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Dancing on the edge of stagflation



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Abstract

The European Central Bank (ECB) is facing a dangerous trade-off between the control of supply-led inflation and the need to avoid a further recession in the euro area. The paper argues that an effective ECB monetary strategy to handle this trade-off would have been to anticipate the increase in the policy interest rates and to postpone the end of the asset net purchase programmes. The ECB did not follow this sequence, which is why its current monetary policy, bound in a difficult balance, risks favouring a euro-area stagflation and financial market fragmentation. The new anti-fragmentation instrument (TPI) introduced by the ECB appears ineffective and subject to excessive discretion. The ECB should instead pursue a compelling combination of its rules-based monetary policy with EU centralised and national fiscal policies.

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LIST OF ABBREVIATIONS

APP	Asset purchase programme
CPI	Consumers Price Index
ECB	European Central Bank
ELB	Effective Lower Bound
ESM	European Stability Mechanism
EU	European Union
Fed	Federal Reserve
GDP	Gross domestic product
HICP	Harmonised index of consumer prices
LTRO	Longer-term refinancing operations
NGEU	Next generation – EU
PELTRO	Pandemic emergency longer-term refinancing operations
PEPP	Pandemic emergency purchase programme
RRF	Recovery and resilience facility
SURE	Temporary support to mitigate unemployment risks in an emergency
TLTRO	Targeted longer-term refinancing operations
TPI	Transmission Protection Instrument
US	United States of America
ZLB	Zero-lower bound

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EXECUTIVE SUMMARY

- **In the current scenario, the ECB faces a difficult trade-off between the control of supply-led inflation and the need to avoid a further recession in the euro area.** This paper argues that the ECB had the possibility to implement a monetary strategy able to reduce this stagflation risk: to anticipate the increase in the policy interest rates in the second half of 2021 and the first half of 2022, and to postpone the end of the asset net purchase programmes.
- The proposed sequencing would have allowed for the mimicking, in a different economic phase, of the effective combination between monetary policy, national fiscal policies, and a new centralised fiscal policy (policy mix) activated in the euro area as a response to the pandemic shock.
- The ECB decided to adopt a different sequencing by ending its asset net purchase programmes (PEPP and APP) in March and June 2022, respectively, and by increasing its policy rates since July 2022. This sequence, which will determine binding constraints in the fiscal capacity of the most fragile Member States, is increasing the risk of stagflation in the euro area and is triggering fragmentation in its financial market.
- **In this situation, the ECB's current monetary policy is bound in a difficult balance.** Its restrictive stance should be gradual to avoid that the persistence of the pandemic supply-side shocks and the dramatic economic consequences of the Russian invasion of Ukraine impede the EU's medium-term development generated by Next Generation – EU. Conversely, the same stance should be sufficiently severe to weaken the inflationary process that, being supply-driven, cannot be easily handled by means of monetary tools.
- **The ECB's compromise, currently pursued by the Governing Council, risks favouring stagflation.** To avoid at least that the increasing risk of stagflation is coupled with financial fragmentation, the ECB recently launched an anti-fragmentation instrument: the TPI.
- **The TPI is characterised by many drawbacks.** Differently from LTRO, OMT, TLTRO, APP, and PEPP, the TPI can be activated by the ECB in a largely discretionary way. Hence, besides representing a decisive step towards the ECB's abandonment of any forward guidance, it widens the ex-ante unregulated power of a central bank and – in the meantime – it appears unable to design effective incentives for financial investors.
- **Consequently, an unsolved trilemma emerges in the euro area.** It appears impossible to conceive a central bank that can act in an ex-ante discretionary way, that maintains its full independence, and that remains accountable thanks to ex-post controls by a third party.
- **Our suggestion is to exit from the above trilemma by abandoning the ECB's ex-ante and ineffective discretionary strategy and re-establishing ex-ante rules, independently decided and announced by the ECB and compliant with its mandate.** In this perspective, the TPI should remain in the background and never be implemented. Moreover, it would become possible again to design a combination of the ECB's monetary policy and EU centralised and national fiscal policies that is an effective response to stagflation.

1. INTRODUCTION

High inflation has emerged as an existential worldwide challenge. In the United States (US), from March to July 2022, the Federal Reserve (Fed) augmented the target federal funds range by 225 basis points (two increases of 75 bps each just in June and July). After the last hike, Chair Jerome Powell held that a similar move could be repeated in the following months if the US price dynamics did not slowdown.¹ Last June, the Bank of England fixed the bank rate at 1.25%. The “Old Lady of Threadneedle Street” forecasted that the United Kingdom’s inflation, as measured by the Consumer Price Index (CPI), will reach a peak slightly above 11% next October mainly due to rising global energy prices. Similarly, last March, the European Central Bank (ECB) recognised that inflation in the euro area was not a temporary phenomenon and started the closure of its unconventional programmes of net asset purchases; and, last June, it completed the end of these programmes and the specific conditions of its unconventional Targeted Longer-Term Refinancing Operations (T-LTROIII) in favour of the European banks. Then, in July, the ECB increased its policy interest rates by 50 basis points (bps), although only 25 bps were previously announced. Interest rates were further increased in September, by 75 bps.

An inflation rate largely above the usual central banks’ target of 2% was absent for a long time, but it is currently a widespread phenomenon, including in the US and Europe. However, this does not justify *per se* a uniform monetary policy response. The main drivers of an excessive inflation can be, and indeed are, different in different areas. In the US, the price dynamics have been determined by an overheating of the “real” economy due to expansive and pro-cyclical fiscal policies that started before the pandemic shock and accompanied the subsequent rebound. US inflation has thus been determined by an excess of demand that triggered a price–wage spiral. The origins of the euro area’s inflation are different. The high dependence on international trade made the European economy vulnerable to the breaks in the global value chains triggered by the pandemic shock and its persistence;² and Russia’s invasion of Ukraine dramatically worsened price dynamics and extended the sectors involved (e.g., foods). The 2021 rebound and the related increase in aggregate demand, stimulated by the substantial public support of incomes in many Member States, has just generalised the euro area inflation to the whole economy.

The current inflation processes in the US and the euro area are so strong that restrictive monetary policies cannot be avoided. However, the different inflation drivers imply that the two areas face different situations. Despite the likelihood of a recession,³ the Fed can pursue an effective monetary policy restriction as the determinants of the US inflation process are traditional and the economy can overcome a negative phase without suffering significant long-term disequilibria. On the contrary, the ECB is facing a supply-led inflation that cannot be efficiently managed by monetary policy without causing a serious recession; and the euro area economies already registered – at least – three or four deeply negative economic phases since 2008, therefore they would be severely affected by a new one. Hence, the ECB is faced with a difficult compromise: how to manage the inflation pressure without causing a new deep recession in the euro area?

Our considerations suggest that the Fed is currently more likely to curb the excess inflation in the medium term than the ECB. In fact, the ECB must adopt a more gradual restrictive stance to reduce the

¹ The most recent data on the US inflation rate, published in July and August 2022, indicate that the general index started decreasing, even if the core inflation remains high and largely above the Fed’s target. In any case, in his recent speech at Jackson Hole (26 August 2022), Mr. Powell reaffirmed that Fed should continue its restrictive monetary policy.

² These international breaks also affected significant parts of the US economy; however, in that case, they strengthened an inflationary phenomenon already in place.

³ The provisional macroeconomic data show that there was a decrease in the US gross domestic product (GDP) in the first two quarters of 2022. However, to formally state that the US economy registered a “technical” recession in the first semester of the current year, it is necessary to wait for the certification of these data and their interpretation.

probability of a new economic recession; and, in so doing, it risks becoming unable to put under control price dynamics triggered by variables (such as energy prices) that cannot be directly influenced by monetary policy. It follows that the euro area economy could be characterised by a longer and deeper period of stagflation starting in the third or last quarter of 2022. Potentially, it would have been possible to mitigate this negative perspective if the ECB had adopted different monetary strategies from the second half of 2021 to July 2022: earlier increases in policy interest rates without suspending the Asset Purchase Programme (APP) and the Pandemic Emergency Purchase Programme (PEPP). This sequencing would have provided a signal to fight inflation without compromising the policy mix launched during the pandemic. However, in the current scenario, the ECB's monetary policy does not have alternatives compared to the stance currently implemented: a gradual increase in policy interest rates and reinvestments of redemptions from APP and PEPP.

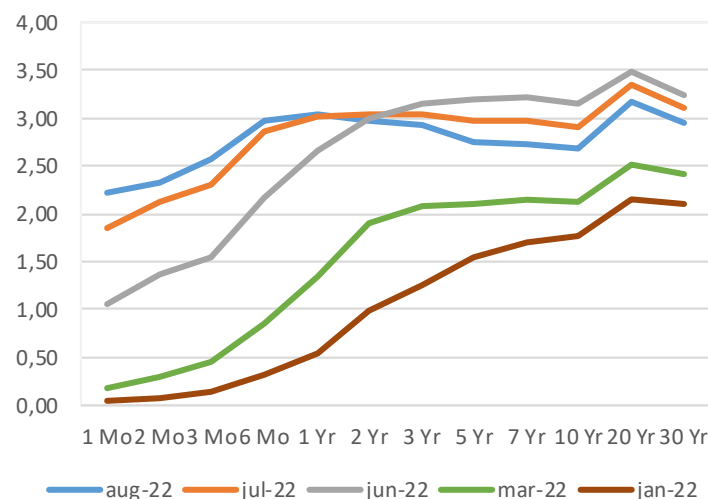
The rest of the paper is organised as follows. Section 2 compares the monetary policy adopted by the Fed and the ECB. Section 3 discusses a possible alternative sequence for the ECB's restrictive decisions. Section 4 backs the current scenario emphasising that, at this moment, the ECB's monetary policy stance does not have many alternatives to follow. Section 5 analyses the possible effectiveness of the Transmission Protection Instrument (TPI) announced by the ECB last July. Section 6 provides our main conclusion: the ECB should recognise the specific constraints and the related limits of its current monetary policy and should pursue stronger cooperation with a centralised, even if temporary, European Union (EU) fiscal policy.

2. A COMPARISON BETWEEN THE FED'S AND THE ECB'S RECENT DECISIONS

The current stance of the ECB's monetary policy has been deeply influenced by the Fed's decisions since mid-December 2021. In November of that year, the Fed recognised that the inflation dynamic in the US was not a temporary phenomenon only due to the late consequences of the pandemic shock and to the related bottlenecks on the supply side. It implicitly acknowledged that the US inflationary process was mainly due to an excess demand fed by overly expansionary and pro-cyclical fiscal policies: the distortionary cuts in taxation implemented by the Trump administration before the pandemic, during an already overheated cyclical phase; and the vast programme of public spending in infrastructure and social protection launched by the Biden administration during the strong economic rebound in the US in the second half of 2020 and in 2021. Hence, in December 2021, the Federal Open Market Committee (FOMC) announced a dramatic change in the US monetary policy to be started in March 2022. In the weeks following the December meeting, the Fed Chair and other members of the FOMC reiterated the announced decisions. The new restrictive stance materialised in a sequence of increases in policy interest rates and reductions in the liquidity made available to the economic system. In the period March 2022 – July 2022, the Fed augmented the target federal funds range from 0.00-0.25 to 2.25-2.50 through the first increase of 25 bps in March, a further increase of 50 bps in April, and two increases of 75 bps each in June and July.

Apparently, the Fed's strategy was successful in guiding investors' expectations. As shown in Figure 1, the curve of the US market structure of interest rates registered a significant and uniform upward shift until June 2022, and then became flatter. Together with the provisional negative data on the gross domestic product (GDP) dynamics in the first and second quarters of 2022, these shifts in the curve indicate that the economy was so adversely affected by the monetary policy restrictions that there was a possible technical recession in the first half of 2022. However, as signalled by the flattening of the July and August curves of the US market structure of interest rates, most economic agents expect that monetary policy will be able to reabsorb the excessive inflationary pressure in the medium term. Hence, in a reasonable time horizon, the Fed will have room to support US macroeconomic growth through new decreases in policy interest rates and increases in the supply of liquidity. The medium-long term perspective is, thus, the return to a stable and positive economic phase.

Figure 1: Treasury US par yield curve rates



Source: US Department of the Treasury.

In mid-December 2021, on the other side of the Atlantic Ocean, the ECB confirmed its view that monetary policy tools were not very effective in contrasting an inflation in the euro area which was mainly due to supply-side bottlenecks prolonged by an unexpected but soon weakening persistence of the pandemic impact. Moreover, the vulnerability of many EU “core” countries (such as Germany) to these bottlenecks in the international value chains suggested that monetary support was still needed. At the same time, the ECB was not in the condition to neglect the Fed’s announced initiatives. A complete lack of restrictive reactions would have condemned the ECB to remain “behind the curve” of interest rates in the euro area’s financial markets, thus undermining the effectiveness of future initiatives in monetary policy and determining an unmanaged depreciation of the euro. Hence, at the beginning of 2022, the ECB realised that it was between a rock and a hard place. This difficult situation was worsened by the outbreak of Russia’s invasion of Ukraine (end of February) and the severe implementation of the Fed’s announcements (March). The EU and the euro area were deeply impacted by the war at their eastern borders and by their vulnerability towards the consequent energy crisis. Hence, they faced parallel increases in the probabilities to enter an economic recession and to remain unprotected from the inflationary process and the impact of the Fed’s monetary initiatives.

The above-described scenario explains the contradictory signals issued by the ECB’s Governing Council in the meetings between February and July 2022.

First, the ECB announced that the net purchase of government and private bonds based on the pandemic programme (PEPP) would have ended on the expected date (March 2022); however, it specified that this restrictive move would have been partially compensated by the temporary strengthening of the previous asset purchase programme (APP) without a rise in the policy interest rates. Then, the ECB admitted that the APP would have ended in the summer of 2022 and would have been followed – sooner or later in the same year – by an increase in policy interest rates. As a further step, the ECB decided to terminate the APP by the end of June and to increase policy interest rates by 25 bps in July. In the meantime, to counterbalance this new restrictive stance of its monetary policy, the ECB repeated that the reinvestments of the proceeds of the APP and PEPP’s programmes deriving from assets at maturity and their relative rates of return would be continued for years;⁴ and it confirmed that PEPP reinvestments would have concentrated on the public assets of the most fragile Member States without meeting the ECB’s capital key.⁵ In June, the ECB announced the launch of a new tool aimed at avoiding national fragmentations in the European financial markets (as stated above, the TPI). Finally, last July, the actual rise in the three policy interest rates amounted to 50 bps and the definition of the new tool did not clarify the crucial details (see Section 5 below) despite the previous extraordinary meeting devoted to this matter.

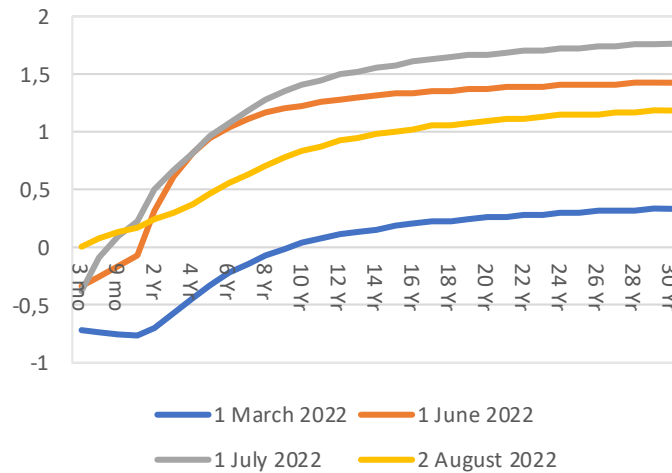
Our sketchy reconstruction of the monetary policy stance in the euro area from the end of 2021 to mid-2022 emphasises the coming and going of the ECB’s strategy. These contradictory decisions had an impact on the term structure of market interest rates in the euro area. As shown in Figure 2, despite the different trends in the US, last July, the investors’ prevailing expectations were that the ECB would have been unable to reabsorb the excessive inflationary pressure in the medium term. The euro area market interest rates curve continued to shift upward, and its slope did not become flatter. Moreover, the downward shift of the curve observed in August was accompanied by a steeper slope in the portion relating to medium-long term market interest rates; and this is a signal that investors are sceptical of the ECB’s ability to put long-term price dynamics under control. Hence, even if the ECB is implementing a more gradual restrictive stance in its monetary policy than that of the Fed, the impact on the euro

⁴ The reinvestments in the PEPP programme will last until the end of 2024; the time extension of the reinvestments in the APP programme is still indeterminate.

⁵ This flexibility can be effective in the short time. However, it is sufficient to compare the amount of the previous net purchase programmes and the maximum amount of the reinvestments to verify that the latter cannot compensate the former.

area disequilibria is more severe. The ECB's compromise of adopting moderate policy initiatives to reduce the inflation rate without causing a new economic recession risk leading to a long stagflation in the euro area.

Figure 2: Interest rate term structure for the euro area



Source: ECB.

Notes: In the yield curves, only AAA rated bonds are considered.

Our considerations imply that, during the second quarter of 2022, the ECB abandoned its forward guidance to strengthen its discretionary power in pursuing an ambiguous and possibly ineffective compromise. As it will become clearer in Section 5, this choice reached its highest level in the TPI's design. Therefore, as we will stress in the "Conclusion" part, one of the main questions of the euro area monetary policy becomes: can a technocratic body, such as a central bank, keep its full independence and – at the same time – act in a discretionary way with only ex-post controls and without an ex-ante declared and reasonable strategy?

Before addressing this question on a sound basis many qualifications are needed. First, we should discuss if the ECB had been in the condition to avoid its current policy constraints. In the following Section, we offer a positive answer by maintaining that, in the last quarter of 2021, it would have been effective to implement an alternative monetary policy in the euro area: instead of postponing the implementation of the so-called "appropriate sequence," – that is, the end of the unconventional net purchase programmes, first, and increases in the policy interest rates only later – the ECB could have started with increases in policy interest rates to control inflation in the euro area. The ECB did not follow this alternative sequence. Our discussion is thus counterfactual and, as such, not conclusive. As illustrated in Section 4, it remains that the implementation of the appropriate sequence in 2022 has left the ECB without efficient alternatives to the current compromise. Apparently, the introduction of TPI could weaken the ECB's constraints. However, in Section 5, we maintain that this is not the case due to the poor incentive design and the other drawbacks characterising this new tool.

3. IS THE ECB'S SEQUENCE APPROPRIATE?

It is well known that, differently from the Fed, the ECB has fixed negative policy interest rates. This choice came largely before the pandemic shock and even before the adoption of unconventional monetary policies. In fact, in June 2014, the ECB decreased the interest rate on the main refinancing operations to 0.15% and that on the deposit facility to – 0.10%; instead, the implementation of the first TLTROs and the launch of quantitative easing can be dated, respectively, to September and October of the same year in parallel with a further reduction of the interest rates on the main refinancing operations to 0.05% and on the deposit facility to – 0.30%. Then, the ECB's decision to extend the quantitative easing to the purchase of government bonds (mid-January 2015) paved the way for a new combination of a strengthened APP and an innovative TLTRO. In spring 2016, the ECB reached the zero-lower bound (ZLB) for the standard refinancing operations (interest rate equal to 0.00%) and fixed the rate on deposit facility to – 0.40%; mainly, it decided to refinance the most virtuous banks in terms of past and future lending policy at a negative interest rate equal to that on deposit facility (that is, – 0.40%). Before the pandemic shock, a final reduction of 10 bps in the interest rate on the deposit facility and, therefore, on the refinancing cost for the most virtuous banks was introduced at the unexpected restart of the APP's programme in fall 2019.⁶

The ECB's negative interest rate policy was maintained during the pandemic. In the two meetings of March 2020, there was a one-time expansion of the APP and the launch of the PEPP. Moreover, in the first meeting, the ECB decided to strengthen the TLTROIII starting in June 2020 by offering, for a limited period, refinancing to banks at interest rates of – 0.25%, reduced to – 0.75% for the most virtuous banks; and, to fill the gap from March to June, the ECB restarted a temporary Longer-Term Refinancing Operations (LTRO) with full allotment at a fixed interest rate of – 0.50%.⁷ Then, at the end April, the conditions of the TLTROIII's specific refinancing were further eased in the sense that interest rates were lowered, respectively, to – 0.50% and to – 1.00%; moreover, the ECB decided to launch a new programme of Pandemic Emergency Longer-Term Refinancing Operations (PELTRO) fixing interest rates at – 0.25%. Finally, in December 2020, the ECB strengthened its ultra-expansionary monetary policy by reaching a peak in the PEPP's envelope; moreover, it extended the period covered by the TLTROIII's specific refinancing conditions and by the PELTRO.

The monetary strategy which the ECB followed from mid-2014 to the end of 2020 stresses that negative interest rates were a crucial component in the set of tools put in place to support the "real" economy of the euro area.⁸ The negative interest rates on deposit facilities aimed at disincentivising banks to hoard the liquidity offered by the ECB through the banking channel in banking reserves instead of transmitting it to the economic system. This "incentive design" was improved when the negative interest rates on deposit facilities were coupled with the negative interest rates on banks' refinancing using the TLTROIII, the new LTRO and the PELTRO. Moreover, the negative interest rates efficiently interacted with other unconventional monetary policy tools (specifically, APPs and PEPP) because the best response to the pandemic shock was a policy mix aimed at avoiding the bankruptcy of firms and financial intermediaries with liquidity problems but structurally solid and at sustaining the aggregate demand through income transfers in favour of workers and self-employees temporarily at the margin of the labour market and households on the brink of poverty. Besides launching a fiscal capacity at the European level (e.g. the temporary Support to mitigate Unemployment Risks in an Emergency:

⁶ It must be recalled that a part of the excess deposits held by banks at the ECB was exempted from the negative interest rate on the basis of a two-tier system.

⁷ This temporary programme reproduced the initiative taken by the ECB at the end of 2011 – beginning of 2012.

⁸ Note that the ECB's monetary policy was continued substantially unchanged from December 2020 to September 2021.

SURE), this policy mix required monetary policy to lower the probability of a credit crunch and allowed for expansionary national fiscal policies even in Member States otherwise without fiscal capacity.

Since the late summer of 2021, the strengthening of a temporary central fiscal capacity thanks to the actual start of the Next Generation – EU (NGEU) and its main programme (the Recovery and Resilience Facility: RRF) made the design of the EU's efficient policy mix more complex. In the medium-long term, the successful implementation of the RRF will strongly support the EU's development by improving the potential output of the Member States thanks to national reforms and public and private investments in the "green" transition, digital innovation, and human resources. However, although substantial, the amount of the European funds cannot fully finance this set of reforms and investments; significant support from national resources is also needed. Hence, the success of the RRF requires that even the most fragile euro area countries be able to reproduce a national expansionary fiscal policy in a medium-long term horizon; and it is well known that this possibility depends on an adequate size of the ECB's public sector net asset purchase programmes. On the other hand, in the short term, the implementation of the RRF stimulates the aggregate demand but implies a restructuring in the national production processes with a temporary negative impact on aggregate supply. Hence, there is a high risk that the NGEU will trigger short-term excessive price dynamics that should be put under control by a prudent monetary policy.

These considerations highlight that the evolution of the policy mix, efficiently designed by the European institutions in response to the pandemic shock and based on a central fiscal capacity, determines *per se* a trade-off in monetary policy. The ECB is challenged to harmonise a short-term prudent monetary policy with a medium-long term expansionary monetary policy aimed at supporting expansionary national fiscal policies. This difficult trade-off was anticipated by the unexpected persistence of the negative impact of the pandemic on the breaks in the international value chains and on the consequent supply-side bottlenecks. Hence, it is not surprising that the euro area and the EU have suffered inflationary pressure since the second half of 2021. Moreover, at the beginning of 2022, this negative inflationary pressure was dramatically strengthened by Russia's invasion of Ukraine and the related crisis in the energy, raw materials, and food sectors. Moreover, in our perspective, the risk remains that the progress in RRF investments and the related production restructuring will shortly even contribute to high inflation rates.

The monetary strategy pursued in the euro area since the fall of 2021 stresses that the ECB has not been fully aware of the trade-off imposed by the continuation of an efficient policy mix in the EU. Confronted with growing inflationary pressure, some of the ECB Governing Council members began to recognise that it could have been appropriate to adjust the monetary policy stance, even if euro area inflation was still deemed as transitional. However, as confirmed by President Lagarde in the press conference of mid-December 2021, there was a consensus in maintaining that the "appropriate sequence" would have been the end of PEPP's net purchases, first, the closure of APP's net purchases, as a second step, and the increase in policy interest rates as a final step. As clarified by Lane (2022), the ECB has followed a precise sequencing since September 2019: "the end date for net asset purchases is naturally earlier than the date at which it would be appropriate to raise the key policy interest rates." And Lagarde (2022) restated: "a rate hike will not occur before our net asset purchases finish."

In light of the examined trade-off, this sequence is far from appropriate because it impedes the harmonisation of a short-term prudent monetary policy with the medium-term support of national fiscal policies. The reversal of this sequence could have been more promising. In the last quarter of 2021 and the first quarter of 2022, the ECB should have pursued increases in policy interest rates to overcome their negative values. Maybe this would have been a sufficient signal to put the growing inflation pressure under control, despite the following and unexpected shock of the war in Ukraine. If this had

been the case, it would have been possible to continue the PEPP and the APP or, at least, to compensate the end of the PEPP with a substantial and long-lasting strengthening of the APP in spring 2022. Thus, the stance of the ECB's monetary policy would have been compatible with an efficient policy mix aimed at controlling inflation pressure and improving the probability of the RRF's successful implementation also through the support of national fiscal policies.

As already stressed, this hypothetically reversed sequence is counterfactual. Hence, we cannot reach conclusive implications. However, it is helpful to address two specific points:

1. a critical assessment of the reasons that the members of the Governing Council offered to justify the sequence followed by the ECB;
2. the possible drawbacks of the reversed sequence suggested here.

As affirmed by Lane (2022), the ECB's sequencing is efficient due to the constraints put by the presence of an effective lower bound (ELB) in the euro area: "if the economy is not in the shadow of the effective lower bound [...], the set of policy interest rates is sufficient to deliver the inflation target"; otherwise, it is appropriate to employ "asset purchases and longer-term refinancing operations." However, Lane's affirmation applies to the case in which a decrease in policy interest rates would be required, whereas it becomes paradoxical in the opposite and currently relevant case. Analogous observations can be addressed to the analysis proposed by Schnabel (2022a). In February 2022, she maintained that the ECB's sequencing "reduces the uncertainty about how our actions will affect financing conditions and the broader economy," because the euro area price dynamics did not imply a "significant risk of inflation markedly above target over the medium term," and hence it did not require "bringing policy rates well into positive territory." However, this assessment still conceives inflation as a temporary phenomenon; and, as clarified above, it turned out to be contradicted by the ECB's own policy decisions of July 2022 and by the commitment to implement further increases in policy interest rates.⁹

The above observations do not exclude that the reversed sequencing suggested here can be subject to two severe objections. First, as recognised, the continuation in the short-medium term of the government bonds' net purchases is aimed at allowing expansionary fiscal policies to support the national implementation of the RRF. However, despite the possible beneficial impact of the increases in policy interest rates on euro area price pressure, the related policy mix appears incompatible with an inflationary scenario. Second, in this same inflationary scenario, it is still harder to justify an expansionary fiscal policy in countries with high public debt/GDP ratio that, without the support of the ECB's asset purchase programmes, would not have a positive fiscal capacity; the related policy mix appears to be subject to a moral hazard problem. The answer to these two objections cannot be, and should not be, addressed by monetary policy. In our perspective, the trade-off characterising the ECB's decisions in the euro area's current situation requires tight cooperation between monetary and fiscal policies. Hence, the ECB's net asset purchase programmes should have a medium-term limited horizon fixed by gradually replacing the expansionary national fiscal policies with a more substantial central fiscal capacity.

⁹ In her recent speech at Jackson Hole (end of last August), Ms. Schnabel strengthened this commitment by affirming that the ECB's monetary policy should increase policy interest rates to equalise aggregate demand to the decreased aggregate supply.

4. AN ASSESSMENT OF THE ECB'S CURRENT POLICY

Unlike what we recommended in the previous section, the ECB postponed any change in its monetary policy stance until March 2022; moreover, it first stopped its unconventional programmes of net asset purchases and then increased the policy interest rates. Given the adopted sequence, currently the ECB cannot do much differently from what it is doing: pursuing a risky compromise between fighting inflation and safeguarding the EU's medium-term growth, which is threatened by external shocks but is potentially fuelled by an effective utilisation of the RRF.

An in-depth and refined quantitative analysis of the euro area's current inflation process and the related ECB's monetary policy goes beyond the scope of the present paper. Here, we refer to a few descriptive indicators that offer preliminary insights supporting our claims. The following narrative is based on two steps.

Our starting step is recognising that the euro area inflation process cannot be interpreted as a temporary phenomenon only due to the contingent and decreasing bottlenecks in the global value chains triggered by a declining pandemic shock.¹⁰ At least four points support our view. First: even if the euro area's inflation rates reached peaks (August 2022) that were unknown in most of the Member States since the 1980s (see Figure 3), the price dynamics could further increase in the next months. Second: as shown by the various components of the Harmonised Index of Consumer Prices (HICP), in the last months of 2021 and the first quarter of 2022, the euro area's price pressure was not limited to energy, but it gradually involved a large part of the economy; and this generalisation was enormously accelerated by the impact of the Russian invasion of Ukraine (see Table 1). Third, during the last twelve months, the perceived probability of registering excessive inflation rates in the next five years after five years strongly increased in the EU as well as in the US (see Figure 4);¹¹ moreover, the probabilities were higher (lower) in the EU than in the US concerning future inflation rates over 5% (over 4%). Fourth, as shown by the euro area and US inflation-linked swap rate dynamics (see Figure 5), long-term market-based inflation expectations accelerated their increase in 2021 and peaked in the first months of 2022.

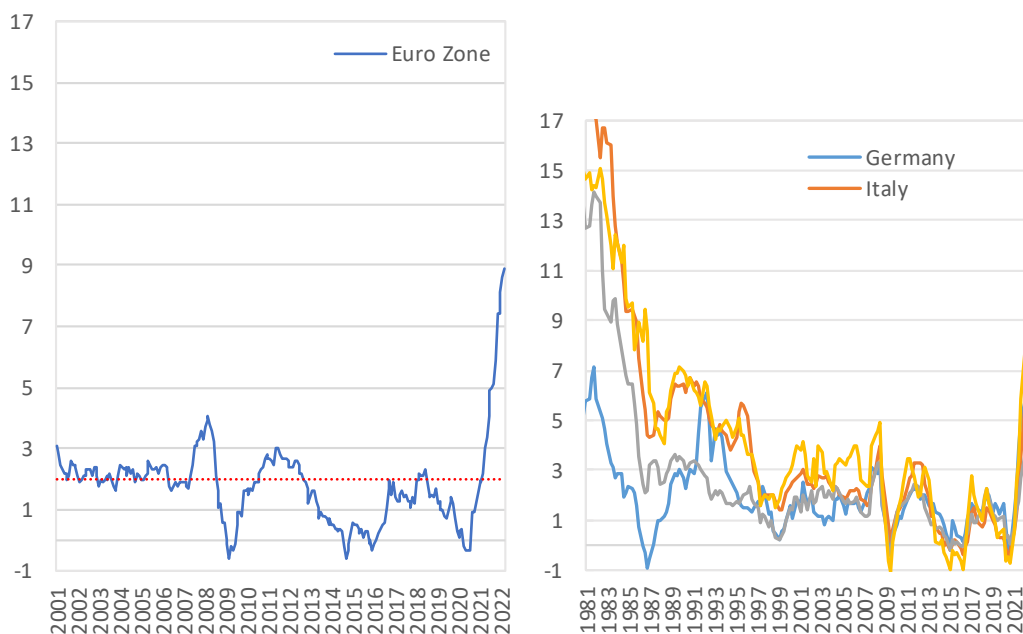
The second step of our narrative is that the non-temporary nature of the euro area's inflation dynamics would risk being accompanied by a new recession, especially if the ECB's monetary policy was unable to find a practical compromise between controlling the inflation pressure and the support for a successful implementation of the RRF. Based on the confidence indexes for the euro area's economic perspectives, the most recent surveys mirror a shared perception among the main actors that this risk is dramatically increasing.¹² In July 2022, the economic sentiment indicator (ESI) of the euro area declined for the fifth consecutive month (with a monthly decrease of 4.5 points), reaching the lowest value since February 2022 (see Figure 6). This value, comparable to that registered by the euro area in the phase of expected deflationary recession (mid-2014), hit 99 points, a value slightly below the threshold separating expansionary from recessionary forecasts. It must be added that other national surveys report a worsening in the economic sentiment of German and French households.

¹⁰ We emphasise this point because, as already mentioned, many members of the ECB Executive Board have maintained that the excessive inflation rates in the euro area were a temporary problem still in fall 2021 and at the beginning of 2022 (see Lagarde, 2021, 2022; Lane, 2022; and Schnabel, 2021, 2022a).

¹¹ The probabilities are computed by Ricardo Reis. For details, see Hilscher *et al.* (2022).

¹² The ESI is a composite indicator produced by the European Commission (DG ECFIN) which tracks GDP growth. This indicator is a weighted average of the balances of replies to selected questions addressed to firms and consumers. The ESI is seasonally adjusted and scaled to a long-term mean of 100 and a standard deviation of 10. Values above 100 indicate above-average economic sentiment, and vice versa.

Figure 3: Inflation rates in the euro area and selected countries



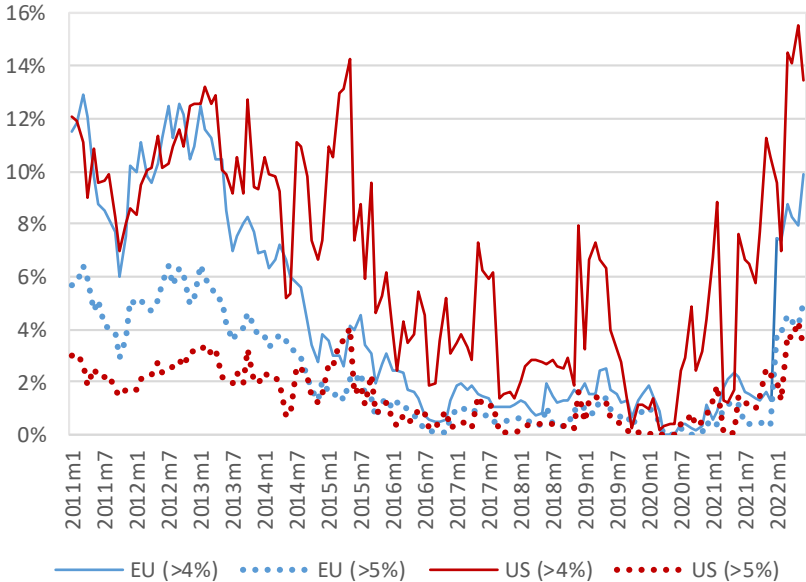
Source: Inflation for the eurozone has been obtained from ECB. Data on inflation for the four countries included in the right panel are those from OECD, which have been retrieved from FRED.

Table 1: Inflation by components (monthly averages by quarters)

Quarter	Energy	Food	Others
2021 Q1	-0.5	0.8	1.1
2021 Q2	12.0	0.0	0.9
2021 Q3	15.8	1.7	1.4
2021 Q4	25.7	2.5	2.4
2022 Q1	25.7	2.5	2.4
2022 Q2	39.5	9.1	3.7
2022 July	39.7	11.8	4.0

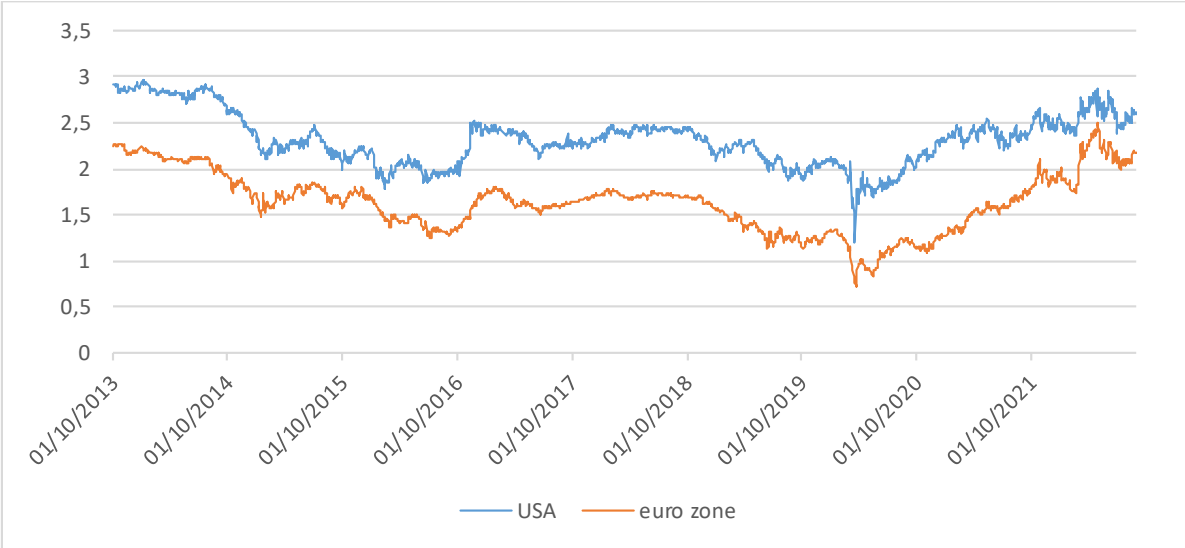
Source: Inflation by each sector for the euro zone has been obtained from ECB.

Figure 4: Probabilities of expected high long-term inflation (euro area, US)



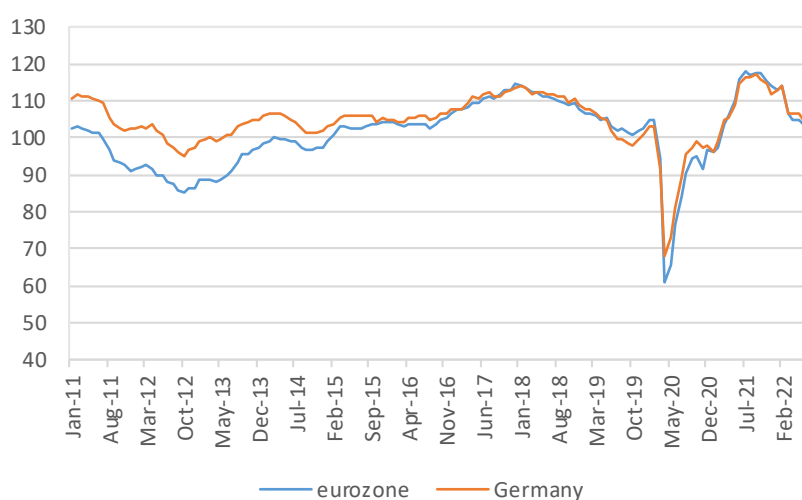
Source: Updated from Hilscher *et al.* (2022), <https://personal.lse.ac.uk/reisr/disasters.html>

Figure 5: Forward inflation expectation rates (5yF5y)



Source: Datastream.
Note: Inflation linked swap rates.

Figure 6: Economic Sentiment Indicator (ESI)



Source: European Commission.

Notes: Seasonally adjusted data.

Our interpretation of the previous narrative is that the current high risk of stagflation does not leave many alternatives for the ECB's monetary policy. We have stressed that, differently from the Fed, which can pursue a severe and effective monetary policy restriction, the ECB is facing a supply-led – even if generalised – inflation process that cannot be managed by monetary policy without causing a severe recession. It is also worth noting that the euro area already recorded three or four deeply negative economic phases since 2008, therefore they would be seriously affected by a new one.¹³ Hence, the ECB's aim must be that of managing the inflation pressure without causing a new deep recession in the euro area. The ECB is thus constrained to follow a gradual increase in the policy interest rates and, in the meantime, to indirectly support the RRF's implementation by means of the short-term and weak tool offered by the reinvestment of redemptions from unconventional asset purchase programmes. In particular, the ECB can exploit the flexibility allowed by reinvesting the PEPP's redemptions.

¹³ The US economy was instead characterised by a long expansion from the second half of 2009 to the end of 2019, interrupted by a deep but short depression in the first half of 2020 and complemented by a quick rebound. Hence, as confirmed by the low unemployment rate in the labour market, the US economy can overcome a recessionary phase without suffering serious long-term disequilibria.

5. THE ECB'S ANTI-FRAGMENTATION INSTRUMENTS

The provisional conclusions reached at the end of the previous section apparently neglect the initiative the ECB took in its July meeting: the launch of the TPI. This initiative paralleled the increase in policy interest rates. The ECB's new tool explicitly aimed at reacting to the possible consequences of the fragmentation of the euro area financial market that can derive from the end of the net asset purchase programmes in June.

It is a common view that recurrent levels of financial fragmentation have characterised the euro area since the global financial crisis and the consequent European sovereign debt and banking sector crises. Fragmentation should be measured by the dynamics of the "excessive" spread between the interest rates of two representative public or private assets with the same maturity and with other similar fundamental features. Regarding the sovereign debt crisis in the euro area, spreads typically refer to the differences between the average rate of return of the ten-year government bonds issued by a given Member State and the average rate of return of the corresponding bonds issued by the safest Member State (i.e. Germany). These differences could be fully explained by the different riskiness of the two compared bonds. In these cases, the spreads could be labelled as "normal" (as opposite to excessive) because – in principle – they would be compatible with the perfect functioning of a unified and competitive financial market. Thus, the variability of the deviations of the actual spreads from the "normal" spreads offers a theoretical definition of "excessive" spreads and a possible measure of financial market fragmentation.

The problem is that this measure is weakly operational because it is difficult to empirically compare the relative riskiness of two different assets without referring to their relative interest rates.¹⁴ Hence, the euro area financial market fragmentation can be identified by employing a different definition: market fragmentation arises when spreads become so significant that they hinder the efficient transmission of the centralised monetary policy in the different Member States. The ECB explicitly adopts this definition. In the press conference of June 2022, President Lagarde stated that the "critical point" of market fragmentation is not determined by "specific level of yields increase or lending rates or bond spreads" but by the impediment of "monetary policy transmission [...] throughout the entire euro area" (see also: Schnabel 2022b). For instance, during 2011 and 2012, the spreads between the Italian and German government bonds exceeded 500 bps. These circumstances led to a financial market fragmentation in the euro area because a unique monetary policy would have been adequate to the Italian (German) economic situation only at the cost of being too expansionary (too restrictive) towards Germany (Italy).

In a previous paper prepared for the European Parliament's Committee on Economic and Monetary Affairs (ECON), we adopted the same approach to state that the ECB's policy decisions since March 2022 have increased fragmentation in the euro area financial market (Benigno et al., 2022). Moreover, Sections 2 and 3 of the current paper have offered further support to this statement. Our argument is based on the evidence that the ECB's current monetary policy and, specifically, its "appropriate" sequence are causing asymmetrically severe binding constraints to the Member States with high public debt. Conversely, the ECB maintains that the new stance of its monetary policy does not unavoidably determine this asymmetry and the consequent market fragmentation. In the already mentioned press conference of June 2022, President Lagarde stated: "the principle is that we will not tolerate fragmentation that would impair monetary policy transmission, and we will determine based on circumstances, of countries, how and when that risk is likely to materialise, and we will prevent it." In

¹⁴ It is obvious that interest rates cannot play, in the meantime, the role of explanatory and that of dependent variable without causing a logical failure in the analysis.

this respect, the approval of the TPI and the interaction of this new instrument with other tools already available are crucial. Hence, in the following of this section, we assess the TPI's effectiveness and its possible combination with the PEPP reinvestment, and the Outright Monetary Transactions (OMT) approved by the ECB in the summer of 2012 but never activated.

The ECB Governing Council discussed the risk of financial market fragmentation and the possible response since its announcement of the upcoming end of the PEPP's net purchases at the meeting in mid-December 2021. In presenting the ECB's "Monetary Policy Decisions", Mme Lagarde affirmed that to prevent "risks of market fragmentation, [...] PEPP reinvestments can be adjusted flexibly across time, asset classes and jurisdictions at any time." This affirmation with the exact wording was repeated in the three following ECB meetings.¹⁵ However, during the press conference of the last of these meetings (April 2022), President Lagarde added that the ECB could overcome the risk of market fragmentation by complementing the PEPP's flexible reinvestments extended until 2024 with the design of "whatever additional instrument is appropriate in order to deliver the flexibility that we believe is useful. [...] We can deploy new instruments to secure monetary transmission as we move along the path of policy normalisation." Then, in the ECB's *ad hoc* but inconclusive meeting of mid-June and in the press conferences of last July, the ordering of the old and new anti-fragmentation instruments was clarified: first, the PEPP's "flexible reinvestment" allowing, for instance, the utilisation of German bond redemptions to purchase Italian government bonds; then, the new tool (TPI) created "to counter unwarranted, disorderly market dynamics"; and finally, the OMT "to deal with unwarranted impairment to transmission that are caused by redenomination risks and that are country-specific."

Preliminary descriptive evidence shows that, since last June, the ECB has utilised the flexibility of PEPP reinvestments to concentrate its aggregate gross purchases of Italian public bonds at the expense of the replacement of French and German bonds reaching maturity. At first glance, this initiative was successful because the average spreads between the Italian and German public bonds did not follow an increasing trend despite the worsening of the macroeconomic framework (energy prices) and the dramatic rise in Italy's political and institutional uncertainty due to the unexpected anticipation of the general elections at the end of September. However, this evidence is insufficient to offer an empirical check; the comparison between the size of the ECB's net purchase programmes and the rotating amount of the gross purchases of PEPP reinvestments highlights the quantitative inadequacy of the latter to handle financial instability and severe fragmentation. Moreover, as we already stated (Benigno et al., 2022), the OMT is effective as a deterrence against the redenomination risk in the euro area. However, its actual utilisation is puzzling given that the requiring country must previously undergo strong conditionality.¹⁶ The activation of the OMT can appeal only to countries on the brink of bankruptcy. This implies that, in the current situation, the ECB's most crucial anti-fragmentation tool is the TPI.

The TPI focuses on purchasing public bonds with a residual maturity ranging from 1 to 10 years,¹⁷ and it can be activated at the discretion of the ECB if the potential beneficiary country satisfies a few conditions. Moreover, the amount purchased is not limited by an *ex-ante* defined quantitative threshold but should not impact the current monetary policy. In its meeting last July, the ECB Governing Council did not offer a detailed specification of these features. However, we can elaborate

¹⁵ In April 2022, Mme Lagarde also stated that part of "the birth certificate" of PEPP was "antifragmentation" and that PEPP "has proven very efficient" for this purpose.

¹⁶ A necessary condition to have access to the OMT is that the country applying to this tool must already be enrolled in an aid programme handled by the European Stability Mechanism (ESM); and the latter will authorise the entry into that programme, only if the country commits itself to meet severe macro- and micro-economic constraints.

¹⁷ The TPI also allows the purchase of private bonds, but this aspect can be neglected in the current analysis. Moreover, the TPI's large maturity range does not perfectly fit the purpose of easing the monetary transmission mechanism. In this respect, it is sufficient to recall that the OMT's purchases are limited to a residual maturity between 1 and 3 years to allow the efficient functioning of monetary channels.

on three fundamental aspects: the determinants of TPI's activation, its required conditionalities, and its impact on monetary policy.

The first aspect implies that the TPI's potential beneficiaries should be characterised by spreads exceeding their structural weaknesses. It means that the TPI's activation is based on those concepts of "normal" and "excessive" spreads that we disregarded above as too ambiguous. The second aspect refers to conditionalities that can be reduced to three points: each TPI beneficiary should not be subject to a EU procedure; it should be compliant with the commitments undertaken with the Recovery and Resilience Facility (RRF) and, therefore, with the European Semester (see Buti and Messori, 2020); and it should pass the scrutiny of European and international institutions on the sustainability of its public debt. Finally, the third aspect requires that the activation of the TPI does not lead to any increase in the ECB's balance sheet size.

At first glance, these three aspects bring the TPI close to the OMT (see Bini Smaghi, 2022). The mechanism and the incentive designs of these two instruments are instead different, if not opposite. The ECB is free to implement and suspend both programmes. However, the OMT can be activated by the ECB only if a country makes a formal preventive request to utilise this tool and is already enrolled in a European aid programme. Conversely, the ECB autonomously activates the TPI through a double discretionary decision: first, the poor-founded assessment that the spreads affecting the potential beneficiary countries exceed their structural riskiness; second, the sharing of other European institutions' scrutiny on the sustainability of the potential beneficiaries' public debt. The latter decision is also constrained by the compliance with the EU procedures and the RRF's commitments. However, for obvious reasons, these additional conditions will become binding only at the end of 2023 and 2024, respectively, whereas the upcoming risk of stagflation requires that the TPI be immediately operative.

The invariance in the size of the ECB's balance sheet justifies why the analysed weaknesses of the TPI's mechanism undermine its effectiveness. As in the case of the OMT, the TPI's cogency depends on its ability to credibly present the threat that the ECB is ready to surprise markets investors. However, the OMT's threat is credible as it is based on clear rules not influenceable by the market and is, thus, compatible with the ECB's "forward guidance"; instead, the TPI's threat is based on the ECB's discretion and its consequent abandonment of any "forward guidance." Moreover, unlike the OMT, the TPI's incentive design cannot be based on an unlimited purchase of public bonds. As we already stressed, TPI does not only require a sterilisation of purchases in terms of the monetary policy stance, but it should leave the ECB's balance sheet unchanged. This means that any purchase of public bonds must be compensated by a corresponding sale of other assets already held by the ECB. Private investors are aware that the amount of these last assets is limited and that the saleable portion of some of them is constrained. Hence, whereas the OMT makes any "short position" based on the redenomination risk a losing bet, the TPI can incentivise the financial investment aimed at widening fragmentation in the euro area financial market.

6. CONCLUSION

Our analysis has shown that the challenge currently faced by the ECB is hard to handle: the euro area monetary policy should be able to put supply-led inflation pressure under control without triggering a recessionary trend fed by the combination of various adverse exogenous shocks. Our proposed thesis is that a possible way to achieve this difficult result, thus avoiding the incoming stagflation in the euro area, would have been to increase policy interest rates in the second half of 2021 and the first half of 2022 and to postpone the end of the net asset purchase programmes. This sequence would have allowed for the reproduction, in a different economic phase and with a consequent different combination of the policy tools, of that policy mix that was so effective in responding to the pandemic shock: a well-balanced combination of monetary policy and national and centralised fiscal policies.

As it is well known, the ECB followed a different sequencing: it ended the net asset purchase programmes between March and June 2022, and it started to increase its policy rates in July 2022. Not surprisingly, from our point of view, this sequencing has increased the risk of euro area financial market fragmentation as a signal of the rising risk of stagflation. In reacting to this trend, the ECB Governing Council decided to launch an anti-fragmentation tool: the TPI. However, we have shown that this new tool can lead to counter-productive results.

Here it would be useless to further discuss the TPI's future effectiveness. We should first wait for its implementation and its consequent actual results. Unfortunately, the incoming euro area stagflation will urge the TPI's activation in the near future. This stagflation will likely cause fragmentation in the financial market, which, in turn, will hinder an efficient transmission of the ECB's monetary policy through the usual channels. In that situation, it will become easy to check the strength or the weakness of the TPI's incentive designs. To conclude this paper, it is instead important to point out that, independently of the future assessment of the TPI's implementation, this mechanism could have a negative implication in terms of the ECB's accountability.

If our analysis is well-founded, the TPI represents a decisive step toward the ECB abandoning any forward guidance to maximise its ex-ante discretionary power. This implication would mark a break in the ECB's governance. The approval of the LTRO, the launch of the OMT, the recourse to the various forms of TLTRO and to the net asset purchase programmes were compliant with an ex-ante transparent set of rules. The LTRO was determined by a refinancing supply curve with an infinite elasticity at a given policy interest rate. The possible activation of the OMT in favour of a given Member State was subordinated to its preventive enrolment in a European aid programme. The TLTRO's refinancing conditions changed through time but were unambiguously anchored to banks' lending activities; and APP and PEPP were constrained to specific envelopes and predetermined allocations. Thus, a third party entitled to the ex-post control of the ECB's compliance to its commitments and mandate (as specified by the European Treaties) can utilise these ex-ante rules as an objective term of reference for its verification process. Conversely, the TPI's activation would depend on a decision taken by the ECB in a discretionary way. Hence, a third party would lose any objective term of reference and should base its ex-post control on arbitrary judgments. Thus, the effectiveness of this control would be dramatically weakened.

This consideration implies the return to a fundamental question. Can a technocratic body, such as a central bank, maintain its independence and – at the same time – act in an ex-ante discretionary way with only ex-post controls? If we are right in maintaining that, in the case of the TPI's activation, the ex-post controls would be deprived of any objective reference, it will not be easy to answer this question. The point can be illustrated by referring to the series of "Monetary Dialogue papers" requested by the ECON Committee in preparation for the regular hearings of the ECB's President at the European

Parliament. In the case of the TPI, this procedure would lose a large part of its interest because the consequent hearings would risk being reduced to a confrontation of convergent or divergent subjective assessments on some discretionary action already achieved.

This example allows for a more general observation. Let us assume that most of the members of the European Parliament in charge of ex-post control of the ECB's actions have a dissenting position towards the monetary policy strategy implemented through the TPI. Given the lack of any objective term of reference to assess the roots of this dissenting position, it would become highly controversial to impose an ex-post drastic revision of the ECB's strategy and the cancellation of the TPI's impact. Given the impossibility to check if the related TPI intervention deviated from an ECB's ex-ante commitment, the solution of this case would very likely lead to a lose-lose equilibrium: by stating the predominance of the European Parliament's position, the ECB's independence would be compromised; conversely, by stating the predominance of the ECB's position, the central bank's independence would be equivalent to a lack of accountability.

Our analysis leads to an unsolved trilemma. It shows that, in the euro area, it seems impossible to design an independent central bank which can act in an ex-ante discretionary way thanks to a given policy tool, and which is thus accountable only thanks to ex-post controls. Our previous analysis stresses that a more effective exit from this unsolvable trilemma is to abandon the ECB's ex-ante discretion strategy and re-establish ex-ante rules, independently decided and announced by the ECB but compliant with the central bank's mandate as specified by the Treaties. The implication is that the TPI should be conceived as an unfortunate bump in the ECB's road, to be confined to the background and never implemented. Instead, the ex-ante new rules should be founded on an effective combination of the stance of the ECB's monetary policy and those EU centralised and national fiscal policies needed to respond to the stagflation.

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The European Central Bank (ECB) is facing a dangerous trade-off between the control of supply-led inflation and the need to avoid a further recession in the euro area. The paper argues that an effective ECB monetary strategy to handle this trade-off would have been to anticipate the increase in the policy interest rates and to postpone the end of the asset net purchase programmes. The ECB did not follow this sequence, which is why its current monetary policy, bound in a difficult balance, risks favouring a euro-area stagflation and financial market fragmentation. The new anti-fragmentation instrument (TPI) introduced by the ECB appears ineffective and subject to excessive discretion. The ECB should instead pursue a compelling combination of its rules-based monetary policy with EU centralised and national fiscal policies.

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