between member countries. On the other hand, each of them carries little weight in the confrontation with the United States, which has become openly protectionist, and China, with its dynamism in emerging productive paradigms. The EU needs to be a geo-economic and political player in its own right. This explains the Commission's activism since Covid-19. Citizens have benefited from this new impetus, with a common strategy on vaccines, for example. For their part, the governments of the most fragile economies have benefited from European solidarity, which has counterbalanced the principle of regional competition.

### **Historical bifurcation, polycentric governance, or nationalist withdrawal?**

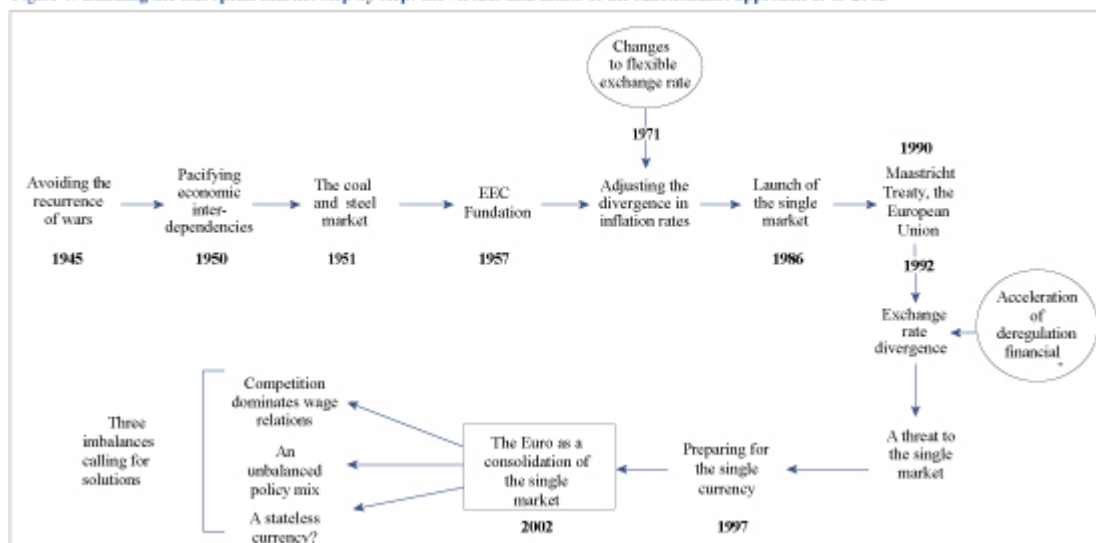
The processes described above can recombine to form a wide variety of trajectories. Prediction is not possible, as it is the strategic interactions between collective actors that will determine how to overcome the EU's various crises. It is possible to imagine three more or less coherent scenarios.

- *Towards an original federalism disguised by a myriad of*

## *technical coordination procedures*

This first scenario is based on three central assumptions. Firstly, it marks the end of reliance on neo-functionalism, whereby governments must be the servants of the necessities imposed by economic interdependence between nation-states (figure 1). The sphere of politics pursues its objectives, even if governments must contend with economic logic. Secondly, it draws the consequences of technological, geopolitical, health, and environmental transformations that threaten the stability of societies and the viability of their socio-economic regimes. Pooling resources increases the chances of success for all participants in European programs. Finally, this first scenario extends the trends already observed since the outbreak of the pandemic.

Figure 1: Building the European market step by step: the virtues and limits of the functionalist approach 1945-2002



As far as the word federalism has a repulsive effect on public opinion, which is influenced by populist nationalism, the practice of enhanced cooperation does not have to be accompanied by an appeal to the federalist ideal. Instead, skillful rhetoric must convince citizens that the EU ensures their protection and opens new common goods. These advances in no way subtract from the social, economic, and political rights guaranteed at the national level. Charismatic politicians must be able to resist anti-EU rhetoric that feeds on the relative powerlessness of national authorities overwhelmed by transnational forces beyond their control.

- *Adapting polycentric governance at the margins, far from a Europe of power*

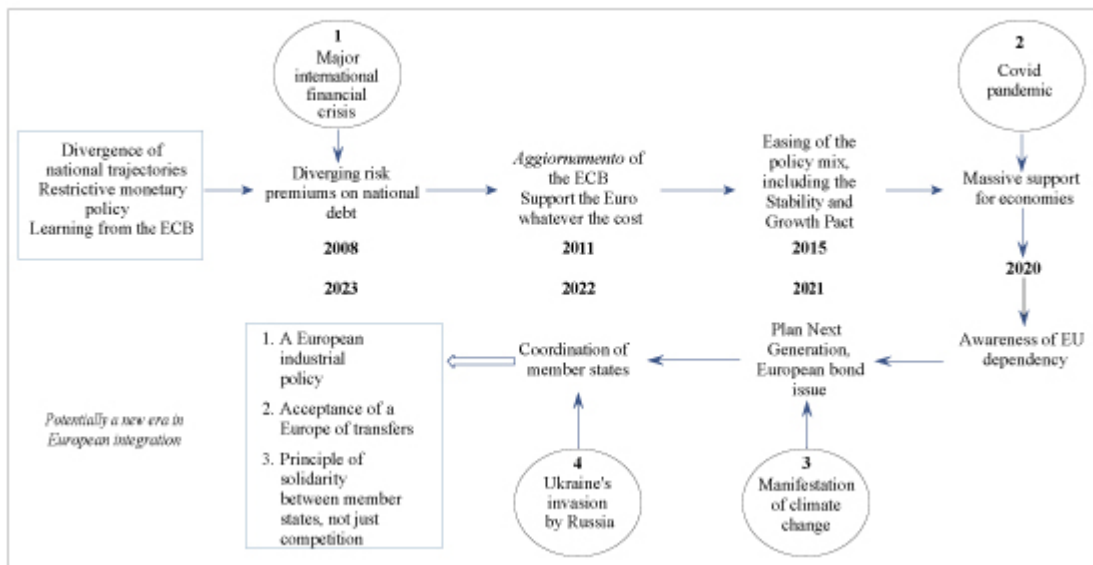
This second scenario, on the other hand, assumes that the current period will be one of continuity with the long-term trajectory of European integration. The polycentrism of EU entities is a vector of pragmatic adaptability to emerging issues, without the need to centralize power in Brussels, as suggested by the diversity of European agency locations. Trial and error, the multiplication of ad hoc procedures, and the possible use of enhanced cooperation on issues involving a fraction of member countries are all sources of adaptation in the face of the repetition of events potentially unfavorable to the EU.

This considers the fact that negotiating new European treaties seems a perilous mission, that public opinion judges the EU on the basis of its contribution to the well-being of its populations rather than the transparency and coherence of its governance, and that an imperial conception is illusory. One might be tempted to invoke a form of catallaxy applied not to the economy and the market, but to the political sphere: the interaction of highly varied processes, without central authority, eventually leads to a roughly and provisionally viable configuration. The English expression “muddling through” aptly captures this pragmatism, marked by the renunciation by public decision-makers of the need to spell out an objective and a goal, if only to persevere in being.

Success is not guaranteed. Firstly, past successes are no guarantee of their continuation into the future. Secondly, there is no guarantee that a pragmatic solution will be found in the face of an avalanche of unfavorable events since the affirmation of an objective may prove to be a necessary condition for lifting the prevailing uncertainty as to the outcome of both institutional and economic crises. Last but not least, how can we politically legitimize an order whose logic and nature elude decision-makers? Isn't this

powerlessness the breeding ground for populist voluntarism?

Figure 2. Transformations in the global economy affect all countries and stimulate unprecedented institutional advances (2008-2023)



- *National and European elections: a nationalist majority redesigns a different Europe*

This third scenario is based on an analysis of changes in the objectives of government following recent elections in Europe. Both in the South (Italy) and in the Scandinavian countries (Finland, Sweden, Denmark), coalitions have come to power dominated by parties opposed to immigration, defenders of national identity, and, in short, reluctant to delegate new powers to the EU. In this, they join the authoritarian, nationalist governments of Central Europe (Hungary, Poland). In the European Parliament elections of 2024, could this movement result in the loss of a majority in favor of the EU's current policies, to the benefit of a new majority bringing together nationalist parties that are very diverse, but share the same obsession: to block the extension of EU competences and repatriate as many of them as possible to the national level?

Russia's war against Ukraine has brought the imperative of defense to the fore, an area in which the EU has made little progress. Does not this mean that NATO is becoming central to the political organization of the old continent, to the detriment of the economic objectives pursued by European

integration?

These hypotheses, derived from the 23 June 2023 CEVIpOF and OFCE meeting? call for a follow-up, as the questions to be clarified are so many and quite difficult indeed. Cross-disciplinary analysis is more necessary than ever.

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## A second Hamiltonian moment

Par Hubert Kempf

In the European debate surrounding the *Next Generation EU* plan, the European Commission's decision in 2020 to issue debt for the benefit of the Member States is often compared to the decision taken by the US federal government in 1790, under the impetus of Treasury Secretary Alexander Hamilton, not only to honor the outstanding federal debt but also to assume the debts of the federated states. This comparison is specious. Hamilton's financial policy went hand in hand with the ability to raise the taxes needed to service the debt, made possible by the use of military force. This is in stark contrast to the situation in the European Union, where the Commission has no coercive powers whatsoever.

The European Council's decision (of 21 June 2020, confirmed on 14 December 2020) to authorize the European Commission to respond to the crisis opened up by the Covid-19 pandemic with a 750 billion debt issuance program in order to lend at low rates or make unrequited transfers to the Member States represents a political and economic innovation that cannot be underestimated or ignored. Many commentators have hailed it as

the *“Hamiltonian moment”* of the European Union. The expression was coined in 2011 by Paul Volcker, former Chairman of the US Federal Reserve from 1979 to 1983 and then Chairman of the *Economic Recovery Advisory Board* appointed by Barack Obama. Referring to the situation in Europe, Paul Volcker said *“Europe is at an Alexander Hamilton moment, but there’s no Alexander Hamilton in sight”*[\[1\]](#) .

The expression has become popular and has been used by many commentators, journalists and politicians. It refers to the budgetary and fiscal policy proposed, negotiated and implemented by Alexander Hamilton in 1790[\[2\]](#). Appointed by George Washington as Secretary of the Treasury on 11 September 1789, after Congress had created the post on 2 September, Hamilton immediately set about drafting a report that became a landmark in American history. In this report[\[3\]](#), Hamilton proposed not to default on the outstanding federal debt, to apply the same treatment to all holders of federal debt securities, regardless of when they were acquired, and to transfer the outstanding debts of the federated states to the federal government.

However experts discuss the relevance of the parallel drawn between the decision on federal public finances taken by the American Congress in 1790 and the announcements made by the European Commission in 2020. They conclude that the programs and circumstances differ so substantially as to render this parallel[\[4\]](#) meaningless. These discussions, centered on economic considerations, are useful. But they miss the critical point: the political impact of these acts.

No one disputes the importance of Alexander Hamilton’s fiscal and financial policy in American political history. For three reasons:

1/ an immediate and spectacular recovery in the creditworthiness of the US federal and state governments on the international financial markets;

2/ the structuring of the American political debate between the Federalists and the Republicans at the time, which continues today where references to the Hamiltonian and Jeffersonian traditions are still very much alive[\[5\]](#) ;

3/ Hamilton's intellectual power, which led him to develop an analysis of the workings of the financial markets that was far ahead of its time[\[6\]](#).

As for the significance to be attached to the announcements by the European authorities, at the risk of being contradicted by future developments, let us say that it is relevant to see in these announcements an obvious innovation: it is now openly accepted by all the countries of the European Union that the European Commission can exercise significant budgetary powers in the event of exceptional circumstances (without any precise definition of what exceptional circumstances are). What's more, the principle of conditionality for aid granted to Member States is also endorsed by the European Council, which clearly puts the European Commission in the position of an umpire and gives it discretionary power over Member States. But these developments are more of an expedient, and do not result in any change in the institutional relationship of power between the Member States and the Union's bodies (the European authorities).

From this perspective, it is reasonable to refer to the Hamiltonian moment of 1790 in order to assess how innovative the 2020 decision is. In both cases, there is a budgetary decision that modifies the financial relationships between the member jurisdictions of the unions. More specifically, the federal level in the case of the United States, and the supra-state level in the case of Europe, assume responsibilities that were or could have been the responsibility of the federated or national Treasuries of the union. It is clear that this advance may involve a major, if not radical, change in the political relations between jurisdictions.



But this point of comparison alone is not enough. If Hamilton's fiscal and financial program has been the undisputed success that it is acknowledged to be, this is neither due solely to the passage of the law, nor to its translation into complex financial regulations.

To understand this, we need to single out a second "Hamiltonian moment". This moment took place in 1794, during the "whiskey rebellion" that shook the west of the 13 American states that then made up the United States<sup>[7]</sup>.

This rebellion<sup>[8]</sup> stems from the law passed by Congress in 1789 stipulating that excise duties could be levied by the federal state. Note immediately the difference with the European case: as soon as the Constitution had been adopted (after its ratification by 9 of the 13 American states), the first Congress exercised its right to levy the tax granted to it by the Constitution, unlike what was provided for in the Articles of Confederation. This right is not available to the European Parliament, let alone the Commission. As early as 1790, Hamilton proposed levying a tax on whiskey. This was a logical choice: whiskey was an ideal product to levy a tax on at a time when communication routes were difficult and trade within the Union was limited. A non-perishable and transportable product, it concentrated in a small volume a large but perishable agricultural production and was easy to trade. It was also easy to control - and therefore to tax - because there were few crossing points. But its production is concentrated in a few counties in the western part of a few states, whereas it was consumed throughout the country. The proposed tax was therefore seen by whiskey producers as a major discrimination against them, since they would be the only ones to bear it to the benefit of the entire Union. Congress, aware of the problem so created, refused to pass the law. It did, however, pass it the following year, a year after the law on the regularization of public debts, in view of the need to fill the federal government's coffers, in particular

to assume the burden of the federal debt increased by its decision of 1790.

It wasn't long before unrest began to take hold from 1791 onwards, especially in the western counties of Pennsylvania, encouraged by opponents of the Federalist party led by Hamilton. The tensions soon became a political issue, pitting the Federalists, supporters of a strong, interventionist state controlled by the social and educated elites, against the Anti-Federalists, who were to form the core of the Republican party led by Jefferson. The Federalists, then in power, felt that the authority of the (federal) state was in question and that this was a prodrome of the return to the anarchy that prevailed before the vote on the Constitution of 1789. According to Hamilton, it was becoming urgent to take action against the rebels, but George Washington, the President and, as such, head of the army, delayed.

In August 1794, the refusal of the tax led almost 6,000 armed opponents to mobilize. They were soon on the point of taking control of Pittsburgh. After yet another failed attempt at conciliation, Washington decided to take military action against the rebels. It ordered the raising of 14,000 militiamen from New Jersey, Maryland, Virginia and Pennsylvania. Faced with such a deployment of force (larger than the continental army that had held out against the British), the rebellion immediately collapsed. The rebels dispersed. The leaders were arrested and put on trial. Two were sentenced to hanging and finally pardoned by Washington. The conclusion of the affair was drawn by Hamilton: "The insurrection in the end will have benefited us and added to the solidity of everything in this country" [\[9\]](#). This was particularly true for the financial soundness of the federal state.

This second moment sheds light on the first moment of 1790, that of the drafting of Hamilton's report and the adoption of the law he submitted to Congress. There were two reasons for

the speed and determination with which Hamilton conceived his budgetary and financial policy, in addition to the catastrophic financial situation in which the young republic found itself, its credit then at an all-time low. The first, acknowledged by historians, financial professionals and politicians alike, was his expertise in these matters, exceptional for the time, which led him to devise a bold and complex plan. This plan was little, if at all, understood by his contemporaries and in particular his opponents, led by John Adams and Thomas Jefferson, but it is easily understood today when it is recognized that financial credibility (defined as the temporal coherence of a debt plan) is a central element in the determination of interest rates. The second, just as important, is that Hamilton was confident in the capacity of the federal state of raising the tax revenues needed to service the debt. This implies being able to levy taxes effectively. Hamilton had been a brilliant officer in the War of Independence, noted by Washington for his bravery and military intelligence, so much so that he made him his aide-de-camp and was thus able to measure his intellectual, political and military qualities. Hamilton knew the power of guns [\[10\]](#) as well as the weight of words. In the face of the tax rebellion, he did not hesitate to advocate the exercise of the federal government's monopoly on legitimate violence and convinced the President to quell the rebellion in the West.

This second moment at the end of the eighteenth century is exemplary of the ability of the nascent American federal state to balance its budget, to service its debt, even when augmented by the debts of the states, and thus to avoid default. Without this ability, it is doubtful that the stroke of genius attempted by Hamilton in 1790 would have been so successful.

This episode cruelly highlights the difference with the European situation in the 2020s. At no time, and for good reason, did the President of the Commission clearly mention

how the debt issued would be repaid. A fortiori, she was unable to declare that the European Union would levy taxes - it does not have the power to do so - or that she would, if necessary, mobilize the means of coercion and constraint on recalcitrant Europeans, since she has none at her disposal.

It is easy to understand why European "federalists" (so designating supporters of strong supranational European institutions, for want of a better name) have seized on the expression "Hamiltonian moment" to describe the European Commission's adoption of its recovery plan. Placing itself under the prestigious patronage of Hamilton, and comparing this plan with the proposals made to Congress in 1790 and brilliantly defended by Hamilton, makes it possible to suggest that the European Union, more than two centuries apart, is following a fairly similar path to that taken by the American republic, namely the gradual but obstinate constitution of a federation, a hierarchical inter-governmental entity dominated by the federal state. But this is to take too much liberty with history and to pay more lip service to it than to reality.

The history of the American union is very different from the history of the European union. The American union was born in 1787-1789 from the realization that the confederation born in 1776 was failing, due to the inability of the American states to cooperate effectively. From the outset, it was characterized by a desire for the pre-eminence of the federal state. It certainly took time for the federal state to establish itself and realize its full potential. The relationship between the federal state and the federated states is always subject to change. We are currently witnessing a wave of promotion of the federated states, in particular by the current Supreme Court. But such movements are not new and do not significantly alter the political, social and economic dominance of the federal state<sup>[11]</sup>. This should come as no surprise: this pre-eminence is enshrined in

the founding texts of the American republic and can be seen in the political twists and turns of its early years, as is clearly demonstrated by the policies sought and promoted by its most brilliant and effective leader, Alexander Hamilton. This is clearly shown by the two 'Hamiltonian moments' of the 1790s, which cannot be thought of in isolation from each other. The first Hamiltonian moment induces us to compare Hamilton's American fiscal policy at the end of the eighteenth century with the European announcements of 2020 in response to the Covid-19 pandemic. The second Hamiltonian moment, however, makes it easier to see the differences between the two sequences, and illustrates how American federalism is not a prefiguration of developments in the European Union. The early years of the American republic, far from highlighting a congruence between American destiny and European trial and error, instead show their marked differences. The construction of Europe had nothing to do with the founding of the United States and did not follow the federalist path followed by the latter.

In short, one moment is not enough to make history. European leaders and citizens would be well advised not to forget this lesson from the early days of the American federation.

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[1] See [Wheatley \(2012\)](#), "[Analysis: What Europe can learn from Alexander Hamilton](#)". [Reuters](#).

[2] The reference biography on Hamilton is Chesnow, Ron (2005), *Alexander Hamilton*, Penguin Books...

[3] Hamilton, Alexander (1790), *Report Relative to a Provision for the Support of Public Credit*, U.S. Treasury Department

[4] See in particular the very detailed contribution by [Elie Cohen \(2020\)](#). See also [Issing \(2020\)](#) and [Gheorghiu \(2022\)](#).

[5] See Banning, Lance (1980), *The Jeffersonian persuasion:*

*Evolution of a party ideology*. Cornell University Press.

[6] [Thomas Sargent \(2012\)](#) has no difficulty in interpreting Hamilton's thinking and actions in the terms of the most recent economic theory, born of the rational expectations revolution and the notion of temporal coherence.

[7] See [Krom and Krom \(2013\)](#).

[8] We follow the developments dedicated to the rebellion by Gordon S. Wood (2009), *Empire of liberty. A history of the Early Republic, 1789-1815*, Oxford University Press, pp. 134-139.

[9] Alexander Hamilton to Angelica Church, 23 October 1794, *Papers of Alexander Hamilton*, Vol. 17, p.340, quoted in Wood (2009), p.138.

[10] "Ultima ratio regum", as others before him had claimed.

[11] I was already arguing this in the 1980s, proving that the issue is not new. Cf. [Kempf and Toinet \(1980\)](#).

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# Inequality and macroeconomic models

By [Stéphane Auray](#) and [Aurélien Eyquem](#)

"All models are wrong, some are useful." This quote from George Box has often been used to justify the simplistic assumptions made in macroeconomic models. One of these has long been criticised: the fact that the behaviour of households, although differing (heterogeneous) in their individual characteristics (age, profession, gender, income,

wealth, state of health, labour market status), can be approximated at the macroeconomic level by that of a so-called “representative” agent. This assumption of a representative agent means considering that the heterogeneity of agents and the resulting inequalities are of little importance for aggregate fluctuations.

Economists are not blind – they are well aware that households, companies and banks are not all identical. Many studies have looked at the effects of household heterogeneity on aggregate savings and, consequently, on macroeconomic fluctuations[\[1\]](#). On the other hand, some studies propose so-called “overlapping generations” models in which age plays an important role[\[2\]](#).

Most often, households in these models move from one state to another (from employment to unemployment, from one level of skills and therefore of income to another, from one age to another) and the probabilities of a transition are known. In the absence of insurance mechanisms (unemployment, redistribution, health), the expected risk of a transition produces an expected risk of income or health, which leads agents to save in order to insure themselves. Furthermore, differences in savings and consumption behaviour are also likely to lead to differences in labour supply behaviour. Finally, changes in the macroeconomic environment (changes in the unemployment rate, interest rates, wages, taxes and contributions, public spending, insurance schemes) potentially affect these individual probabilities and the resulting microeconomic behaviour. Aggregate risks therefore affect each household differently, depending on its characteristics, generating general equilibrium and redistributive effects. However, this relatively old work has come up against two obstacles.



The first is technical: tracking the evolution of the distribution of agents over time is mathematically complex. It is of course possible to reduce the extent of the heterogeneity by limiting ourselves to two agents (or two types of agent): those with access to the financial markets and those who are forced to consume their income at each period [\[31\]](#), working people and pensioners, etc. But while these simplified models make it possible to understand and validate broad intuitions, they are still limited, particularly from an empirical point of view. They do not, for example, allow us to carry out a realistic study of changes in inequality across the entire distribution of income or wealth.

The second obstacle is more profound: several of these studies have concluded that models with heterogeneous agents, although much more complex to manipulate, did not perform significantly better than models with representative agents in terms of aggregate macroeconomic validation ([Krusell and Smith, 1998](#)). Admittedly, they were not aiming to study changes in inequality or the macroeconomic impact, but rather the contribution of agent heterogeneity to aggregate dynamics. In fact, the subject of inequality has long been considered to be almost or fully orthogonal to macroeconomic analysis (at least when considering fluctuations) and to fall more within the remit of labour economics, microeconomics or collective choice theory. As a result, heterogeneous agent models have long suffered from the image of being an unnecessarily complex subject in the macroeconomic analysis of fluctuations.

In recent years, these models have undergone an exceptional revival, to the point where they seem to be becoming the standard for macroeconomic analysis. The first obstacle has been overcome by an exponential increase in the computing power used to solve and simulate these models, combined with the development of powerful mathematical tools that render their solution easier ([Achdou et al., 2022](#)). The second obstacle has been overcome by the three-pronged movement that



we describe below: the growing body of work (particularly empirical work) demonstrating the importance of income and wealth inequalities for issues typically addressed by macroeconomics – over and above their intrinsic interest; the development of tools for measuring inequalities that make it possible to reconcile them with macroeconomic analysis; and the refinement of the assumptions made in models with heterogeneous agents.

First, numerous empirical studies show that precautionary savings plays a major role in macroeconomic fluctuations ([Gourinchas and Parker, 2001](#)). But precautionary savings and the sensitivity of savings (and household spending) to income are not identical for all households. Indeed, empirical work suggests that the aggregate marginal propensity to consume (MPC) lies between 15% and 25% ([Jappelli and Pistaferri, 2010](#)), and that the MPC of a large proportion of the population is higher than the MPC obtained in representative agent models. In representative agent models at the top of the wealth distribution, the latter is approximately equal to the real interest rate, and therefore much lower than the empirical estimates (see Kaplan and Violante, 2022). It is therefore critical to understand the origin of a high aggregate MPC based on solid microeconomic foundations, particularly if we wish to carry out a realistic study of the impact of macroeconomic policies (monetary, fiscal, etc.) that rely on multiplier effects linked to the distribution of MPCs.

In recent years, an abundant and increasingly well-developed empirical literature has been dealing with issues relating to income inequality. Following the seminal article by [Atkinson \(1970\)](#) along with more recent developments[\[4\]](#), we now have long data series that measure income inequality before and after tax, along with wealth inequality, across the entire household distribution for a large number of countries. Finally, what are known as [Distributional National Accounts](#) make it possible to compare in great detail the predictions of

macroeconomic models using heterogeneous agents with microeconomic data that are totally consistent with the framework of macroeconomic analysis.

Finally, the heterogeneous agent models themselves have evolved. The “first generation” models generally considered a single asset (physical capital, in other words, company shares) and prevented agents from taking on debt, which led them to save for precautionary reasons. These hypotheses were not able to explain why MPCs were high. They failed to correctly replicate the observed distribution of income and, above all, of wealth. In reality, households have access to several assets (liquid savings, housing, equities), and the composition of their wealth differs greatly depending on the level of wealth: households generally start saving in liquid form, then invest their savings in property by taking out bank loans, and finally diversify their savings (only for those with the greatest wealth, above the 60th percentile of the wealth distribution) by buying shares ([Auray, Eyquem, Goupille-Lebret and Garbinti, 2023](#)). In doing so, a large proportion of the population ends up in debt in order to build up their property wealth, which is thus not very liquid. Although they have high incomes, many households consume almost all their income, which reduces their capacity for self-insurance through savings. This increases their MPC (and therefore the aggregate MPC) in line with empirical observations ([Kaplan, Violante and Weidner, 2014](#)).

Macroeconomists can now fully integrate the analysis of inequalities in income, wealth and health into models based on more realistic microeconomic behaviour. They can re-examine the consensus reached on the conduct of monetary[\[5\]](#) or fiscal[\[6\]](#) policies and examine their redistributive effects. They are also in a position to quantify the aggregate and redistributive effects of trade or environmental policies, which are or will be at the heart of their political acceptability – giving rise to new horizons for less wrong,

more useful models.

[1] See in particular [Bewley \(1977\)](#), [Campbell and Mankiw \(1991\)](#), [Aiyagari \(1994\)](#), [Krusell and Smith \(1998\)](#), [Castaneda, Diaz-Gimenez and Rios-Rull \(1998\)](#).

[2] See the work of Allais (1947) and [Samuelson \(1958\)](#), and among others [De Nardi \(2004\)](#).

[3] See [Campbell and Mankiw \(1989\)](#) ; [Bilbiie and Straub \(2004\)](#) ; [Gali, Lopez-Salido and Valles \(2007\)](#).

[4] See ([2001](#), [2003](#)), [Piketty and Saez \(2003, 2006\)](#), [Atkinson, Piketty and Saez \(2011\)](#), [Piketty, Saez and Zucman \(2018\)](#) and [Alvaredo et al. \(2020\)](#).

[5] [Kaplan, Moll and Violante \(2018\)](#); [Auclert \(2019\)](#); [Le Grand, Martin-Baillon and Ragot \(2023\)](#).

[6] [Heathcote \(2005\)](#); [Le Grand and Ragot \(2022\)](#); [Bayer, Born and Luetticke \(2020\)](#).

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# Why – and how – to make Next Generation EU (NGEU) sustainable

[Frédéric Allemand](#), [Jérôme Creel](#), [Nicolas Leron](#), [Sandrine Levasseur](#) and [Francesco Saraceno](#)

The Next Generation EU (NGEU) instrument was created during the pandemic to finance the recovery and, above all, to ensure the resilience of the European Union (EU). Since then, with the war in Ukraine and its various consequences, the shocks

hitting the EU continue to accumulate, in a context where it is also necessary to accelerate the ecological transition and the digitalization of the economy. Russia's invasion of Ukraine has put defence matters back on the front burner, while inflation is giving rise to heterogeneous reactions from member states, which is not conducive to economic convergence, not to mention the monetary tightening that is destabilizing some banks. The Biden administration's subsidies to US industry have all the hallmarks of a new episode in the trade war, to which the European Commission has responded by temporarily relaxing the rules on state aid. In this uncertain environment, where one shock is following another, the idea of making the NGEU instrument permanent instead of temporary has gained ground. European Commissioner [P. Gentiloni](#), for example, mentioned the idea as early as 2021; it was raised at a conference of the [Official Monetary and Financial Institutions Forum](#) in 2022; it appeared at the conclusion of an article by [Schramm](#) and de Witte, published in the [Journal of Common Market Studies](#) in 2022; and it was mentioned publicly by [Christine Lagarde](#) in 2022. There is, however, little consensus on this issue, especially in Germany, where, after the Constitutional Court's decision in favour of the NGEU on 6 December 2022, the Minister of Finance, Christian Lindner, reminded us that the issuance of common debt (at the heart of the NGEU) must remain an "[exception](#)". As the debate remains open, in a [recent study](#) for the Foundation for European Progressive Studies (FEPS), we assessed the economic and political relevance that the implementation of a permanent NGEU-type instrument would entail, as well as the technical and legal difficulties involved.

The implementation of the NGEU has already raised delicate questions of coordination between member states regarding the allocation of funds to the Commission's various structural

priorities (how much to the ecological transition? how much to digitalization?) and between the countries themselves, since the question of a “fair return” never fails to resurface in the course of negotiations. Adding to these coordination difficulties, the first part of our study raises the question of the *democratic legitimacy* of EU policies when supranational priorities limit the autonomy of national parliaments, starting with fiscal policy, the “material heart” of democracy. The problem of democratic accountability is not new if one considers that supranational rules, such as the Stability and Growth Pact, impose limits on the power of parliaments to “tax and spend”. In fact, the intrinsic logic of coordination is to force political power to conform to functional (macroeconomic) imperatives, which inevitably leads to a form of depoliticization of fiscal and budget policy. The perpetuation of the NGEU must therefore be seen as an opportunity to remedy the depoliticization of EU policies and to move towards a “political Europe” by establishing a supranational level for the implementation of a European fiscal policy.

This part of the study also reminds us that while the implementation of the NGEU has been of paramount importance in stimulating a post-pandemic recovery, the economic results are still uncertain since the funds were allocated only relatively recently [\[1\]](#). It also reveals a change in the mindset of EU policymakers. For the first time, joint borrowing and some risk-sharing have become features of a European fiscal plan. It would be wrong, however, at this stage to see the NGEU as a “Hamiltonian” moment or as the founding act of a federal Europe: the NGEU is limited in scope and duration; it does not take over the past debts of the member states; and it has not created a common spending (investment) capacity. And this is perhaps both its main weakness and its main area for improvement. The pandemic and the strong economic response to it by European states have indicated that they can share common, crucial goals: recovery, resilience, the ecological

transition and digitalization. What is missing, however, is a central fiscal capacity to better link the long-term challenges with an instrument adapted to this kind of horizon. Hence the idea of making the NGEU permanent.

As a preamble to a possible long-term establishment of the NGEU, another part of the study raises the issue of determining the main task of a permanent central budgetary instrument. One obvious answer is the provision and financing of European public goods (broadly defined to include the areas of security and environmental protection) that member states may not provide in sufficient quantity, due to a lack of resources and/or externalities. Regarding the provision of public goods, it should be recalled that the preferences of EU citizens are fairly homogeneous within the Union, and that there is a growing demand for some needs to be met at the EU level. For example, [86% of EU citizens are in favour of making investments in renewable energy at the EU level](#). Even the production of military equipment by the EU is increasingly supported by citizens, with 69% “agreeing or strongly agreeing”. The provision of public goods at the EU rather than the national level would also allow for very tangible economies of scale, for example in the field of infrastructure. Last but not least, this would be justified by the instrument’s capacity to “make Europe” through concrete actions and strengthen the feeling of being European. Any debate on a central budgetary capacity would of course have to be conducted in parallel with that on the reform of the Stability and Growth Pact in order to guarantee the creation of a fiscal space (or additional margins of manoeuvre) in the EU.

The study then points out that there are few options for creating a central budgetary capacity within the current institutional framework. The treaties define a budgetary framework (centred on the multi-annual financial framework, the MFF) for the EU that ties spending to the ability to raise

funds, thus severely limiting the ability to raise debt in normal times. The creation of special financial instruments and the decision to spend beyond the MFF ceilings are explicitly linked to exceptional circumstances and cannot be a solution for the recurrent provision of public goods. The 0.6 percentage point increase in the own resources ceiling to 2 percent of GNI [2] ensured that the unprecedented level of borrowing respected the constitutional principle of a balanced budget.

However, this increase was approved only because of its exceptional and temporary nature, as the ceiling on own resources for payments is to be reduced to 1.40 percent of GNI once the funds are repaid and the commitments cease to exist. Even if permanent funding were to be allocated to the NGEU instrument, its capacity to intervene would remain limited. In accordance with its legal basis (Article 122 TFEU), the NGEU is a tool for crisis management whose activation is linked to the occurrence or risk of exceptional circumstances. As a matter of principle, European legislation prohibits the EU from using funds borrowed on the capital markets to finance operational expenditure.

The study examines other legal arrangements that could contribute to the financing of public goods, but whatever legal basis is chosen, (a) the EU does not have a general multi-purpose financial instrument that it could activate, in addition to the general budget, to finance actions and projects over the long term; and (b) the EU cannot grant funds to finance actions outside its area of competence, i.e., it cannot substitute itself for member states in areas where the latter retain competence for their policies. Therefore, if a central budgetary capacity is to be created, it would be necessary to revise the treaties or establish new intergovernmental arrangements (along the lines of the European Stability Mechanism).

Based on the second option, the study proposes that a European

public investment agency be created as a first step towards the creation of a central budgetary capacity. This agency would have the function of planning and implementing investment projects, in cooperation with the member states. Under EU legislation, the agency would not have full control over policy choices but would act mainly within the limits set by the roadmaps of the EU institutions. Nevertheless, it would have the administrative capacity to design public investment projects that the Commission currently lacks, and it could be given control over allocating grants, developing technical guidelines, monitoring cross-compliance, etc.

The last part of the study reminds us, nonetheless, that even substantial progress in developing a central budget capacity should not obscure the need for national budget policies to be implemented as well, and that close coordination between them is needed. While increasing powers are being transferred to the European level in the area of public goods, as can be seen for example with the European Green Pact and with the targeting of NGEU spending towards greening and digitalization, there is still a need to coordinate national governments' policies with each other and with the policies implemented at the central level. Policy coordination, which necessarily limits the autonomy of national parliaments, raises the question of the democratic legitimacy of EU policies and may lead to a form of depoliticization of fiscal policy. This would become even more problematic if the EU were to transfer to the supranational level some of the decisions about which public goods to provide and from whom to finance them. To avoid delinking the strengthening of European macroeconomic policy on public goods with the democratic dimension of this orientation, nothing less than a quantum leap in the creation of a political Europe, with two democratic levels, is probably needed, with genuine *European democracy* -- because it would be based on a real European parliamentary fiscal power, which would in turn be linked to the preferences of the European electorate -- but fully



*articulated with the national democracies with their recovered fiscal margins.*

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[\[1\]](#) The inconsistency between the need to revive the European economy after the pandemic and a very gradual disbursement of funds is discussed by [Creel \(2020\)](#).

[\[2\]](#) GNI: Gross national income, defined as GDP plus net income received from abroad for the compensation of employees, property, and net taxes and subsidies on production.

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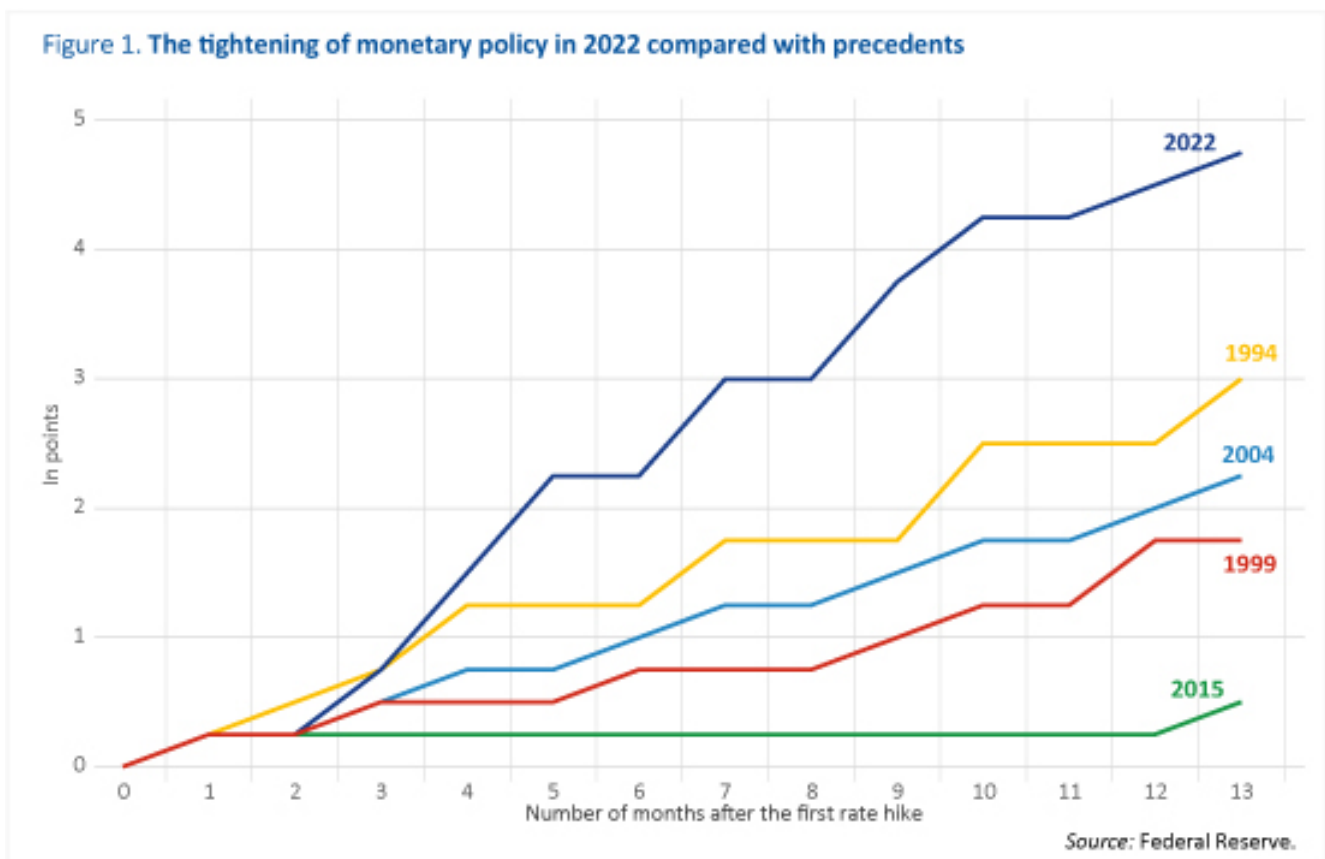
# Will the US labour market withstand monetary tightening?

By [Christophe Blot](#)

In March 2022, the US central bank began tightening monetary policy in response to rapidly rising inflation. Since then, the target rate for monetary policy has been increased at each meeting of the Federal Open Market Committee (FOMC), and now stands at 5%. The aim of these decisions is to bring inflation back towards the Federal Reserve's 2% target. After peaking in the summer of 2022, inflation has fallen in line with the fall in energy prices. Thus far, economic activity has been resilient, and the unemployment rate has remained stable despite the tighter monetary and financial conditions. Will inflation continue to fall, and, more importantly, can it converge on the target without pushing up unemployment?

# Inflation under control?

The Federal Reserve had been cautious throughout 2021, under the view that the increase in prices would be transitory. It was not until March 2022 that it began tightening, just over a year after inflation began to rise above the 2% target, when it had reached 6.8%[\[1\]](#). The rise in prices has in fact proved to be more prolonged than FOMC members had anticipated and has spread to all components of the index. Finally, the central bank also feared the risk of a disconnection in inflation expectations, which would have sustained an inflationary spiral. Once it began to act, rate hikes occurred in rapid succession, with the target rate for federal funds rising from 0.25% to 5% in one year, i.e. a much faster pace of tightening than that observed in previous cycles ([Figure 1](#)), and in particular during the course of 2015, when the Federal Reserve had raised rates only twice in one year, and each time by only 0.25 points.



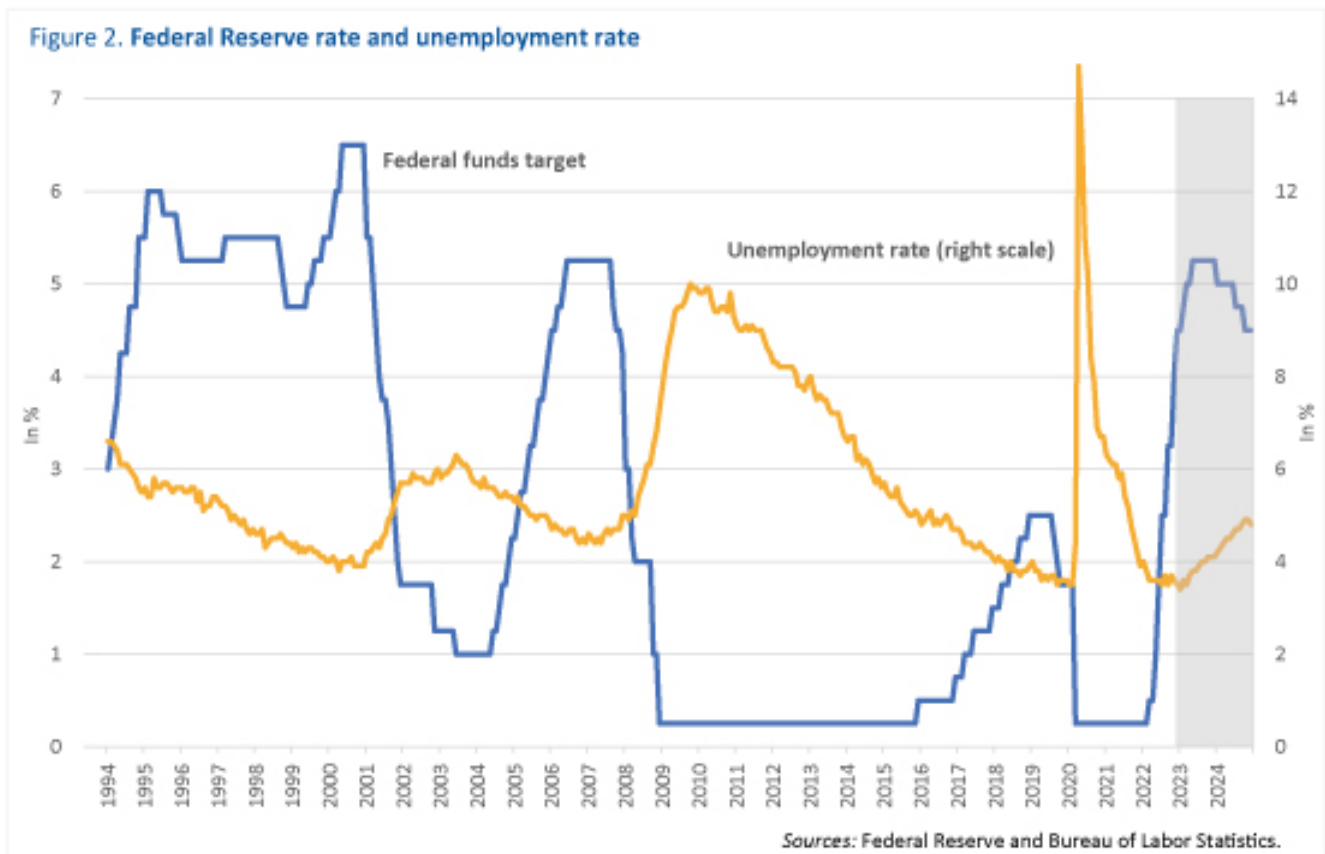
Inflation peaked just a few months after the tightening started. From 7% year-on-year in June 2022, it gradually fell

to 5% in February 2023. However, this decline was not due to the Federal Reserve, but mainly reflected changes in the energy component, which is itself directly linked to the fall in oil prices and, to a lesser extent, in the price of American gas[\[2\]](#). In February 2023, the energy component of the consumption deflator fell by 0.9% year-on-year, whereas it had risen by 60.8% in June 2022. Although the food price index remains dynamic, its rise is also stalling.

Looking beyond the energy factor, is the decline in inflation sustainable? Assuming that oil and gas prices remain stable, the contribution of energy prices will indeed push US inflation down further in coming months. However, the end of the inflationary episode will depend mainly on trends in core inflation, which of course includes a diffusion effect of energy prices but whose dynamics depend mainly on supply and demand factors[\[3\]](#).

## **Is a rise in unemployment inevitable?**

Excluding energy and food prices, so-called core inflation also shows signs of slowing down. In February 2023, it rose by 4.6% year-on-year, compared with 5.2% in September 2022. This dynamic can be explained in part by the evolution of durable goods prices, which were hit during 2022 by supply difficulties[\[4\]](#). The indicator measuring the pressure on production lines has fallen sharply and, since the beginning of 2023, has returned below its long-term average value[\[5\]](#). The impact of monetary policy will mainly be transmitted via demand. Indeed, the increase in the target rate for monetary policy has been passed on to all public and private rates, market rates and bank rates. The consequent tightening of monetary and financial conditions should result in a tapering of credit activity and a slowdown in domestic demand: consumption and investment.

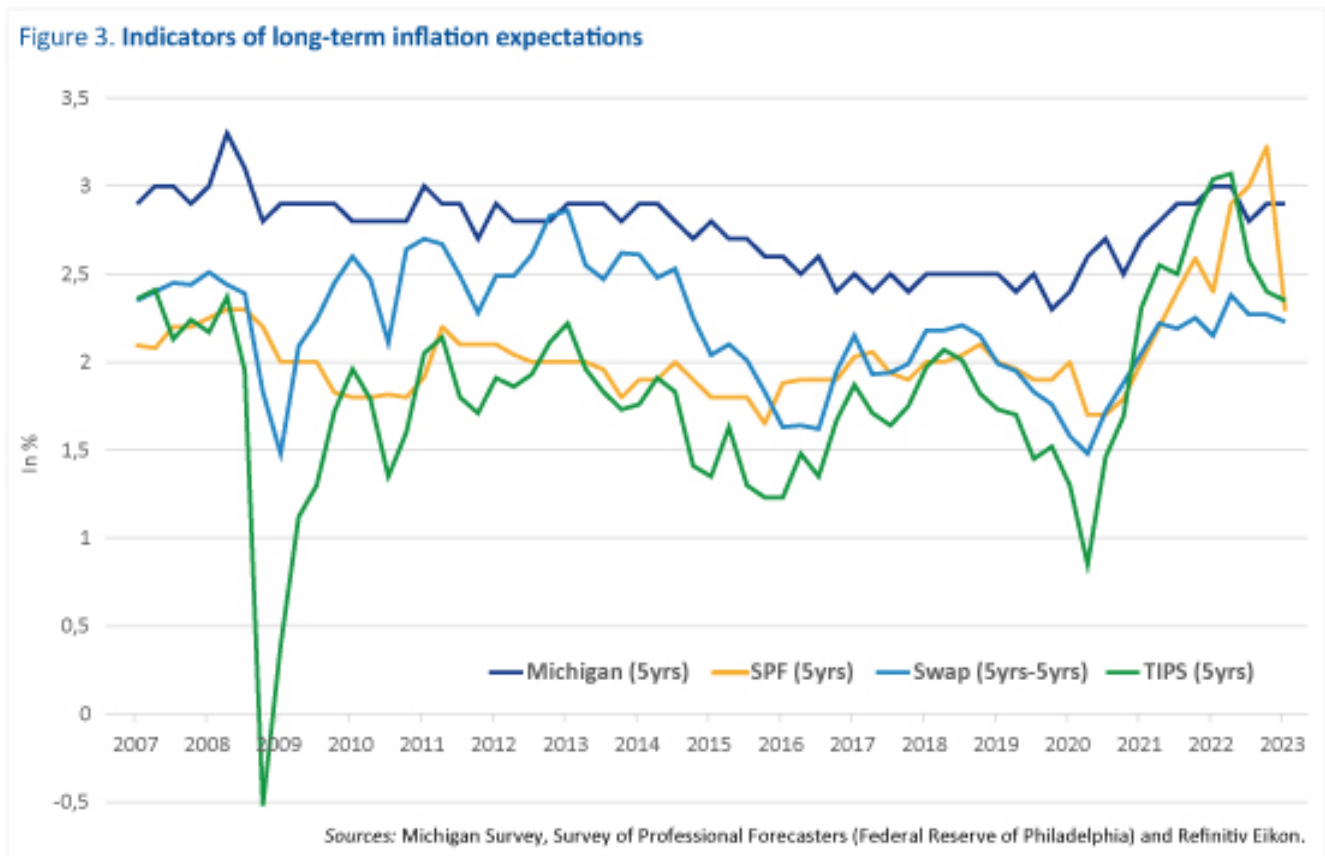


However, after GDP fell in two quarters at the beginning of 2022, it recovered in the second half of the year. Most importantly, the unemployment rate remains at a historically low level: 3.5%, according to the Bureau of Labor Statistics (BLS) for the month of March 2023. Is this situation – falling inflation without rising unemployment – sustainable? If so, the Federal Reserve would succeed in achieving its price target while avoiding recession or at least rising unemployment. [Olivier Blanchard](#) seemed to doubt this optimistic scenario. Indeed, most macroeconomic analyses suggest that a restrictive monetary policy pushes up unemployment. For example, the variant of the [FRB-US](#) model suggests that a one-point interest rate hike results in a 0.1 point rise in unemployment in the first year and then peaks at 0.2 points in the second and third years. Recent analysis by Miranda-Agrippino and Ricco (2021) suggests a similar order of magnitude, with a peak of around 0.2 points for a one-point increase in the policy rate, but faster transmission[\[6\]](#). Given the magnitude of the monetary tightening and all else being equal, we expect the unemployment rate to rise by 0.3

percentage points in 2023, which in our scenario would bring it to 3.9% from 3.6% on average over 2022. Indeed, given the lags in the transmission of monetary policy, the tightening over 2022 is likely to have only a small impact, which could explain why the unemployment rate has not yet risen. Previous episodes of monetary tightening have also been characterised by a more or less significant lag between the tightening phase of monetary policy and an increase in unemployment ([Figure 2](#)). For example, the Federal Reserve's moves to tighten monetary policy in the summer of 2004 did not have a rapid impact on the unemployment rate, which continued to fall until the spring of 2007, before rising sharply thereafter, reaching a peak of almost 10% in early 2010 in the context of the global financial crisis. The same inertia was evident after 2016, with unemployment not rising until 2020 during the lockdowns.

Finally, the capacity of monetary policy to reduce inflation depends not only on the relationship between unemployment and inflation but also on the reaction of inflation expectations. In this regard, the various indicators of long-term expectations suggest either stability or a slight decrease. For example, the Michigan Household Survey indicates a 5-year inflation expectation of 2.8% in February 2023, compared with 3.1% in June 2022. According to market indicators, 5-year forward inflation expectations fluctuate around 2.5%. These levels are certainly higher than the target set by the Federal Reserve, but they do not reflect a significant and lasting shift away from what was observed before 2021 ([Figure 3](#)). As for the inflation-unemployment link, it is clear that there is greater uncertainty. In the FRB-US model, the increase in unemployment induced by monetary tightening has very little effect on the inflation rate, although the estimates of Miranda-Agrippinon and Ricco (2021) suggest a greater impact. In our scenario, US inflation would continue to fall in 2023 not only because of the energy component but also because of a fall in core inflation. In our scenario, we assume that by the end of 2023, the deflator would rise by

3.6% year-on-year, with core inflation at 3.7%.



[\[1\]](#) This is inflation measured by the consumer price deflator, which is the index monitored by the Federal Reserve. In comparison, inflation measured by the consumer price index (CPI) is on average higher, whether we consider the overall indicator or the index excluding food and energy prices.

[\[2\]](#) The price of gas on the US market has not reached the highs seen in Europe. However, the price almost tripled between the spring of 2021 and the end of summer 2022 before returning to the low point observed in April 2020.

[\[3\]](#) The contribution of food has already fallen since the start of the year, and we anticipate that this will continue.

[\[4\]](#) This is the case for semiconductors, used in particular by the automotive sector. These shortages have contributed to the rise in the prices of cars, both new and especially used, which rose by more than 40% year-on-year at the beginning of

2022.

[5] See the [Global Supply Chain Pressure Index](#) (GSCPI), which is calculated by economists at the New York Federal Reserve.

[6] See Miranda-Agrippino S. & Ricco G. (2021), “The transmission of monetary policy shocks”, *American Economic Journal: Macroeconomics*, 13(3), 74-107. Other estimates indicate effects that are sometimes greater, depending on the estimation strategy. See the simulations reported by Coibion O. (2012), “Are the effects of monetary policy shocks big or small?”, *American Economic Journal: Macroeconomics*, 4(2), 1-32.

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# Bank fragility: What consequences for economic growth and its relationship with bank loans?

[Jérôme Creel](#) and [Fabien Labondance](#)

The collapse of Silicon Valley Bank (SVB) has rekindled concern about the solidity of the US banking system and, via the danger of contagion, the European banking system. It offers a kind of case study of the complex relationship between banks and the economy.

SVB's collapse came a few months after the [Committee for the Alfred Nobel Memorial Prize in Economics](#), funded by the Royal



Swedish Bank, awarded the 2022 prize to Ben Bernanke, Douglas Diamond and Philip Dybvig for their contributions to banking economics. In particular, Diamond and Dybvig explained the mechanisms by which a banking panic can occur (word of mouth is enough – economists speak of self-fulfilling prophecies), the difficulty of separating a solvency crisis from a liquidity crisis, and the measures to be implemented to stop it, i.e. by insuring deposits[\[1\]](#). Bernanke showed the way that a banking panic can be transmitted to the real economy, thereby justifying the central bank's implementation of a bank bailout. Their work undoubtedly helps to better understand the recent decisions of the US monetary authorities to contain the crisis triggered by SVB, such as the [extension of deposit insurance](#).

In addition to this work, an empirical consensus had emerged that economic growth, as measured by the change in GDP per capita, could be explained by the development of bank credit and the financial markets. The international financial crisis of 2007-2009 reshuffled the deck. The work of [Gourinchas and Obstfeld \(2012\)](#) and [Schularick and Taylor \(2012\)](#) (and much subsequent work) showed that the expansion of bank credit was a leading indicator of banking crises. However, the link between bank credit, bank fragility and prosperity remained to be established.

This is the link that we explore with [Paul Hubert](#) in a paper entitled "Credit, bank fragility and economic performance", to be published in the [Oxford Economic Papers](#). This paper examines the role of bank fragility in the relationship between private bank credit and economic growth in the European Union. We consider two types of bank fragility, one in terms of bank assets, and the other in terms of liability: the share of non-performing loans on the balance sheet and, in addition, the ratio of capital to assets, i.e. the inverse of leverage.

Our results are as follows. First, bank fragility, represented



by non-performing loans, has a negative effect on economic growth: the higher their share of the balance sheet, the lower the growth of GDP per capita. Second, if bank fragility is included in the estimated model, in most specifications, bank credit has no effect on economic growth. The impact of credit on per capita economic growth seems to depend on the degree of bank fragility. Credit only has a positive and significant effect on per capita economic growth in a sub-sample ending before 2008 – which is in line with previous literature – and when non-performing loans are relatively low, i.e. when bank fragility is limited. Conversely, when bank fragility is high, credit has no impact on growth, whereas non-performing loans have a significant negative effect<sup>[2]</sup>.

Omitting a bank fragility variable in the relationship between bank credit and economic growth may therefore lead to erroneous conclusions about the economic impact of financial development.

The main implication of these empirical results is that closely monitoring and limiting non-performing loans – ex ante through prudent credit supply policies, or ex post through incentives to build up loan loss provisions – not only plays a prudential role at the bank level but also has an impact at the macroeconomic level. This monitoring of non-performing loans is critical for bank credit policy to have a positive impact on economic activity.

<sup>[1]</sup> See the critical summary of their work in the article by Hubert Kempf, “Diamond et Dybvig et la fragilité bancaire” [Diamond and Dybvig and Bank Fragility], forthcoming in the *Revue d'économie politique*.

<sup>[2]</sup> On the liability side, leverage has no impact on economic performance.

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# The UK budget: From support to austerity

By [Hervé Péléraux](#)

With the latest national accounts published on 22 December 2022 showing a 0.3% fall in GDP in Q3 of 2022, following a 0.1% rise in the previous quarter, concerns are growing that the British economy may be entering a recession. In an inflationary context that has been exacerbated since early 2021, in particular due to the rise in energy prices, successive governments, led by Johnson, Truss and then Sunak, have introduced measures to support the economy in order to cushion the shock to purchasing power and temper its negative impact on activity.

On 17 November, the Sunak government, which took office on 24 October, presented a budget that contrasts sharply with the orientation of its predecessor, led by Liz Truss, who resigned after only 44 days in office. Indeed, the former government's announcement of a sweeping budgetary plan to support households and businesses in the face of the energy crisis and to lower taxes over a five-year period left doubts about its viability in the absence of financing, sending panic through the markets.

For the medium term, the budget presented by the current British Chancellor Jeremy Hunt takes a line opposite to that promoted by the former government and relies instead on austerity to prolong the effort at fiscal consolidation undertaken after the Covid-19 shock and to guarantee control

of the public finances over the next five years in a context of rising interest rates. The government is nonetheless caught between conflicting objectives: between support for households and business in the short term to mitigate the effects of the inflationary shock, and the desire to guarantee the medium-term stability of public finances. The plan announced on 17 November is thus divided into three parts.

### **A State buffering inflation**

A first set of short-term measures has been taken to support households faced with rising prices, particularly for energy. The government continued the measure taken by the previous government for this winter, namely capping gas and electricity prices. Thus, during the winter of 2022/2023, households will see their energy bills limited to an average of £2,500 per year, which represents a saving of £900 borne by the public purse, at a total cost of £24.8 billion. This cost is of course uncertain as it depends on the price of energy on the international markets. The provisions will be less generous in the 2023/2024 financial year<sup>[1]</sup>, when the cap rises to £3,000 per annum, reducing household support by £500 and cutting the measure's overall cost to £12.8 billion according to the budget. Raising the cap should thus save £14 billion in 2023/2024 compared to the Truss government's announcement of £26.8 billion in tax shields for the year.

The government plans to plough 90% of this £14 billion savings in 2023/2024 back into support schemes for the most vulnerable households, with payments to 8 million households: means-tested benefit recipients will receive payments of £900, pensioners £300, and recipients of disability allowance £150. The government has also decided to follow the Low Pay Commission's recommendation of a 9.7% rise in the minimum wage in April 2023, and social benefits and state pensions will rise in line with inflation in October 2022, i.e. by 10.1%.

On the other hand, in order to support the productive sector,

the government has maintained the Truss government's support scheme for companies facing rising energy costs, while cutting the scheme back. The measures, introduced for six months between 1 October 2022 and 31 March 2023, should cost £18.4 billion (compared with £29 billion planned by the previous government).

The government had not yet decided on 17 November 2022 whether to renew the business support measures for the 2023/2024 financial year, and an evaluation was to be carried out to inform future decisions. On 9 January 2023, Sunak's government clarified its intentions regarding the sustainability of the "energy shield" for businesses: it will be maintained during the 2023/2024 financial year but will be considerably reduced compared to current provisions. This is due to their cost, which Jeremy Hunt considers unsustainable for the country's public finances. So £5.5 billion is budgeted for the 2023/2024 financial year.

In total, the energy shield and support for vulnerable households and businesses will receive £43.2 billion in 2022/2023 and £30.6 billion in 2023/2024. Adding in the measures already taken by the Johnson government since March 2022, the public commitment comes to £64.2 billion in 2022/2023 and £45.3 billion in the following year. On a calendar basis, this support amounts to £48.2 billion in 2022 (or 2.2 percentage points of 2019 GDP) and £50 billion in 2023, making the UK one of the most generous countries on the continent of Europe in terms of supporting the economy in the face of an inflationary shock<sup>[21]</sup>, although slightly later than others.

## **The State – Guarantor of the sustainability of the public finances**

In addition to this short-term support for the economy, which implies a highly expansionary policy, the new government has expressed its concern to ensure a "sustainable" trajectory for

the public purse, i.e. one that leads to both a fall in the debt/GDP ratio over a five-year period and a reduction in the deficit to below 3% of GDP. In order not to contradict the support measures decided for the 2022/2023 and 2023/2024 financial years, when there is a high risk of the British economy entering a recession, the government has taken care to start tightening fiscal policy only in 2024/2025.

The fiscal austerity plan provides additional resources that rise progressively to £55 billion in 2027/2028, which is split between 45% in tax increases (£25 billion in 2027/2028) and 55% in spending cuts (£30 billion). For households, the government plans to lower the 45% income tax threshold from £150,000 to £125,140 in April 2023, to freeze income and inheritance tax rates at current levels for a further two years until April 2028, to quadruple tax credits on dividends and capital gains from 2024/2025, and to limit the previous government's reductions in property transaction duty to 31 March 2025.

The 19% corporation tax cut envisaged by Liz Truss is cancelled, and the rate will rise to 25% in April 2023, as announced before Truss took office. The rate of social security contributions will remain at the current level between April 2023 and April 2028. In addition, energy companies' excess profits will be taxed more heavily, with the current arrangements extended to March 2028 and the tax rate increased from 25% to 35% on 1 January 2023 (£14 billion expected in the 2023/2024 financial year). In addition, a 45% tax on the profits of electricity producers will be introduced in January 2023 (£4 billion expected in 2023/2024). The government nevertheless remains concerned about inflationary pressures on production and has planned a cumulative support to business of £13.6 billion until 2027/2028, mainly by means of local taxes.

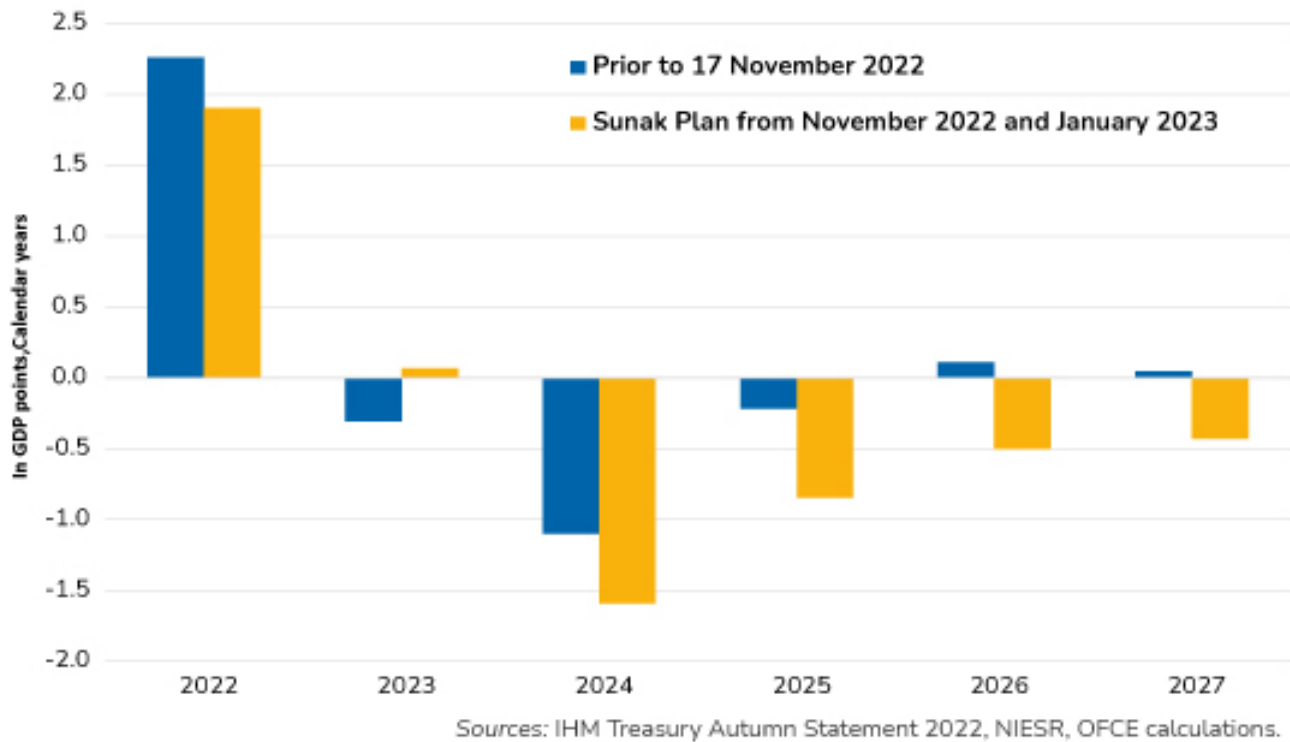
On the expenditure side, the government plans to implement a savings plan based mainly on slowing down the growth in public

spending, which should not exceed inflation by more than 1 point. However, the effort will be implemented from the 2025/2026 financial year onwards, while some spending on priority public services (health, social protection and schools) will rise over the next two financial years.

### **Calming the markets**

In terms of the fiscal impulse, the calendar year 2022 looks to be the most expensive ever in response to the emergency created by the spectacular rise in inflation (Figure 1). In 2023, the redeployment of almost all the resources freed up by the reduction in the energy shield to the most vulnerable households and the maintenance of a “business shield” will make it possible to ensure the government’s overall commitment to the emergency plan, without however generating any significant additional stimulus. On the other hand, in 2024, the withdrawal of short-term aid schemes and the entry into force of the fiscal savings plan will generate a very negative fiscal impulse of -1.2 points of GDP. By 2027, the provisions announced by the Sunak government will see a negative fiscal impulse of around 0.5 percentage points of GDP each year.

Figure 1. Fiscal impulse in the United Kingdom



However, it is hypothetical whether these projections will be attained over a five-year horizon. First, a new budget will be presented on 15 March. Second, a general election will be held by the end of 2024. There is therefore great uncertainty about the implementation of this plan. Nevertheless, the November 2022 announcements achieved the objective of calming the financial markets, as by 1 December 2022 the yield on 10-year government bonds had fallen back to its level prior to the Truss government's autumn budget statements (Figure 2). In the meantime, the pound, after depreciating by 5% between 6 and 28 September 2022, also returned to its level of early September.

Figure 2. Yield on 10-year United Kingdom government bonds



[1] In the United Kingdom, the financial year starts on 1 April and ends on the following 31 March.

[2] See "[From hot to cold](#)", Analysis and Forecasting Department, *Perspectives 2022-2023 pour l'économie mondiale et la zone euro* [in French], 12 October 2022, pp. 35-41.