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The ECB's Mandate: Perspectives on General Economic Policies

Compilation of papers





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This document was requested by the European Parliament's committee on Economic and Monetary Affairs.

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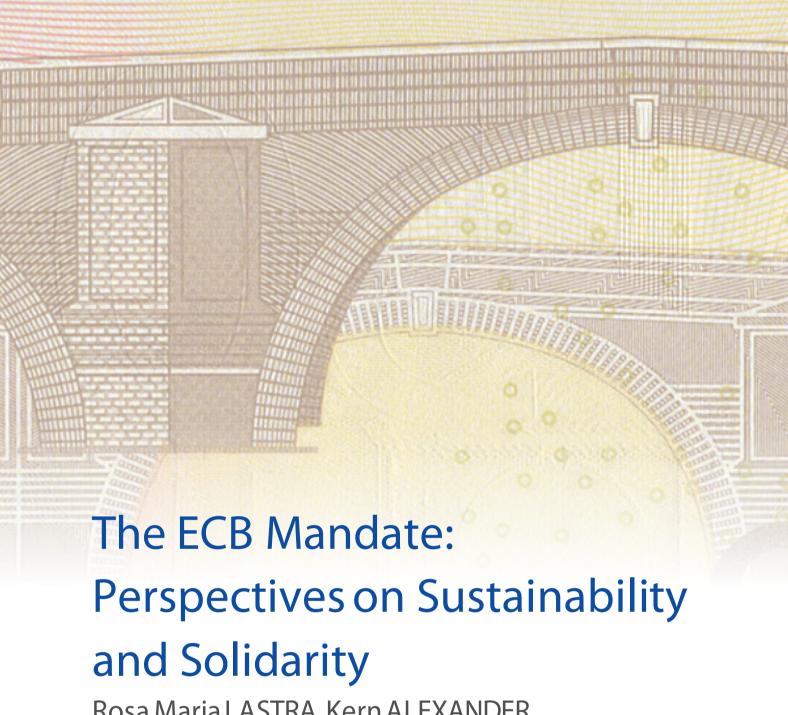
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Rosa Maria LASTRA, Kern ALEXANDER



Abstract

This report analyses the ECB mandate in light of its primary objective of price stability along with its secondary objective to support the general economic policies in the Union (Article 127 TFEU), which include employment, growth, climate change, and the quality of the environment, bearing in mind the broader goals of sustainability and solidarity (Article 3 TEU). The pursuit of financial stability directly interacts with the price stability mandate.

This document was provided by the Policy Department for Economic, Scientific and Quality of Life Policies at the request of the committee on Economic and Monetary Affairs.

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LIST OF ABBREVIATIONS

CJEU Court of Justice of the European Union

COVID-19 Coronavirus crisis

ECB European Central Bank

EMU Economic and Monetary Union

EP European Parliament

ESCB European System of Central Banks

GFC Great Financial Crisis

IMF International Monetary Fund

LoLR Lender of Last Resort

LTROs Long-Term Refinancing Operations

MEP Member of European Parliament

NGFS Network for Greening the Financial System

NCBs National Central Banks

PELTRO Pandemic Emergency Long-term Refinancing Operation

PEPP Pandemic Emergency Purchase Programme

PSPP Public Sector Purchase Programme

QE Quantitative Easing

SSM Single Supervisory Mechanism

TEU Treaty on European Union

TFEU Treaty on the Functioning of the European Union

TLTRO Targeted Long-term Refinancing Operations

EXECUTIVE SUMMARY

- As part of its monetary policy strategy review, the European Central Bank (ECB) is reassessing how its monetary policy tools to achieve its primary objective of price stability should take account of "other considerations, such as financial stability, employment, environmental sustainability" in accordance with Article 127 TFEU and Article 3 TEU.
- This paper considers the ECB's legal mandate and whether it is adequate to manage the economic and financial risks associated with unsustainable activity, including climate change, financial crises and pandemics like COVID-19. It argues that the potential consequences of these risks for the economy and for the financial sector in particular fall squarely within the ECB's mandate to support the economic policies in the EU and that they interact with the primary objective of price stability.
- Regarding monetary stability, we recommend that the ECB focus on low and stable inflation as a priority, but also support a sustainable growth rate that is defined as such over the long-term. The ECB should support national governments in considering how monetary measures can be used to help provide credit to support climate adaptation and mitigation strategies and to address the economic damage caused by the COVID-19 crisis, in line with the principle of solidarity, but within the confines of the Article 123 (1) Court of Justice of the European Union (CJEU) jurisprudence.
- Financial stability considerations suggest that central banks should go further than this, to positively promote a transition to a sustainable and hence lower carbon economy, as part of their primary objectives. The full recognition of the ECB's secondary objectives, to support the EU's wider economic policies, can be invoked as necessary, including deciding what tools can be used to stabilise the banking sector in response to the COVID-19 crisis.
- The ECB's role as a bank supervisor will be important for ensuring that authorised firms are identifying and managing environmental and social risks. For instance, the ECB can help banks build stress tests based on forward scenarios that will help the industry judge what its capital and liquidity requirements should be in the face of future threats to stability caused by environmental or social phenomena.
- The paper concludes, however, that EU institutions and Member State fiscal authorities have the primary role to play managing economic policy to address these risks because of their control over taxation, expenditure, legislation and regulation. Nevertheless, the ECB must take environmental, social and economic sustainability into account to the extent that these secondary objectives impact upon the primary price stability mandate. The ECB can facilitate a growing role for EU institutions and Member States to fill the governance gap in fiscal policy at the EU level by providing more economic backing to address environmental and social sustainability risks, particularly regarding the urgent need to adopt substantial measures to address the COVID-19 crisis.

1. INTRODUCTION

This report considers how the European Central Bank can play an important role in reducing the economic and financial risks arising from unsustainable activity, in light of climate change, financial crises and pandemics like COVID-19. We argue that the potential consequences of these risks – for the economy in general and for the financial sector in particular – fall squarely within the ECB's mandate, which includes its secondary objective to support the economic policies in the European Union, and that they interact with the primary objective of price stability.

Although the ECB has an important role in addressing these risks, we claim that EU institutions and Member State fiscal authorities have the primary role to play managing economic policy to address these risks because of their control overtaxation, expenditure, legislation and regulation. Nevertheless, it is submitted that the ECB must take environmental, social and economic sustainability risks into account, both as part of its secondary objective and because they can impact upon the price stability mandate.

Also, of particular relevance in the context of the ECB's operations is the contribution to financial stability (Article 127.5 TFEU). As the great financial crisis (GFC) and subsequent sovereign debt crisis in the euro area evidenced, financial instability impairs the normal transmission mechanism of monetary policy. Actions to combat systemic risk in financial markets are an integral part of the central bank's armoury to achieve price stability.

The evolving nature of central banking helps us frame the questions posed to us by the European Parliament (ECON Committee), namely: (1) how the ECB's primary price stability objective interacts with the secondary objectives, namely the general economic policies of the Union, in accordance with Article 127.1 TFEU and (2) how the ECB should fulfil its broad mandate as defined by Article 3 TEU, in particular with regard to climate change.

The European Parliament requested this assignment on 6 March 2020, before the World Health Organization declared COVID-19 to be a pandemic on 11 March and before many of the unprecedented measures of economic and monetary support in the EU and around the world were announced. While pre-COVID-19, the emphasis on climate change and sustainability was part of the monetary policy strategy review launched by President Lagarde, the unprecedented nature of the pandemic has brought a new dimension to the role of the ECB.

The COVID-19 crisis provides a vivid example of the challenges that the ECB and other central banks (as well as public authorities) confront when dealing with unforeseen circumstances of such magnitude: an unprecedented public health crisis which constitutes both a demand shock and a supply shock to the economic system of gargantuan proportions and, in the case of the EU responses, questions the very commitment by Member States to deeper monetary and economic integration and evidences the need for solidarity. After all, the support of the general economic policies of the Union also includes solidarity in accordance to Article 3 TEU.²

The effectiveness of the ECB's response to the COVID-19 will depend on the economic leadership of EU institutions and Member States in providing financing and related resources to the countries most affected by the crisis. On 23 April 2020, the European Council approved the Eurogroup's EUR 540 billion

We would like to thank Annina Melliger for assistance in production and style formatting of the report.

Further to Aricle 3 TEU, the solidarity clause of Article 222 (1)(b) TFEU states that:

[&]quot;The Union and its Member States shall act jointly in a spirit of solidarity if a Member State is the object of a terrorist attack or the victim of a natural or man-made disaster. The Union shall mobilise all the instruments at its disposal, including the military resources made available by the Member States. to:

⁽b) assist a Member State in its territory, at the request of its political authorities, in the event of a natural or man-made disaster. "

rescue package consisting of European Stability Mechanism credit lines, investment capital from the European Investment Bank and the European Commission's temporary Support to mitigate Unemployment Risks in an Emergency (SURE). They also agreed to create a Recovery Fund and mandated the Commission to spell out the details and the amount and sources of funding.

The COVID-19 public health crisis brings again to the fore the contours of monetary policy, exposing the asymmetry between a centralised monetary policy and decentralised fiscal policies in the euro area. We contend that any future EU economic recovery programme will necessitate significant support and involvement of the ECB, within the boundaries of the Treaty provisions.

The overarching purpose of our report is thus to analyse how the ECB's mandate can be interpreted in light of its primary objective of price stability along with its secondary objective to support the general economic policies of the Union, including employment, growth, climate change and the quality of the environment, bearing in mind the broader goals of sustainability and solidarity and the importance of financial stability. In short, how can we reconcile the pursuit of secondary objectives while not sacrificing price stability?

Understanding the ECB's mandate is a very important question which is being increasingly raised, not just by campaigners, but by the central banks themselves.³

³ Draghi, 2020; Lagarde, 2019; Prudential Regulation Authority, 2018; Cœré, 2018; Debelle, 2019.

2. HISTORY OF CENTRAL BANK OBJECTIVES

While the *raison d'être* for establishing the first central banks (Swedish Riksbank in 1668 and Bank of England in 1694) was government finance, the objectives of central banks have changed overtime. The Federal Reserve System was founded in 1913 in response to the damaging banking crises at the beginning of the twentieth century in the US, and it was entrusted with powers to act as lender of last resort - discount window - and to supervise banks. The main rationale for the creation of the Bundesbank in 1957 in Germany was price stability, a mandate which was 'inherited' by the ECB in 1999. Following the GFC of 2008, the rediscovery of financial stability as a key central bank objective (as well as being an objective for the government and for financial regulatory and supervisory agencies) has inspired legislative reforms around the world.

In the UK, financial stability is a statutory objective of the Bank of England on a par with price stability (twin mandate) while in the case of the ECB, given the hierarchy of objectives established in Article 127 TFEU (with price stability as the primary objective), the establishment of the Single Supervisory Mechanism and the responses to the dual financial and sovereign debt crisis in the euro area have been adopted within that Treaty framework (Article 127.5 refers to financial stability and Article 127.6 is the enabling clause for prudential supervision) and, despite its importance, financial stability is subordinate to price stability according to the Treaty. As explained below, the very wording of Article 127 of the Treaty is much more precise when it comes to the objective of price stability than when it comes to the other objectives.

In the US, the history of the Federal Reserve System illustrates the viciss itudes of monetary and financial developments. While during the Great Depression and its immediate aftermath the emphasis was on growth and employment, not on controlling inflation (not dissimilar to the economic situation in the aftermath of the GFC), the 'oil shock' in the 1970s destroyed the post-war pattern where governments had tried to buy a little more growth with a little more inflation (Philips curve), instead entrenching price stability as their primary concern.

Empirical evidence and theory suggest that independent central banks do a better job than politicians at controlling inflation. ⁵ Governments needed a brake to avoid taking destructive actions when the siren of inflationary temptation appeared, and like Ulysses at the mast, central banks around the World were granted independence to achieve inflation control. One goal: price stability, one instrument: monetary policy was the recipe adopted almost universally.

Up until the GFC, the solution adopted by the political authorities in many countries was to pursue growth and employment directly through fiscal policy and other instruments of economic policy—typically under political instruction—and to delegate the mandate of price stability and the conduct of monetary policy to an independent central bank. This model relied upon the pursuit of one goal: monetary stability; using one instrument: monetary policy. In the eyes of many central banking experts, since monetary policy was essentially a single instrument, it could not simultaneously be assigned to more than one objective. This is known as the **Tinbergen Rule** (named after Nobel Laureate Dutch economist, Jan Tinbergen), ⁶ which states that for each and every policy target there must be at least one policy tool. If there are fewer tools than targets, then some policy goals will not be achieved. If a monetary tool is assigned two objectives, for example, it is unlikely to achieve both and may end up achieving neither because of the related compromises necessarily involved. According to this line of thought,

⁴ See generally Lastra, 2015, ch 2 and 7 and Goodhart, 1985.

See Lastra, 1996, pp 13–24, for a broader explanation of the arguments for and against central bank independence, and Lastra, 1992, 476–82.

⁶ Tinbergen, 1952.

monetary tools are best suited to achieving price stability, while other policies and mechanisms should be applied to other objectives. Tinbergen's (1952) rule that the number of achievable policy goals cannot exceed the number of policy instruments suggests that a mechanical monetary policy rule targeting price stability can fail to achieve the objectives of full employment and price stability.

But, as with any economic theory, it had some fault lines. The first one refers to the primacy of the goal of controlling inflation in all circumstances. The second fault line refers to the measurement of inflation. Following Goodhart's law, any observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes, the measurement of inflation based on the Consumer Price Index (CPI) largely ignored asset prices, in particular house prices, thus being unable to identify and combat the 'elephant in the room', that is a large asset price bubble that eventually burst in August 2007.8

The emphasis on price stability is a development that needs to be understood in a historical context: that provided by the country experiences, economic policies, and economic thinking which prevailed in the second half of the twentieth century. This development has had important legal implications nationally and internationally, particularly in the 1990s, as a substantial number of domestic laws as well as some international treaties (most notably the Maastricht Treaty on European Union) made this objective the primary goal of central banks and monetary agencies just as a number of provisions have been elaborated to hold those institutions accountable for their success (or failure) in pursuing this goal.

In the twenty-first century we need a rebalanced framework of macroeconomic policy, with fiscal policy regaining part of its earlier role.

Goodhart, 1985.

⁸ Goodhart, 2016.

THE ECB'S MANDATE 3.

As discussed above, since the GFC, central bank mandates with a primary objective of price stability have either been explicitly expanded by new legislation to incorporate financial stability as the 'twin mandate' and with it a range of supervisory functions. The EU Member States voted in 2012 unanimously in Council, based on Article 127 (6) TFEU, to grant the European Central Bank supervisory powers for credit institutions (banking groups). The ECB's responsibilities under the Treaty also extend to overseeing payment and settlement system, which is also a basic task of the ECB in accordance with Article 127(2) TFEU. The ECB's wide-ranging competences raise the important issue to what extent its powers can support the general economic policies of the Union.

The GFC changed the traditional understanding of the instruments of monetary policy, adapting the conventional tools, namely, open market operations, discount policies and reserve requirements, and adding a range of unconventional measures9 - all using instruments foreseen by the Treaty and the Statute of the ESCB but never used in this way, or to this extent in the past - including credit support, credit easing (long-term refinancing operations, LTROs), interventions in foreign exchange and securities markets, provision of liquidity in foreign currency (swaps), negative interest rates and forward quidance and, most significantly, quantitative easing (QE). Resorting to 'central bank balance sheet policy' has brought monetary policy into uncharted territory.

The ECB's primary objective: price stability 3.1.

Monetary stability has an internal dimension (stability of prices within a given jurisdiction) and an external dimension (the value of the currency vis-à-vis other currencies). Monetary stability can be defined in positive terms or in negative terms. In positive terms, monetary stability refers to the maintenance of the internal value of money (ie, price stability) as well as of the external value of the currency (i.e., the stability of the currency vis-à-vis other currencies, which is, in turn, influenced by the choice of exchange rate regime). 10 In negative terms, monetary stability refers broadly to the absence of instability (erratic or unanticipated movements) in the level of prices. When it comes to price stability (internal dimension of monetary stability), the phenomenon of deflation can cause as much 'instability' as inflation.

Price stability became the prime responsibility of a modern central bank with the generalised acceptance of central bank independence as an instrument in the pursuit of such objective. In developed countries it usually involves targeting it directly. 11 The primary objective of the ECB is price stability (internal dimension of monetary stability). This mandate is set forth in clear terms in Article 127 (1) of the Treaty on the Functioning of the European Union (TFEU):

"The primary objective of the European System of Central Banks (hereinafter referred to as 'ESCB') shall be to maintain price stability. Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Union with a view to contributing to the achievement of the objectives of the Union as laid down in Article 3 of the Treaty on European Union."

Lastra 2015, chapter 7.

Lastra 2015, chapter 2. The stability of exchange rates and the issue of which is the best exchange rate arrangement for a given country (fixed, floating, or some version of managed float) remain a matter of great controversy in the economic literature. Since monetary laws tend to reflect the prevailing economic theories of any given time (path dependency) and since the pendulum has shifted from fixed to floating and back to fixed with all sorts of variations in between (managed float, dirty floating, fixed but adjustable), the law tends to refer to the external dimension of monetary stability (the stability of the currency) in rather ambiguous terms.

IMF 2019.

Whilst Article 127(1) establishes the primacy of the price stability mandate, it does not give a precise definition of what is meant by price stability. The ECB's Governing Council announced a quantitative definition of price stability: "Price stability is defined as a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2%" and clarified that, in the pursuit of price stability, it aims to maintain inflation rates "below, but close to, 2% over the medium term." Though movements (measured in percentage rate of change) in consumer price indices or retail price indices have generally been used as a measurement of inflation, in recent years there has also been a debate about the importance of other economic indicators to measure inflation (such as a nominal gross domestic product target). Some economists have expressed concerns about the limitations of using as measures of inflation price indices of currently provided consumer goods and services. Goodhart, for instance, suggested some time ago that an analytically correct measure of inflation should take account of asset price changes, in particular of housing prices and of changes in financial asset prices. In any case, price stability refers both to inflation (rising prices) and to deflation (falling prices).

The basic economic thinking behind setting price stability as the primary objective of the ESCB's monetary policy is that it is the task of other economic actors to deal with the growth potential of the economy, and that assigning to monetary policy an objective for real income or employment is problematic. Stable prices are a pre-requisite for longer term economic prosperity.

The wording of Article 127(1) TFEU is heavily influenced by Article 12 of the 1957 Bundesbank Law, which was the subject of academic controversy in Germany, with one author referring to it as the 'squaring of the circle'.¹⁴

Price stability is not only the primary objective of the ESCB. It is also one of the objectives of the Union, according to Article 119(2) TFEU and to Article 119(3) which states that stable prices shall be one of the 'guiding principles' of the Union. It is interesting to observe that Article 119(2) TFEU refers to price stability as being the primary objective both for the 'single monetary policy' and for 'exchange rate policy'. But, as stated above, the price stability mandate refers to the single monetary policy.

The Treaty establishes a clear hierarchy of objectives and assigns overriding importance to the objective of price stability, reflecting the consensus that stable prices are essential to achieve a favorable economic environment and a high level of employment. This is in line with the Tinbergen Rule ¹⁵, mentioned above, which states that for each and every policy target there must be at least one policy tool.

3.2. ECB's secondary objectives

Article 127 TFEU makes clear reference to Article 3 (paragraph 3) of the TEU that defines broadly the ESCB's secondary objectives to support the economic policies of the Union as follows:

"The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of

http://www.ecb.europa.eu/mopo/strategy/pricestab/html/index.en.html; In the Weiss case [Weiss and others v ECB, Case C- 493/17], the CJEU agreed that the 2% interpretation was fine, saying it is for the ECB to the decide and that 2% does not appear manifestly erroneous.

See Goodhart, 1999. Few economists have contributed as much to the history and understanding of central banking in theory and practice as Charles Goodhart has. For long relegated to the abstruse universe of the specialist, central banking has now come to the front of economic policy debate. This process has been facilitated in no small way by the writings, teachings, and policy advice of Charles Goodhart.

¹⁴ See Stern, 1980,

¹⁵ Tinbergen, 1952.

protection and improvement of the quality of the environment. It shall promote scientific and technological advance.

It shall combat social exclusion and discrimination, and shall promote social justice and protection, equality between women and men, solidarity between generations and protection of the rights of the child.

It shall promote economic, social and territorial cohesion, and solidarity among Member States.

It shall respect its rich cultural and linguistic diversity, and shall ensure that Europe's cultural heritage is safeguarded and enhanced."

The Treaty provisions are less clear in defining the ECB's role in supporting the broad general economic policies of the Union – also known as the ECB's 'secondary objectives.' While the GFC evidenced the importance of financial stability, attention during the COVID-19 crisis has turned to the objectives of growth and employment as well as the principle of solidarity.

Financial stability was not considered at the time the Maastricht Treaty was signed as relevant as the 'primary' goal of price stability. ¹⁶ Indeed, while the wording of the latter is crystal clear: "The primary objective of the European System of Central Banks shall be to maintain price stability", the language of Article 127(5) is much less forceful: "The ESCB shall contribute to the smooth conduct of policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system". Of course, the law simply reflected the division of responsibilities at that time.

The 'basic' task conferred onto the ECB was monetary policy (one goal: price stability, one instrument: monetary policy) while prudential supervision remained decentralised at the level of the Member States.

However, there is now a consensus that the neglect of financial stability considerations in the years leading up to the crisis was one of its causes. But the ECB's role in financial stability (recognised in Articles 127(5) TFEU and 3.3 of the ESCB Statute) is not an exclusive role. Other Member State authorities and European committees and bodies as well as national authorities also have responsibility for financial stability. The pursuit of financial stability transcends geographic boundaries and institutional mandates. It is a fundamental public good for the euroarea and also for the single market in financial services.

The other condition mentioned in Article 127(1) TFEU, namely to act in accordance with the principles of an open market economy with free competition and favouring an efficient allocation of resources, and in compliance with the principles set out in Article 119 TFEU is a generic statement of respect for market economics in the workings of the ESCB. ¹⁷ Because of this 'generic' nature it is difficult to hold the ECB accountable for its performance in the pursuit of this goal. Accountability is facilitated when there is one goal, rather than multiple goals and when that goal is narrowly defined rather than formulated in broad terms.

In the euro area, the different jurisdictional domains make it difficult to reconcile the pursuit of the primary and the secondary objectives. As we have already noted, whilst price stability in the euro area is a Union objective pursued by a single centralised monetary policy, the pursuit of the secondary objectives relies upon decentralised fiscal policies (subject to coordination) and upon some (limited)

..

¹⁶ See Lastra, p 1265.

 $^{^{\}rm 17}$ $\,$ As it is for the Union and the Member States under Arts 119 and 120 TFEU.

common mechanisms and funds whose adequacy to confront the COVID-19 crisis is currently being tested. In contrast, in countries such as the UK, where the jurisdictional domain of monetary and fiscal policy is aligned, the support of the economic policy of Her Majesty's Government, including its objectives for growth and employment, is aligned with the price stability mandate or primary objective of the Bank of England in terms of jurisdiction.¹⁸

¹⁸ Teneyro (2020), p. 5.

4. WHAT CAN THE ECB DO TO ADDRESS SUSTAINABILITY RISKS?

Based on the experience of previous crisis episodes, and the COVID-19 pandemic, it can be observed in the presence of instability, that the resources of governments and central banks alike become devoted to short-term crisis management. That is probably the easiest way to lose sight and control of any longer-term sustainability agenda. Indeed, one of the main motivations for low and stable inflation is precisely that it enables economic agents to concentrate on matters related to real outcomes and long-term planning without being distracted by the costs of inflation or short-term volatility in the economic cycle. Central banks must not compromise on their core objective of monetary stability. Sound monetary and financial control is a pre-requisite for a long-term sustainable economy.

4.1. The ECB as a bank supervisor

The European Banking Union is arguably one of the most significant EU projects since the creation of the euro. The Banking Union was designed to restore the financial health and stability of the European banking system and to sever the link between weak euro area banking systems and fragile sovereign debt finances. ¹⁹ The Banking Union consists of three pillars: the Single Supervisory Mechanism (SSM), the Single Resolution Mechanism (SRM), and the European Deposit Insurance System (EDIS). The SSM forms the supervisory pillar for credit institutions of the European Banking Union and empowers the ECB to carry out prudential supervision of credit institutions and certain financial holding companies that are established in participating Member States. ²⁰

Broadly speaking, regulation consists of the setting of principles, rules and standards, whilst supervision involves monitoring and surveillance of institution compliance along with investigations and enforcement. ²¹ Both have a role to play in identifying sustainability risks that affect banking sector stability. Under the SSM, the ECB is a bank supervisor responsible for oversight and surveillance of individual credit institutions but does not promulgate the regulatory and technical implementing standards adopted by the European Banking Authority. The European Commission adopted a Sustainable Finance Action Plan in 2018, ²² which proposed amendments to the Capital Requirements Directive V that delegate authority to the EBA to undertake assessments of the materiality of sustainability risks and to recommend how they should be included in prudential regulatory requirements (such as exposure limits) and for the EBA to report back to the Commission regarding several categories of risks between 2021 and 2025. ²³ This could potentially lead to amendments to the EU bank regulatory rulebook that the ECB is required to apply as bank supervisor.

These developments at the EU level will have implications for how the ECB carries out its supervisory responsibilities under the SSM, particularly how it plans to carry out changes to incorporate climate and other sustainability risks into its supervisory review enhancement programme and what its input is likely to be in the forthcoming EBA Reports that will assess the materiality of these risks. Indeed, the

Council Regulation (EU) 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions [2013] OJ L287/63 (SSM Regulation); European Parliament and Council Regulation (EU) 806/2014 of 15 July 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund and amending Regulation (EU) 1093/2010 [2014] OJ L225/1 (SRM Regulation).

²⁰ Alexander (2020) pp 28-31, and Lastra (2015) Chap 10.

See Lastra (1996) chap 2 and Lastra (2015) chap 3 for the difference between supervision and regulation.

²² European Commission, 2018. See also, Alexander and Fisher, 2019, pp 17-19, arguing that the EU prudential rulebook should remain risk based if and when it includes sustainability risk measures to calculate regulatory capital.

The CRD V instructs to the EBA to report - by 28 June 2021 on inclusion of ESG risks in the SREP (Article 98 (8) CRD V) [and] - by 28 June 2025 "whether a dedicated prudential treatment of exposures related to assets or activities associated substantially with environmental and/or social objectives would be justified", 'if appropriate' followed by a legislative proposal from the Commission ... (Article 501 c CRR 2). The CRR 2124 provides for - disclosure of ESG risks, as defined by the EBA report, by large institutions as of 28 June 2022 "on an annual basis for the first year and biannually thereafter" (Article 449a CRR 2). See also, Smits (2020).

ECB's expectations for banks regarding how they manage the financial risks associated with sustainability are evolving. The ECB is a member of the Network for Greening the Financial Sector (NGFS) and its contribution to that forum should be monitored by the European Parliament in order to gauge how it might fulfil its supervisory responsibilities in this area and to assess the scope of its mandate as a European institution bound to provisions such as Articles 11 and 13 TFEU, and to its very own secondary objective which refers to Article 3 TEU. In this regard, the chairman of the NGFS, Frank Elderson, stated in the NGFS Annual Report 2019 that:

"Currently, the Coronavirus and its consequences seem to overshadow everything else and, no doubt, they require coordinated action. However, even in this crisis, we should not lose sight of the fact that climate change stays an urgent and vital issue. Hence, the NGFS members' strong response to continue their collective contribution to the greening of the financial system is key. The greener the recovery from the current crisis is, the better." ²⁴

4.2. Article 123 – prohibition on monetary financing and the ECB's independence

Member State governments are primarily responsible for setting and implementing economic policy to achieve environmental and social sustainability objectives. The economic costs of the GFC and the Eurozone sovereign debt crisis in 2012, however, burdened many euro area governments with high national debt levels which increasingly limit their capacity to pursue general economic policies, including measures to mitigate climate change and pandemic-induced health and economic risks.

The Eurosystem's exclusive responsibility for monetary policy in the euro area is backed by a strong declaration of independence. Central bank independence enhances the credibility that is necessary for the effectiveness of monetary policy operations. Article 130 TFEU clearly indicates that the ECB and the NCBs in the performance of the tasks conferred upon them by the Treaty and the Statute are independent from both national instruction and from the instruction of other EU institutions. ²⁵ The ECB is answerable to the European Parliament and to the Court of Justice of the European Union. Article 263 TFEU and Article 35 of the Statute of the ESCB give exclusive jurisdiction to the CJEU to review the legality of the ECB's actions and decisions. Therefore, the ECB is not bound by the judgments of any national court (including the recent judgment of the German Constitutional Court that we further discuss below).

As part of its monetary policy responsibilities, the ECB has embarked on a number of asset purchase programmes in the post-crisis period involving the purchase of bank, sovereign and corporate bonds with the objective to stimulate bank lending and prevent deflation and a generalised economic downturn in the euro area. Some asset purchase programmes (i.e., the Public Sector Purchase Programme [PSPP] scheme) have faced legal challenges on the grounds that they violate Article 123 (1) TFEU's prohibition on monetary financing. Also the German constitutional court confirmed in its decision of 5 May 2020 (discussed below) that the PSPP does not violate Article 123 TFEU.

Article 123 (1) TFEU prohibits the ECB and the Eurosystem national central banks from financing a government obligation or task. It reads as follows:

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²⁴ NGFS (2020) 2.

The Treaty protects the independence of the ECB in strong terms vis-à-vis other EU institutions and national governments and bodies. Article 130 TFEU states: "When exercised the powers and carrying out the tasks and duties conferred upon them by the Treaties and the Statute of the ESCB and of the ECB, neither the European Central Bank, nor a national central bank, nor any member of their decision-making bodies shall seek or take instructions from Union institutions, bodies, offices or agencies, from any government of a Member State or from any other body. The Union institutions, bodies, offices or agencies and the governments of the Member States undertake to respect this principle and not seek to influence the members of the decision-making bodies of the European Central Bank or of the national central banks in the performance of their tasks."

"Overdraft facilities or any other type of credit facility with the European Central Bank or with the central banks of the Member States (hereinafter referred to as "national central banks") in favour of Union institutions, bodies, offices or agencies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States shall be prohibited, as shall the purchase directly from them by the European Central Bank or national central banks of debt instruments."

Article 123 (1) TFEU – together with Article 21.1 of the Statute of the European System Central Banks (ESCB) – thus prohibits the ECB from creating overdraftfacilities or credit facilities directly in favour of EU institutions, agencies, bodies or member states and regional public bodies, and prohibits the direct purchase by the ECB from Member States of debt instruments.

The prohibition of monetary financing in Article 123(1) TFEU is a cornerstone of EMU and is linked also to the principle of financial independence. While the ECB/ESCB's primary objective is to ensure price stability, the basis assumption of this objective is that statefiscal discipline be maintained. Because the financial obligations of the state can often jeopardise the financial independence of the central bank, the prohibition on monetary financing in Article 123 (1) contributes to the protection of ECB independence.

According to recent CJEU jurisprudence, ²⁶ the ECB can purchase Member State bonds as *indirect* measures to support the effective functioning of its monetary policy framework, but the CJEU made clear in the *Weiss* case that its use of such indirect measures are constrained by the principle of proportionality and that indirect measures involving the purchase of Member State bonds on the secondary markets cannot undermine the Member States' pursuit of a sound budgetary policy.²⁷ In *Weiss*, the CJEU considered the legal validity of the ECB's Public Sector Purchase Programme (PSPP) by interpreting Article 123 (1) to meanthat it prohibited all financial assistance from national central banks that are members of the ESCB to a Member State; but this prohibition does not preclude, generally, the possibility of ESCB members purchasing from the creditors of such state bonds previously issued by that State. ²⁸ In approving the ECB's PSPP programme, involving the purchase of Member State bonds on the secondary market, the CJEU approved the ECB's practice of purchasing the bonds in a flexible manner by "allowing forfluctuations in the distribution of purchase flows over time, across asset classes and among jurisdictions". ²⁹

The CJEU, however, held that Article 123(1) TFEU imposes two limits on the national central banks when it adopts a programme that may involve indirect financing of public authorities and bodies of the Union and the Member States. First, according to *Gauweiler*, the NCB cannot validly engage in indirect

Weiss and others v ECB (Case C- 493/17). See also, Judgment of 16 June 2015, Gauweiler and Others, C- 62/14, EU:C:2015:400. See discussion in Grund, 2020.

²⁷ The wisdom of asset purchases and quantitative easing (QE) programs and the fiscal consequences of such purchases has been questioned by a number of voices. For a recent discussion in the US see Selgin, 2020, and in the UK see Bateman, 2020.

The circumstances in the UK and US are however very different from those in the EU/euro area and not only because of the different jurisdictional domain (discussed above) but also because the prohibition of monetary financing impedes the ECB to act as direct or indirect fiscal arm of EU institutions/Member States. In contrast, under US law, Congress and the Treasury can direct the Fed - in times of crises - to buy US Government bonds and to provide indirect fiscal support, like the loan guarantees in the SBA programme, and under UK law, the so-called Way and Means facility can also be extended.

In considering the role of central bank asset purchases and other forms of QE that further increase the total amount of liabilities held by central banks, some economists point out that there should be a degree of caution regarding the eventual need to offload the debt that is currently being accumulated on central bank balance sheets.

See De Larosière, SUERF Policy Note 148, 2020: "The idea that states can compensate for everything by exposing their balance sheets is unfortunately, in part an illusion. Indeed, most States have fragile balance sheets with monumental debts and the extension – which some would like to see unlimited – of these financial capacities obviously raises the essential issue of the sustainability of deficits – except if one agreed that all incremental expenses were to end up for ever on central banks' balance sheets. However, such an approach would ultimately lead to the systematic monetisation of all deficits". https://www.suerf.org/policynotes/11613/reflections-on-the-health-and-financial-crisis

Weiss and others v ECB (Case C-493/17).

²⁹ Weiss and others v ECB (Case C- 493/17), para 133.

financing of a public authority or body of the Union or Member States if it would mean, in practice, that its intervention has an effect equivalent to that of a direct financing of public authorities and bodies of the Member States. Second, the NCB must build sufficient safeguards into its intervention to ensure that the latter does not fall foul of the prohibition of monetary financing in Article 123 TFEU, by satisfying itself that the programme comforms with the proportionality principle in that the measures in question are necessary to support the effective functioning of the ECB's monetary policy and that the measures are not such as to reduce the impetus which Article 123 (1) creates for Member States to follow a sound budgetary policy.³⁰

According to this reasoning, as long as the ECB acts within these limits, it can adopt other indirect measures involving, for instance, the purchase of 'green' bonds issued by corporates or the purchase of sovereign bonds on the secondary market which were issued by EU Member States to combat the economic and social damage of the COVID-19 crisis. But the proportionality principle suggests that the ECB should conduct an analysis that the particular measures it undertakes to promote a more effective monetary policy are suitable to those ends, and that they are necessary – that is, there are no less onerous measures available that do not possibly contravene Treaty prohibitions (eg., Article 123 (1) TFEU) – to achieve those ends, and that the measures' disadvantages (or costs) do not manifestly outweigh its advantages (proportionality *stricto sensu*).

In what appears to be a seminal decision on 5 May 2020, the German Constitutional Court,³¹ while rejecting the CJEU's decision upholding the PSPP programme in *Weiss* as *ultra vires* on the grounds that the CJEU failed to engage in a 'comprehensive' analysis of the economic effects and risks of the ECB's PSPB programme and whether it was necessary to achieve an effective monetary policy that supports price stability, it confirms that there is no violation of Art 123 TFEU in the PSPP. The press release of the German Constitutional Court clearly states that "the decision does not apply to PEPP" discussed below.

In a rare statement in response to the German Constitutional Court (press release No. 58/20 of 8 May 2020) the CJEU clarified that it "has jurisdiction to rule that an act of an EU institution is contrary to EU law. Divergences between courts of the Member States as to the validity of such acts would indeed be liable to place in jeopardy the unity of the EU legal order and to detract from legal certainty. Like other authorities of the Member States, national courts are required to ensure that EU law takes full effect".

4.3. The ECB's response to the COVID-19 crisis: legal implications

The scale of the COVID-19 crisis was highlighted by former ECB President Mario Draghi in a letter to the *Financial Times* in which he stated that the economic shock from coronavirus required "a significant increase in public debt" similar to that undertaken "in times of war". The ECB Governing Council has responded to the economic fallout of the pandemic by adopting on 12 March 2020 an an additional envelope for its asset purchase programme of EUR 120 billion until the end of 2020. 32 The ECB followed

³⁰ See Judgment of 16 June 2015, *Gauweiler and Others*, C- 62/14, EU:C:2015:400, Judgment of 16 June 2015, paragraphs 95 and 97, paragraphs 100 to 102 and 109.

The very definition of *monetary finance* in the legal literature is the subject of some controversy. In an illuminating *forthcoming* contribution Bateman (2020) explains the difference between direct and indirect varieties of monetary finance and links the legal and economic debate that surrounds the importance of sound budgetary policy.

The Bundesverfassungsgericht or BVerfG released its controversial judgement on 5 May 2020 https://www.bundesverfassungsgericht.de/SharedDocs/Pressemitteilungen/EN/2020/bvq20-032.html at a very sensitive political and economic time in Europe given the COVID-19 crisis. In any case, regarding Article 123 that the German Constitutional Court grudgingly accepts that PSPP might be in conformity with Article 123 TFEU, or rather, that it does not manifestly violate Article 123 TFEU. In this respect they emphasize the purchase limits and delays established by the PSPP to allow price discovery.

³² On 12 March 2020, the Governing Council also agreed to 13 additional Long-term Refinancing Operations (LTROs) providing bank funding at the very low deposit facility rate (currently -0.5%). For a legal commentary of the PEPP see Sebastian Grund at

this up by announcing on 18 March 2020 an additional asset purchase programme entitled the Pandemic Emergency Purchase Programme (PEPP) and further measures on 30 April 2020.

The PEPP significantly loosens the restrictions the ECB has previously imposed on its asset purchase programmes, given the dimensions of the challenge and that this is a very temporary and specific programme. On 30 April 2020, the ECB Governing Council announced forward guidance that it is "fully prepared to increase the size of the PEPP and adjust its composition, by as much as necessary and for as long as needed', and '[i]n any case it stands ready to adjust all of its instruments, as appropriate, to ensure that inflation moves towards its aim in a sustained manner, in line with its commitment to symmetry." ³³ Prior to the PEPP, ECB bond purchases were limited by its self-imposed rule that required them to be made in proportion to the relative size of each country's economy and its contribution to ECB capital, and the issue and issuer limit. Under PEPP, the ECB has a high degree of flexibility to purchase up to EUR 750 billion of additional bonds, including euro area sovereign bonds.

The PEPP is a proportionate monetary policy instrument established in response to the specific, extraordinary and acute COVID-19 crisis which is necessary for implementing the ECB's monetary policy following the government lockdown measures which are leading to a considerable contraction in economic activity. As stated in Recital 4 of the PEPP Decision: "This situation hampers the transmission of monetary policy impulses and adds severe downside risks to the relevant inflation outlook". Responding to critics who argue that this expansive bond buying programme might undermine the price stability objective, Mr Draghi wrote in the *Financial Times* that "given the present and probable future levels of interest rates, such an increase in government debt will not add to its servicing costs".

In addition, the ECB announced on 30 April that two ECB bank lending programmes would be utilised to combat the economic downturn. First, beginning in June 2020 and until June 2021, the ECB will lend to euro area banks at rates as low as minus 1 percent through its previously available targeted long-term refinancing operations (TLTROs). The minus 1 percent interest rate only applies until June 2021, regardless of the maturity of the operation. The TLTRO loans work by requiring banks to achieve certain targets in the volume of lending before they qualify to borrow at the minus 1 percent rate from the ECB. Second, the ECB announced a new series of non-targeted pandemic emergency longer-term refinancing operations (PELTROs) for banks that would become available in May until 2021. The PELTRO loans are designed to provide banks with "an effective liquidity backstop" by allowing them to borrow from the ECB at very low rates.

The ECB justifies the adoption of these indirect measures to ease credit conditions for euroarea banks as promoting the effective functioning of its monetary policy (normal transmission mechanism) and to respond to the price deflation caused by government lockdown measures in response to the COVID-19 crisis. They are designed to incentivise banks to lend more to businesses and individuals with the hope that this additional lending will create economic activity that will increase prices to the target level of about 2% retail price inflation.

Nevertheless, the ECB's adoption of these new programmes - the PEPP (involving indirect purchase of Member State bonds) and the TLTRO and PELTRO (involving negative interest rate loans for banks) – that ostensibly support the price stability objective may attract legal and policy criticism on the grounds that price stability is being used as a 'legal fig leaf' that obscures the underlying reality that the ECB is simply providing subsidies and credit support in a way that a EU fiscal authority would do if

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https://www.delorscentre.eu/en/publications/detail/publication/legal-compliant-and-suitable-the-ecbs-pandemic-emergency-purchase-programme-pepp/.

The PEPP decision was published in the Official Journal on 25 March 2020.

See https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L:2020:091:TOC. See also EP (2020); https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/648787/IPOL BRI(2020)648787 EN.pdf.

one were to exist at the EU level. It can be argued that the CJEU finally put an end to the use of wideranging indirect measures with its ruling in the *Weiss* case by holding that the proportionality principle should apply to determine the legal limits on the use of such tools and that proportionality requires that such tools are 'necessary' to achieve the price stability objective.

The ECB may be called to justify the PEPP, PELTRO and TLTRO programmes in light of the proportionality principle and the necessity test that must be met to show that these measures are necessary to ensure the effective functioning of its monetary policy and to meet the price stability objective. In favour of the legality of the PEPP, the logic of the Weiss case suggests that a decision of the ECB may be necessary (and valid) to achieve that objective from a monetary policy perspective while also having a beneficial impact on the Member States' fiscal objectives, such as lowering sovereign borrowing costs. The legal limitations with the ECB's use of wide-ranging indirect measures to achieve its price stability objective illustrates clearly the gap in EU fiscal policy governance and the need for bolder moves by EU political/fiscal authorities, particularly regarding how EU institutions decide to use the European Stability Mechanism and European Investment Bank to capitalise and manage an EU investment fund to support Europe's economic recovery from the COVID-19 crisis.

However, it is unclear whether EU institutions and Member States have the political will to meet the challenge. This is why the corona bond proposal has been sidelined by the Commission in its ongoing work for a Recovery Fund. If Germany, and other similar-minded Member States, does not want mutualisation of risk in policies, such as a cross-border deposit insurance scheme and in other areas of economic and social policy that involve the recycling of economic surpluses from more prosperous Member States to less prosperous (more directly impacted by COVID-19) Member States to address cross-border risks, then the whole euro area/ECB monetary and financial governance framework will never work efficiently or effectively because it will always 'bump-up' against legal constraints under the Treaty. A Treaty revision will be the best long-term solution. But in the short runwe must confront the devastating economic consequences of the pandemic.

Parallel with the monetary policy measures adopted by the ECB in March and April, the Council of Ministers agreed on 23 April 2020 a series of economic measures to be operational by 1 June 2020. According to this political agreement, Member States can use an enhanced 'pandemic' credit line with the European Stability Mechanism so that Member States can borrow up to 2 per cent of their gross domestic product on "direct and indirect" costs relating to the health crisis without any conditions attached regarding post-crisis macroeconomic reforms. The agreement also provides for increased capital of EUR 25 billion for the European Investment Bankthat can be leveraged for additional lending of up to EUR 200 billion for the real economy. The 'pandemic' credit line and investment fund represent an important step by EU Member States and EU institutions to provide economic support for the crisis-hit European economy.

³⁴ See https://www.consilium.europa.eu/en/press/press-releases/2020/04/23/conclusions-by-president-charles-michel-following-thevideo-conference-with-members-of-the-european-council-on-23-april-2020/.

Though the ESM Precautionary Credit Line (PCCL) can open the way for the operation of the OMT (Outright Monetary Transactions programme), there is controversy surrounding its conditionality and its efficacy, with different views amongst different Member States. Some economists have advocated a dedicated COVID-19 credit line within the ESM at https://voxeu.org/content/covid-credit-line-europe. As regards the European Investment Bank it has great potential to aid recovery through a focus on equity capital. (For a commentary see Gnan (2020), https://www.suerf.org/policynotes/11391/aeuropean-capitalization-and-development-fund-ecdf-to-facilitate-europes-post-corona-recovery).

Though this is beyond the scope of this paper it is important to note that funding via lending is not the best solution. Funding should come in the form of equity and be done by a dedicated public instrumentality. In the US, Saule Omarova and Robert Hockett have advocated a National Investment Authority. See Saule Omarova (2020) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3566462.

4.4. Financing a sustainable recovery fund

EU institutions and Member State policymakers should take the lead in adopting fiscal measures to mitigate the impact of the COVID-19 crisis and to rebuild the European economy by establishing a sustainable Recovery Fund. At its meeting of 23 April 2020 the Council also tasked the Commission to come up with proposals for such a Fund, and agreed that it should be financed as part of the EU's Multi-annual Financial Framework (MFF) in which the EU budgets hould increase from 1.2 to 2 per cent of the bloc's gross national income. In establishing such a Fund, account must be given to the prohibition in Article 125 (1) TFEU, the so-called no bail-out clause, that provides:

"The Union shall not be liable for or assume the commitments of central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of any Member State, without prejudice to mutual financial guarantees for the joint execution of a joint project. A Member shall not be liable for or assume the commitments of central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of another Member State, without prejudice to mutual financial guarantees for the joint execution of a specific project."

Article 125 (1) essentially prohibits the Union or Member States from assuming financial commitments of a Member State, including central governments, regional, local or public authorities, unless for a joint project. The CJEU analysed the scope of Article 125(1) in the *Pringle* case, 35 where it held that Member States can provide some financial assistance or share liabilities of a Member State as long as the assistance is attached to a commitment by the Member State to adhere to a sound budgetary policy. The CJEU ruled that Article 125 does not "prohibit the granting of financial assistance by one or more Member States to a Member State which remains responsible for its commitments to its creditors provided that the conditions attached to such assistance are such as to prompt that Member State to implement a sound budgetary policy.' This means that any agreement to share commitments of liabilities of a Member State(s) by Union institutions or other Member States is permissible if the assistance is accompanied by conditions that are such 'as to prompt the Member State to implement a sound budgetary policy".

Conditionality in the EU is a novel legal concept, that has found its way into the jurisprudence of the CJEU and into the ESM Treaty (an intergovernmental agreement). It is a concept borrowed from the IMF.³⁷

There is room in the Treaty to adequately respond to Covid-19.³⁸ The so-called 'emergency rule', Article 122 TFEU (which has been used as the legal basis for SURE, Support to mitigate Unemployment Risks in an Emergency) confers on the Union the power to grant *ad hoc* financial assistance to a Member State threatened by exceptional circumstances or natural disasters.

Article 122 (2) TFEU reads as follows:

"Where a Member State is in difficulties or is seriously threatened with severe difficulties caused by natural disasters or exceptional occurrences beyond its control, the Council, on a

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Judgment of 27 November 2012, *Pringle*, C- 370/12, EU:C:2012:756. The *Pringle* judgement, distinguishes between monetary and economic policy measures. See Lastra 2015, chapter 8.

³⁶ Case C-370/12 *Pringle*, para 132.

See Lastra, 2015, chapter 13. IMF conditionality is not a simple concept. There is hard conditionality and there is soft conditionality. And some facilities come with no conditionality. Likewise, in the EU there appear to be different interpretations of conditionality, with the Netherlands favouring a harder conditionality than France (lighter) or Italy (no) conditionality.

The flexibility clause (Article 353 TFEU) also provides room for manoeuvre. The interpretation of Article 125(2)TFEU with regard to Article 123 and 124 and the possibility of expanding the ECB functions according to Article 127(6)TFEU following the simplified revision foreseen in Article 48(6) TEU is another enabling provision.

proposal from the Commission, may grant, under certain conditions, Union financial assistance to the Member State concerned. The President of the Council shall inform the European Parliament of the decision taken."

It is clear in our opinion that COVID-19 falls under the scope of those 'exceptional occurrences' beyond the control of a Member State and that therefore, assistance can be provided on the basis of this emergency rule. In interpreting Article 122(2) TFEU in *Pringle*, the CJEU reasoned that if the aim of Article 125(1) was to prohibit <u>all</u> forms of financial assistance, then Article 122(2) which allows the Union to grant *ad hoc* financial assistance, would have to state that it derogated from Article 125 (1) TFEU.³⁹ Under these conditions, the Court concluded that Article 125 "prohibits the Union and the Member State from granting financial assistance as a result of which the incentive of the recipient Member State to conduct a sound budgetary policy is diminished".⁴⁰

In addition, the CJEU refers to the preparatory work of the Maastricht Treaty that states "the aim of Article 125 TFEU is to ensure that Member States follow a sound budgetary policy" and that the prohibition laid down in Article 125 ensures that Member States remain subject to the logic of the market when they incur debt, since that ought to prompt them to maintain budgetary discipline. "Compliance with such discipline contributes at Union level to the attainment of a higher objective, namely maintaining the financial stability of the Union".

The challenge in the response to the COVID-19 health and economic crisis is to stop a cascade of debt defaults bringing down healthy businesses and exacerbating job losses across Member States in the EU.⁴² Some of the countries most affected by the pandemic - like Spain and Italy - need fiscal space in their responses to the crisis. The tax base will diminish as government expenditure increases, thus leading to both higher deficits and higher public debt, which will increase the cost of government borrowing. A number of concomitant monetary and fiscal measures are needed to stop a downward spiral. (Economic damage of course will be magnified if there is a second outbreak in the fall). The solution to excessive debt is not more debt.

Another alternative that attempts to address the unsustainable debt issue has been suggested by a group of economists who argue that the EU can avoid increasing debt to an unsustainable level for companies and businesses by creating a European pandemic equity fund that takes stakes in unquoted small and medium-sized companies. ⁴³ The fund would invest in equity issued by European companies and be entitled to a share of future earnings. Such an investment would improve the strength of corporate balance sheets, while shifting the focus of the EU's recovery efforts away from the politically intractable debate of credit-versus-grants to an equity capital investment plan that is neither credit (debt) or grants. The problem with the Commission plan is that it primarily relies on leveraged investment based on debt. However, equity is a more appropriate instrument to counter an incipient corporate debt crisis. It avoids a potential widespread corporate default on guarantees from Member State governments or on EU loans that could spread and become a sovereign debt and financial crisis.

³⁹ Case C-370/12 Pringle para 130.

⁴⁰ Case C-370/12 Pringle, para 136.

Draft Treaty amending the EEC Treaty with a view to achieving economic and monetary union, Bulletin of the European Communities, Supplement 2/91, p. 24 and p.54.

⁴² As the IMF Managing Director, Kristalina Georgieva stated in April 2020, this is a "crisis like no other". It is more complex, more uncertain and truly global. The IMF World Economic Outlook forecasts a decline in output of USD 9 trillion in 2020-2021, not seen since the Great Depression. https://www.imf.org/en/Publications/WEO/Issues/2020/04/14/weo-april-2020.

⁴³ Boot et al., 2020.

This is the time for the EU to show the solidarity that is needed to come out of this crisis. But solidarity must be balanced with responsibility. 44 The project of European integration has benefitted during its history from the effects of solidarity: from German reunification and opening the doors of EU membership to Central and Eastern Europe, to the use of structural funds to even out economic disparities amongst the Euro regions. 45 The COVID-19 crisis tests yet again the "weak E" of EMU. The coordination between monetary and economic/structural measures is of paramount importance.

See also paragraphs 142-150 of the Opinion of the Advocate General Kokkot in the *Pringle* Case discussing solidarity, http://curia.europa.eu/juris/document/document.jsf?docid=130561&doclang=EN. On May 18, Germany and France agreed to support a EUR 500 billion EU recovery fund that would involve the European Commission borrowing on capital markets to provide grants to Member States impacted by the crisis, and the Commission would have responsibility for repaying the debt over time. However, the proposal faces opposition from Austria, Sweden and the Netherlands, among others, who insist that Member States repay such aid as debt. Financial Times, Germany and France unite in call for €500bn Europe recovery fund, 18 May 2020. https://on.ft.com/3dYyv49.

All cohesion policy funds have been redirected to fight the COVID-19 emergency. All uncommitted money from the three Cohesion Policy funds – the European Regional Development Fund, the European Social Fund and the Cohesion Fund - will be mobilised to address the effects of the public health crisis. To make sure that funds can be re-directed to where they are most urgently needed, transfers between funds as well as between categories of regions and between policy objectives will be made possible. Moreover, co-financing requirements will be abandoned, as Member States are already using all their means to fight the crisis. Administration will be simplified. The EU is proposing to use all available remaining funds from this year's EU budget to help to respond to the needs of European health systems. https://ec.europa.eu/commission/presscorner/detail/en/IP 20 5.

5. CONCLUSIONS

In this paper, we have set out an analysis of why and how the ECB can and should be involved in addressing the risks to its price stability objective by considering other considerations such as environmental sustainability, financial stability and crisis management, consistent with its pursuit of the primary objective.⁴⁶

Environmental sustainability risks affect central bank primary objectives through monetary conditions and financial stability risks. Regarding monetary stability, we recommend that the ECB focus on low and stable inflation as a priority, but also support a sustainable growth rate that is defined as such over the long-term. ECB monetary measures can be used to help provide credit to support climate adaptation and mitigation strategies and to address the economic damage caused by the COVID-19 crisis, but within the confines of the Article 123 (1) CJEU jurisprudence and in accordance with the principle of central bank independence.

Financial stability considerations suggest that central banks should go further than this, to positively promote a transition to a sustainable and hence lower carbon economy, as part of their primary objectives. The full recognition of secondary objectives, to support the government's wider economic policies, can be invoked as necessary.

In addition, the ECB as bank supervisor should have an important role to play in ensuring that authorised firms are identifying and managing adequately the risks from climate change. They can help banks build stress tests based on forward scenarios that will help the industry judge what its capital and liquidity requirements should be in the face of future threats to stability caused by environmental or social phenomenon.

Finally, it should be emphasised that although there are important tools that the ECB can utilise to support increased financing for environmental and socially sustainable economic activity, nevertheless the lead authority for mitigating environmental and social sustainability risks should always be EU institutions and Member State governments which, unlike the ECB, control legislation, taxation and expenditure programmes, and have overall responsibility for regulatory frameworks and make direct economic interventions. And not to be excluded are private sector market participant who are the main agents for implementing governmental policies – and who are the source of most of the risks and have the greatest potential for managing risks and steering the economy to a more sustainable path.

⁴⁶ It should be noted that while some economists warn about deflation - see inter alia Davies (2020) - some others, such as Goodhart and Pradhan (2020) caution about inflation in the post-COVID-19 world, "Future imperfect after coronavirus".

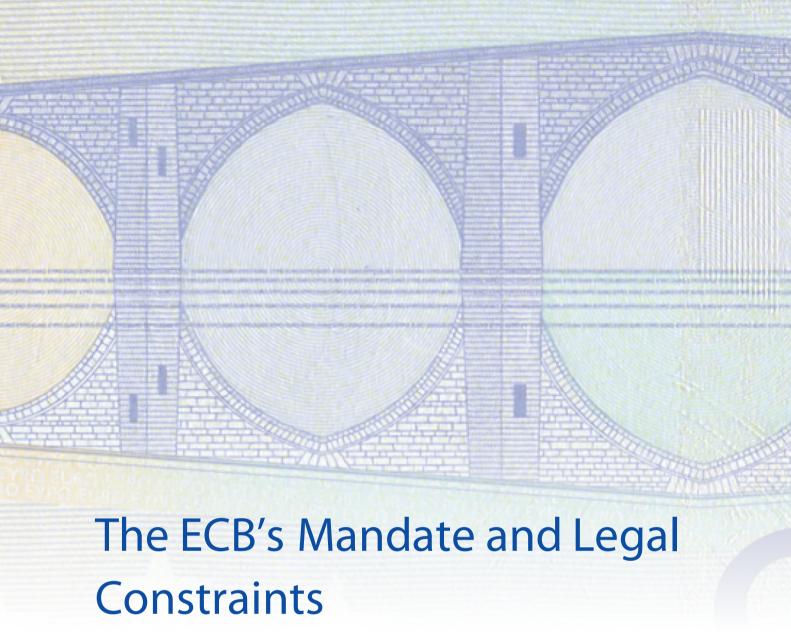
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Abstract

This paper considers how the ECB can implement its mandate in the current crisis conditions and the legal constraints that exist on its actions. The current position of the euro area economy means the threat to meeting the ECB's primary objective of price stability stems from the possibility of a long period of below-target inflation. This means the ECB should consider a wide range of stimulative policies that would help it meet both its primary and secondary objectives. The ECB, however, will be constrained by the ECJ's interpretation of the monetary financing clause and its ability to meet its primary objective (and its independence) could be threatened by the recent German constitutional court judgement which is flawed in both its legal and economic analysis.

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LIST OF ABBREVIATIONS

BVerfG Bundesverfassungsgericht

ECB European Central Bank

ECJ European Court of Justice

NBER National Bureau of Economic Research

PEPP Pandemic Emergency Purchase Programme

PSPP Public Sector Purchase Programme

TEU Treaty on the European Union

TFEU Treaty on the Functioning of the European Union

EXECUTIVE SUMMARY

- This paper considers how the ECB can implement its mandate in the current crisis conditions and the legal constraints that exist on its actions.
- Price stability is the Eurosystem's primary objective. However, the Eurosystem is also legally
 obligated to support economic policies of the Union, provided this support does not prejudice
 its primary objective.
- In recent years, the ECB has fallen short of meeting its self-defined price stability target of inflation being close to but below 2 percent. And the current state of the euro area economy means the threat to meeting its primary objective of price stability stems from the possibility of a long period of below-target inflation.
- The evidence on the behaviour of inflation over the past 25 years also gives the ECB room to pursue policies that previously would have been considered illegal. Economists have less certainty now than they did when the ECB was founded about exactly which factors determine inflation. Evidence suggests that neither low unemployment rates nor rapid expansion of the monetary base necessarily lead to high inflation.
- This means there are many new actions the ECB could take to both meet its primary and secondary objectives. Actions that support the economic policies of the Union and stimulate the economy can move inflation back to its target level and help the ECB meet its primary objective. Tools to constrain inflation during a recovery are also available.
- The ECB, however, will be constrained by the ECJ's interpretation of the monetary financing clause. Actions that could be considered legal via a literal reading of the EU Treaties are likely to be ruled illegal due to ECJ's interpretation of Article 123 of the Treaty on the Functioning of the European Union (TFEU).
- The ECB's ability to meet its primary objective is also threatened by the recent German constitutional court judgement which is flawed in both its legal and economic analysis.
- The German constitutional court's distinction between monetary and economic policies is unjustified. Its position on the proportionality of the PSPP programme has little legal justification and the economic analysis underlying its decision is also highly flawed.
- The ECB does not have to respond to the German constitutional court but it should be relatively easy to provide a convincing explanation that the PSPP represents a proportionate response to economic conditions, thus allowing the continuation of a shared monetary policy across all euro area Member States.

1. INTRODUCTION

The Eurosystem's primary objective, as laid down in the EU Treaties, is the maintenance of price stability. However, the Eurosystem is also legally obligated to support economic policies of the European Union, provided this support does not prejudice its primary objective. In recent years, the ECB has fallen short of meeting its self-defined price stability target of inflation being close to but below 2 percent. With the appointment of a new ECB President, there was an increasingly active discussion through late 2019 and early 2020 about whether the ECB could legally take a wider range of actions to support the general economic policies of the EU consistent with supporting the EU's objectives but without threatening price stability. For example, Christine Lagarde highlighted various ways in which the ECB's could use its financial regulatory tools to support the move to a carbonneutral economy. The strategic review of the ECB's monetary policy that is being undertaken this year will address some of these questions.

With a profound global economic crisis underway, it seems likely that the ECB will continue to fall short of its price stability target over the next few years, with high unemployment and weak demand likely to depress prices. The global economy collapsing at a record pace has already led to a slump in energy prices, which will have a significant effect on headline inflation over the next year or so.

In this situation, there are strong economic and legal arguments for the ECB to consider using a wide range of tools, including some that it has not yet considered, to stimulate the European economy. Such stimulus would both support its primary objective of restoring price stability but also fulfil its requirement to support the general policies of the Union.

Despite this apparently strong economic and legal case for taking substantial and decisive action, the ECB is likely to be constrained in fighting the new global economic crisis by legal restrictions. These restrictions partly stem from the clear wording of some articles in the Treaty but they also stem from how the European Court of Justice (ECJ) interprets these articles and from legal challenges to the scope of the ECB's monetary policy by the Bundesverfassungsgericht (the German constitutional court), most notably its judgement of 5 May 2020. This judgement has the potential to threaten the independence of the ECB and its ability to pursue both its primary and secondary objectives in a shared and co-ordinated fashion.

This paper discusses these issues as follows. In Section 2, I outline the case for the use of large-scale and innovative stimulus and whether the ECB's primary objective of maintaining price stability restricts its ability to do so. I argue that the persistent weakness of inflation in modern advanced economies, our limited understanding of the inflation process and the tools the ECB has available to it to reverse course should inflation increase, together all provide a case for unprecedented stimulus. Section 3 discusses the issues relating to the monetary financing clause in the Treaty and how this clause has been interpreted by the ECJ in a way that places more restrictions on the ECB than a literal reading of the Treaties would imply. Section 4 discusses the legal challenges to the scope of the ECB's monetary policy set out by the German Constitutional Court and argues these challenges are based on a skewed interpretation of the Treaty, flawed economic arguments about the negative impact of asset purchase programmes and an inaccurate assessment of how the ECB Governing Council has taken and communicated its decisions.

One theme worth flagging about the discussion in this paper is that while any detailed discussion of the policies the ECB can adopt must rely both on economic analysis (addressing how the ECB's actions affect the economy) and legal analysis (addressing what it can legally do), it is increasingly the case that key issues sit at the intersection of economic and legal analysis. For example, it is

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¹ See Lagarde (2020).

unfortunately common to see proposals from economists that the ECB should take actions which it is legally constrained from actually doing. However, I believe a more important constraint on the ECB's actions in the current crisis is likely to be the use of flawed economic analysis by courts assessing the legality of its policies.

2. CONSTRAINTS DUE TO THE PRIMARY OBJECTIVE

The key legal article outlining the ECB's legal mandate is Article 127 of the current Treaty on the Functioning of European Union (TFEU). This is repeated in full below:

"The primary objective of the European System of Central Banks (hereinafter referred to as 'the ESCB') shall be to maintain price stability. Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Union with a view to contributing to the achievement of the objectives of the Union as laid down in Article 3 of the Treaty on European Union. The ESCB shall act in accordance with the principle of an open market economy with free competition, favouring an efficient allocation of resources, and in compliance with the principles set out in Article 119."

Article 3 of the Treaty on the European Union (TEU) states:

"The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance."

Taken together, these articles mean there is a legal obligation on the ECB to act to promote full employment and other social goals such as improvements in the quality of the environment — provided the actions taken to support those goals do not endanger price stability.

But how would we know if an action endangered price stability? The Treaty is silent on this issue and rightly so. The factors that determine prices are the domain of economics rather than law. And it would be nice if the scientific evidence on the factors determining aggregate price stability were clear. But, unfortunately, the current state of science on the factors determining inflation is probably as uncertain as I can remember it being during my professional economics career (much of which I have spent analysing and researching the inflation process). In the rest of this section, I will point out two influential theories about the determinants of inflation which have proved to be unreliable and then discuss the implications for the ECB's policy options.

2.1. The Money supply and inflation

A historically important school of thought in economics is monetarism. Associated with Nobel prize winner Milton Friedman, the basic idea of monetarism is that "inflation is always and everywhere a monetary phenomenon" as Friedman (1963) put it. This school of thought believed that the price level would ultimately be proportional to some measure of the money supply such as M1 (which measures currency in circulation plus checking deposits). Monetarists also believed the central bank could maintain control over the money supply via its control over the monetary base (which is currency in circulation plus the reserve accounts that commercial banks hold with the central bank).

Monetarism's practical influence on central banking peaked in the late 1970s and early 1980s when central banks in the UK, US and elsewhere shifted their policies to focus on meeting targets for the growth rate of the money supply. While this period did see high rates of inflation tamed, monetarism was largely abandoned in the mid-1980s as being an impractical methodology that generated volatile interest rates and that relied on a correlation between money supply growth and inflation that was generally weak.

Monetarism still maintained some influence in European policy circles up to the founding of the ECB and the ECB's original monetary policy strategy featured a "prominent role for money." Specifically, a reference value for M3 was set at a 4.5% annual rate and this figure was used to calculate a "monetary

overhang". This measured the cumulative difference between actual M3 growth and the reference value, with higher numbers supposedly representing risks for medium term inflation.

The early years of the ECB did nothing to suggest that the prominent role for money was a useful part of the monetary policy strategy. Money growth steadily exceeded price inflation and a surge in money growth during 2001 was not matched by any contemporaneous or subsequent increase in inflation (see Figure 1). Analysis of the money supply was given a lower emphasis after the 2003 review of monetary policy strategy, with no further reference being made to the monetary overhang variables. The evidence in the years since 2003 has not improved the case for its existence. As Figure 1 shows, money growth has outstripped inflation in almost every year of the ECB's existence, often by a large amount, and there is no statistical evidence that it works as a useful leading indicator of inflation.

Crucially, the idea that there is a strong relationship between prices and the monetary base controlled by central banks has been tested in an extreme "natural experiment" and been found to be false. When the Federal Reserve began its quantitative easing programme in 2010, a group of prominent Republican economists wrote an open letter to Fed Chairman Ben Bernanke warning him not to pursue a programme of expanding the monetary base via large-scale as set purchases. They believed that "The planned asset purchases risk currency debasement and inflation." In practice, despite an enormous increase in the monetary base (a four-fold increase over a short number of years) there was no evidence of any corresponding escalation of prices. Indeed, throughout the period since 2010, inflation in the US has been relatively low, often below the Federal Reserve's preferred 2 percent rate. Similarly, the expansion in the monetary base that has occurred in the Eurosystem since the ECB began its Asset Purchase Programme has not triggered any increase in inflation.

So the idea that there is a link between the monetary base and inflation has been tested about as thoroughly and clearly as any proposition in macroeconomics can be and it has been found to be false. Its failure partly reflects the weakness of the monetarist idea that there should be a strong relationship between the monetary base and the broader money supply (i.e. a stable money multiplier) but it also reflects the absence of a reliable relationship between money growth and inflation.

The letter can be found at https://www.hoover.org/research/open-letter-ben-bernanke.

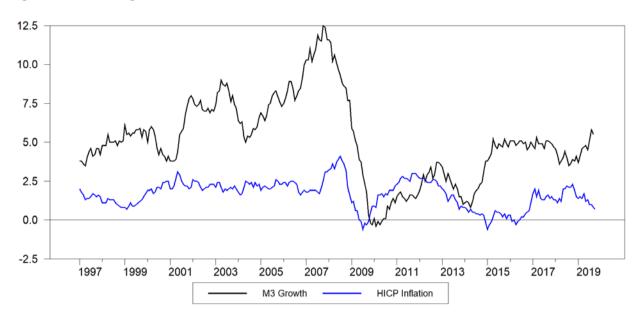


Figure 1: M3 growth (black) and HICP inflation (blue)

Source: Data from ECB Statistical Data Warehouse.

2.2. The Phillips curve

With monetarist ideas about the determination of inflation are widely believed to be of limited use, central bankers have largely turned to the Phillips curve as the framework they use when thinking about inflation.

The original Phillips relationship between inflation and unemployment, as documented by A.W. Phillips in his famous 1958 paper, is no longer considered accurate: Many years of data across many countries fail to report a robust statistical relationship between inflation and unemployment. However, central bankers still rely heavily on another idea of Milton Friedman's — the expectations-augmented Phillips curve. Friedman (1968) put forward the idea that the public's *inflation expectations* were the key determinant of actual inflation outcomes and thus macroeconomic policymakers needed to convince the public to expect low inflation. In addition, however, Friedman believed the state of the labour market affected inflation, with low unemployment rates stimulating wages and prices so that below a certain level of unemployment inflation would tend to rise a bove expected levels. However, he viewed this as a short-run relationship: Ultimately, inflation expectations would adapt over time so that there was no long-run relationship between inflation and unemployment.

This is the framework that most modern central banks have used when modelling and forecasting inflation. Econometric models of inflation tend to rely on the recent behaviour of inflation to proxy for inflationary expectations and then to also include measures of "slack" in the economy, such as unemployment rates or output gap measures. These models view inflation as likely to pick up when the economy grows strongly for a sustained period of time, resulting in low unemployment rates.

The problem for this framework is that the evidence in favour of it has considerably weakened over the past 25 years. There does seem to evidence that inflation declines when there is a recession. Figures 2 and 3 show inflation and unemployment in the US (the blue lines) and the euro area (the red lines) since 1997. The shaded bars represent the NBER-approved official dates for recession in the US. These charts show that inflation fell in both the US and the euro area during both the "dot com"

recession of 2001 and during the "great recession" of 2008/09. They also show how, having picked up during 2010/11, inflation slumped again in the euro area during and after the "double dip" recession of 2012, as the unemployment rate climbed to 12 percent in 2014.

While these patterns roughly conform to the predictions of an expectations-augmented Phillips curve model, the evidence for low unemployment rates triggering higher rates of inflation seems much less strong. In each of the last three global expansions, inflation has remained calm despite unemployment reaching relatively low rates, particularly in the US where the unemployment rate reached below 4 percent in 2019 without triggering any increase in inflation.



Figure 2: US CPI inflation (blue) and euro area HICP inflation (red)

Source: Federal Reserve Bank of St Louis, FRED website.

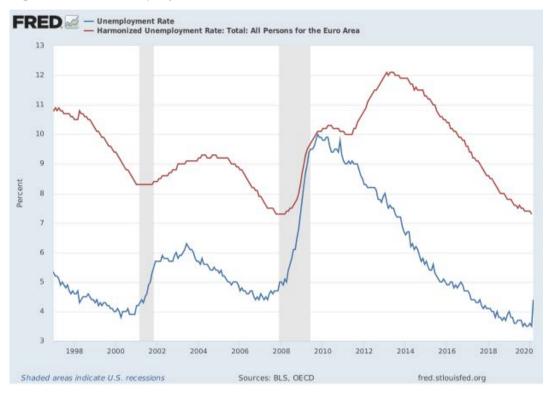


Figure 3: Unemployment rates in the US (blue) and the euro area (red)

Source: Federal Reserve Bank of St Louis, FRED website.

To get a sense of how Phillips curve models have failed to understand recent inflation developments in the euro area, Figure 4 repeats a chart from a new ECB working paper by Eser et al. (noting that ECB chief economist Philip Lane is part of the et al.). The chart provides a historical decomposition of the factors that the ECB's econometric models believe were determining inflation — as measured by deviations in HICP inflation excluding food and energy from its historical average — including an "unexplained" component. Rather than use just one model, the authors reported averages across 780 different Phillips-curve style specifications, so this gives a fair sense of what the typical empirical model believes has been happening with inflation in the euro area. The chart shows that at most points in time, a significant element of inflation cannot be explained by the models. Most notably, the key component determining the persistent low inflation of recent years is ….. "Unexplained"!

To summarise, while economists rely on Phillips curve relationships to forecast and to give monetary policy advice, their answer as to why inflation has been so stubbornly low in recent years is "We don't know". One possibility, as discussed by Blanchard (2016) is the inflation expectations have become "anchored" at low (and falling) levels and this anchoring has offset the positive effect on inflation of falling unemployment. But this theory doesn't get us too far since it doesn't tell us how inflation expectations become anchored or what would cause them to become de-anchored. In terms of the ECB meeting its price stability target of inflation close to 2 percent, it seems the greater risk for now is that the current deep recession will drive inflation well below target and cause inflation expectations to move well below the ECB's target rate.

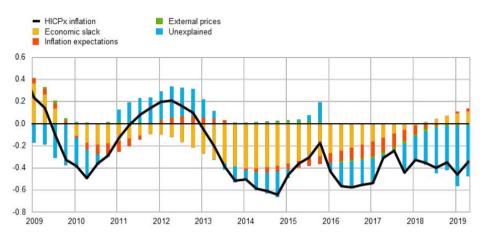


Figure 4: ECB decomposition of HICP inflation excluding food and energy (minus its historical average value)

Source: Eser, Karadi, Lane, Moretti and Osbat (2020).

2.3. Economics and the primary objective

Given Article 127's statement of a clear obligation for the ECB to consider price stability as its prime objective, this article provides the most obvious grounds for ruling out various monetary policy options. Any policy the ECB undertook that prejudiced the pursuit of its price stability would be illegal. However, I think this argument cannot be used against the ECB's current asset purchase programmes. We have seen already that very large asset purchase programmes have not triggered significant inflation. And if these programmes do have a positive effect on inflation then, as of now, implementing them is consistent with the price stability objective, since the ECB is currently failing to meet its own target of inflation close to but below 2 percent.

Indeed, in the current circumstances, it is likely that the ECB could implement various completely new initiatives that would not threaten price stability and would support the economic goals of the EU as set out in Article 3 of TEU. For example, as I discussed in Whelan (2019), the ECB could consider providing long-term low-cost loans to the European Investment Bankto finance a large programme of investments aimed at moving towards a low-carbon economy. Article 3 of TEU explicitly mentions environmental concerns. The ECB should also be willing to consider more aggressive monetary policy options such as a more negative deposit rate, a greater use of tiering of reserves, providing more supports for the mortgage market, equity purchases and even programmes to encourage banks to make zero or negative interest rate loans to businesses affected by the COVID-19 crisis.

Each of these options will be greeted by some as "obviously illegal" based on the opinion that they undermine the ECB's primary objective. But the evidence cited here suggests there is little economic science behind such calls. Moreover, if additional stimulus measures taken by the ECB did manage to generate an economic recovery that then produced additional inflation, the ECB has lots of tools it can use to slow the economy and reduce inflation, most notably raising its depositrate and ceasing asset purchase programmes. So should the ECB overshoot its 2 percent target in the next few years, it has the ability to reverse course with its stimulus measures.

3. CONSTRAINTS DUE TO THE MONETARY FINANCING CLAUSE

Beyond questions about how to interpret the primary and secondary objectives of the ECB, there is one clear restriction on its actions: Article 123 of TFEU which prohibits monetary financing. The first (and key) part of this article is repeated in full below:

"Overdraft facilities or any other type of credit facility with the European Central Bank or with the central banks of the Member States (hereinafter referred to as 'national central banks') in favour of Union institutions, bodies, offices or agencies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States shall be prohibited, as shall the purchase directly from them by the European Central Bank or national central banks of debt instruments."

This article makes clear what is illegal for national central banks: Directly providing money to national governments by purchasing bonds from them or providing them with a credit facility. But it also makes clear that indirect secondary market purchases of these bonds are legal. It isn't surprising that the Treaty says this. The classic textbook example of a monetary policy in which the central bank increases the money supply is an open market purchase of a government bond. To outlaw this would have required ruling out an important monetary policy tool.

So secondary market purchases of government bonds by the Eurosystem are legal. This could be interpreted as meaning that all secondary market purchases of government bonds by the Eurosystem are legal: They are not illegal, so that must mean they are legal right? The reality, however, is not quite so clear. The ECJ and national courts interpret European law not in a *literal* way but a *purposive* way, i.e. they consider what the original purpose of the legislation was rather then restricting them selves to precisely what the specific words say.

To give an example of why such an approach is reasonable, consider the case of pure monetary financing, where a national central bank simply creates money and gives it to the central government. Technically, you could argue that the Treaties do not out law this. They out law buying bonds directly from governments or giving them loans but they don't mention the idea of just giving them money without any requirement to return it. However, the ECJ would interpret such a proposal as clearly at odds with what the authors of Article 123 had in mind when they drafted it. The purpose of the article was clearly to avoid using the money creation powers of central banks to directly finance government spending. It appears the drafters of the Treaty didn't imagine there would ever be discussions of monetary financing via a direct transfer of money rather than bond purchases or loans, so they did not mention this possibility, but it is impossible to imagine they would have approved of such a policy.³

For this reason, Article 123 can place limits on ECB's actions such as asset purchase programmes if courts view these actions as running counter to what the article was intended to achieve. For example, the applicants in the *Weiss* case ruled upon by the ECJ in December 2018 appeared to think that the purpose of Article 123 was ensure that central banks could not make it easier for governments to run deficits and so the PSPP, by lowering yields on government bonds and thus reducing interest costs, must be illegal.

Sensibly, the ECJ rejected this argument, noting:

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Worth noting, however, is that it is legal for national central banks to remit their profits back to their national governments. The Eurosystem's accounting procedures have led to them retaining much of their economic profits stemming from increases in the value of their assets via the process of booking an essentially fake liability called "revaluation accounts". I suspect a revision of those policies and a return to central governments of this money would be legal. This would allow the Eurosystem to remit about 4 percent of euro area GDP to governments.

"the conduct of monetary policy will always entail an impact on interest rates and bank refinancing conditions, which necessarily has consequences for the financing conditions of the public deficit of the Member States"⁴.

In other words, it can't be possible that a monetary policy programme is illegal just because it lowers interest rates and thus lowers the cost of government borrowing.

That said, the ECJ's interpretation of Article 123 does place some restrictions on asset purchase programmes and may restrict the ECB's plans for its EUR 750 billion Pandemic Emergency Purchase Programme (PEPP). Specifically, the ECJ interprets Article 123 as intended to encourage member states to follow a "sound budgetary policy". This phrase is used 11 times in the *Weiss* judgement, with the first and key reference being as follows (paragraph 107):

"the ESCB must build sufficient safeguards into its intervention to ensure that the latter does not fall foul of the prohibition of monetary financing in Article 123 TFEU, by satisfying itself that the programme is not such as to reduce the impetus which that provision is intended to give the Member States to follow a sound budgetary policy".

While not placing explicit limits on the PSPP, the *Weiss* judgement points to a series of features of the PSPP that the ECJ views as implying the policy is not undermining sound budgetary policy. For example, the ECJ cite the explicitly temporary nature of the programme, the fact that ECB is leaving a "blackout period" of time from when a bond is issued to when it can be bought by the Eurosystem and the lack of certainty that any private owner of a sovereign bond can have as to whether they can at some point sell their bond to the ECB. Finally, and perhaps most importantly, the *Weiss* judgement noted that the Eurosystem had decided not to purchase more than 33% of a particular issue of bonds of a member state or more than 33% of the outstanding securities of one of those governments.

This latter point is important because with the introduction of the new PEPP, the ECB has indicated that it is no longer going to stick within these limits. This suggests legal challenges to PEPP on monetary financing grounds may be more likely to succeed at the ECJ.

The legal issues surrounding these issuer limits are subtle. The one-third limits are designed to prevent the Eurosystem from obtaining a "blocking minority" position if a country proposes a debt restructuring which its bondholders then vote on via a Collective Action Clause (CAC). There are concerns that failure to use a blocking minority to prevent debt restructuring could be viewed as illegal monetary financing, since this would involve money created by the Eurosystem being ultimately used to write down the debt of a member state.

In its OMT judgement (paragraph 126), the ECJ acknowledged that purchasing bonds involved the Eurosystem taking on risk:5

"although the lack of privileged creditor status may mean that the ECB is exposed to the risk of a debt cut decided upon by the other creditors of the Member State concerned, it must be stated that such a risk is inherent in a purchase of bonds on the secondary markets, an operation which was authorised by the authors of the Treaties, without being conditional upon the ECB having privileged creditor status."

However, in relation to issuer limits, the key phrase here that suggests CACs may raise a legal is sue is "a debt cut decided upon by the other creditors." By focusing solely on a "debt cut" imposed on the

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See http://curia.europa.eu/juris/document/document.jsf;jsessionid=0EB01E126001D811CB91BDF8D53798F6?text=&docid=208741&pagel ndex=0&doclang=FN

See http://curia.europa.eu/juris/document/document.jsf?text=&docid=165057&pageIndex=0&doclang=EN.

Eurosystem by other creditors, it could be interpreted that the ECJ has implicitly assumed that, once given the opportunity to vote on a potential restructuring, the ECB would be legally required to use a blocking minority position to prevent a debt restructuring.

This raises questions about why the ECB has decided to exceed the one-third issuer limits. The ECB could decide to focus its purchases on bonds issued prior to 2013, when CACs became standard in euro area sovereign debt contracts. Also, should a CAC-driven restructuring ever become a likelihood, the Eurosystem could sell enough bonds prior to the restructuring to get below the blocking minority limit. It would be likely that losses would be incurred on these sales but it would avoid the ECB taking a conscious decision to agree to a debt restructuring. In any case, it is unclear whether CACs would actually be the mechanism employed by future governments to restructure debt. For example, the Greek government restructured its debt via a unilateral act of the Greek parliament, and this may be the approach taken by future European governments when defaulting on debt.

To summarise, while the ECB can argue that the Treaty does not prevent it from making unlimited secondary market purchases of sovereign bonds and that issues to do with restructuring can be dealt with later (and are less likely to happen because of its interventions), the legal situation is that the ECJ's views on the meaning of Article 123 are going to restrict how far the ECB can go with asset purchase programmes.

From a practical policy perspective, this suggests the ECB needs to start thinking about new and innovative ways that it can stimulate the economy by assisting the private sector, rather than continually expanding its purchases of public sector debt.

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⁶ See Gelpern and Gulati (2013) for a sceptical discussion of euro area CACs from two of the leading academic experts on sovereign debt law.

4. CONSTRAINTS DUE TO THE LIMITS OF THE ECB'S MONETARY POLICY MANDATE

A final set of constraints on the ECB could stem from there being legal restrictions on how far its mandate to conduct monetary policy prevents it from taking certain kinds of actions. Most prominently, the idea that the ECB's monetary policy mandate restricts it from pursuing various policies has been promoted by the Bundesverfassungsgericht (BVerfG) in its judgements of recent years, most notably its 5 May 2020 response to the ECJ's Weiss judgement.

This section discusses the idea that the ECB's mandate to implement monetary policy mandate necessarily restricts it from carrying out actions such as the PSPP, first focusing on the BVerfG's distinction between monetary policy and economic and then focusing on the legal and economic issues underlying the BVerfG's 5 May 2020 judgement.

4.1. Monetary policy versus economic policy?

The EU Treaties gives the Eurosystem the responsibility for monetary policy in the euro area. The Treaties also point out that national governments can co-ordinate economic policies. These statements have been taken by someto mean that the ECB cannot pursue economic policies because it can only pursue monetary policy. I have worked in and commented on central banking issues since 1997 but the first time I ever heard of this idea was in the BVerfG ruling on the OMT programme in January 2014.⁷ Paragraph 39 of the ruling including the following:

"The European Central Bank may only support the general economic policies of the Member States (Art. 119 sec. 2, Art. 127 sec. 1 sentence 2 TFEU; Art. 2 sentence 2 ESCB Statute). It is not authorised to pursue its own economic policy. If one assumes – subject to the interpretation by the Court of Justice – that the OMT Decision is to be qualified as an independent act of economic policy, it manifestly violates this distribution of powers."

As an economist the idea that monetary policy and economic policy are different things strikes me as strange. Indeed, I never thought I would have to write the following sentence in one of these briefings: *Monetary policy is part of economic policy*.

Every monetary policy decision the ECB takes — whether they be altering its various policy rates, making loans to banks, purchasing assets, changing collateral rules or communicating about future polices — have economic effects on firms, households and governments. Indeed, the BVerfG position raises the question of how they think the ECB is supposed to meet its primary objective of price stability. Is it supposed to magically conjure up price stability without taking actions that affect the economy? While we don't fully understand the factors that determine aggregate inflation, it is clear that prices generally respond to the underlying forces of supply and demand in the economy.

Thankfully, the ECJ recognises that monetary policy decisions must, by their nature, have real economic effects. Paragraph 66 of the *Weiss* judgement states:

"in order to exert an influence on inflation rates, the ESCB necessarily has to adopt measures that have certain effects on the real economy, which might also be sought — to different ends — in the context of economic policy. In particular, when the maintenance of price stability requires the ESCB to seek to raise inflation, the measures that it must adopt to ease monetary and financial conditions in the euro area for that purpose may entail an impact on the interest

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⁷ This is available at https://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/2014/01/rs20140114_2bvr272813en.html.

rates of government bonds because, inter alia, those interest rates play a decisive role in the setting of the interest rates applicable to the various economic actors".

This is a clearly argued and convincing case from the highest authority on European law. One might have hoped that this spurious distinction would no longer feature in important legal cases involving the ECB. Alas, that did not prove to the case.

4.2. Proportionality and the PSPP

On 5 May 2020, the BVerfG ruled that ECJ's Weiss ruling was not sufficient for it to be willing to declare the PSPP to be legal.⁸ They declared that the element of the ECJ's ruling relating to the proportionality of the PSPP was "not comprehensible" and thus the judgement was ultra vires. It instructed the Bundesbank to stop participating in the implementation and execution of the PSPP in three months' time "unless the ECB Governing Council adopts a new decision that demonstrates in a comprehensible and substantiated manner that the monetary policy objectives pursued by the PSPP are not disproportionate to the economic and fiscal policy effects resulting from the programme." In the absence of this demonstration, the Bundesbank was instructed to sell all of the bonds it purchased as part of the PSPP.

In my opinion, this judgement is legally flawed, relies centrally on poor economic thinking and makes claims about ECB decision making and communications that are clearly false. I will discuss each of these issues in turn in the next three sub-sections.

4.2.1. Legal issues

The key legal argument put forward by the BVerfG against the Weiss ruling was that it did not assess whether the PSPP satisfied the so-called principle of proportionality. Specifically, the BVerfG's judgement begins with the (in my view spurious) distinction between economic and monetary policy and cites the principle of proportionality as follows (paragraph 138):

"As the economic policy effects of the PSPP are disregarded completely, the application of the principle of proportionality by the CJEU cannot fulfil its purpose, given that its key element – the balancing of conflicting interests – is missing. As a result, the review of proportionality is rendered meaningless.

Relying on the principle of proportionality to distinguish between monetary policy and economic policy (Art. 5(1) second sentence and Art. 5(4) TEU) implies that a programme's effects can render it disproportionate."

In relation to the ECB's decision-making, the BVerfG outlined some supposed negative economic effects of the PSPP and declared (in paragraph 176):

"It would have been incumbent upon the ECB to weigh these and other considerable economic policy effects and balance them, based on proportionality considerations, against the expected positive contributions to achieving the monetary policy objective the ECB itself has set. It is not ascertainable that any such balancing was conducted, neither when the programme was first launched nor at any point during its implementation. Unless the ECB provides documentation demonstrating that such balancing took place, and in what form, it is not possible to carry out an effective judicial review as to whether the ECB stayed within its mandate."

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The judgement can be found at https://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/2020/05/rs20200505_2bvr085915en.html;jsessionid=90C EC341BE6D2AD9E28476F1320EEA14.2_cid370.

I believe the BVerfG have adopted a skewed interpretation of the principle of proportionality and asked the ECB to behave in a way that runs counterto its obligations under the Treaty.

The two Treaty articles the BVerfG claim to be crucial to their judgement are as follows. Here is Article 5(1) TEU:

"The limits of Union competences are governed by the principle of conferral. The use of Union competences is governed by the principles of subsidiarity and proportionality."

And here is Article 5(4) TEU:

"Under the principle of proportionality, the content and form of Union action shall not exceed what is necessary to achieve the objectives of the Treaties.

The institutions of the Union shall apply the principle of proportionality as laid down in the Protocol on the application of the principles of subsidiarity and proportionality."

So Article 5(1) TEU just states that the proportionality principle must be used and Article 5(4) TEU defines what the principle means. For the various institutions, the principle means that it cannot exceed what is necessary for it to fulfil the objectives of the EU Treaties they have been charged with achieving.

From the perspective of the ECB, the objective it has been asked to achieve is price stability and the accepted definition of this is inflation close to but below two percent. Was the PSPP excessive to what was necessary to achieve this goal? We already know the answer to this is a clear "No". Despite an enormous purchase programme, the ECB's policies did not return the inflation rate to its target level. Purely by appeal to the Treaty's definition of proportionality, the programme cannot be described as disproportional.

Moreover, the ECB can point to the fact that programmes of this type have been adopted in the past by other central banks when they had reached lower limits on policy rates and wished to meet their inflation targets. If this was a programme that only the ECB had enacted and no other central bank had implemented, it might give pause for thought as to whether the policy was somehow disproportionate but this is clearly not the case.

The BVerfG clearly has a different view of what the proportionality principle means. They believe that "the balancing of conflicting interests" is a key element. I am unsure why they believe this. It is true that academic debates about proportionality often discuss the role that can be played by balancing of interests. 9 However, the word "balancing" is not mentioned in Article 5 of TEU nor is it mentioned in the Protocol of the application of the principles of subsidiarity and proportionality.

Indeed, perhaps uniquely among all the European institutions, a "balancing" test is explicitly not something the ECB can do. It has a primary objective – price stability – and it is not supposed to "balance" this against other economic goals. It can consider those goals but only if they are not preventing it from meeting its price stability goals. As such, it is legitimate for the ECB to take actions that have negative economic effects provided these actions move the economy close to achieving price stability.

The BVerfG may not have considered quite how much the ideas underlying their judgement have the potential to undermine the ECB's independence and its ability to achieve its primary objective. While the negative consequences of asset purchase programmes mentioned by the BVerfG are either mild or illusory (see below), there are clearly times when the ECB's actions to maintain price stability will

⁹ See, for instance, Möller (2012).

have negative impacts on other economic outcomes that are outlined in Article 3 as goals of the Union, such as full employment.

Consider the situation where the ECB decides it needs to raise interest rates to bring down inflation, something it has done several times in the past. As pointed out on Twitter by Jean-Pierre Landau, a former high-ranking official of the Banque de France: "The judgment would allow any Government or Parliament to legally challenge the ECB on the ground that the "balance" between the positive monetary effects and the negative economic consequences (on unemployment) has not been properly assessed." ¹⁰ In light of these potential threats to its independence, it is crucial that the ECB stress that the ECJ is the only court allowed to interpret the legality of its actions.

4.2.2. Negative economic effects of the PSPP

While its legal arguments are weak, the economic arguments underlying the BVerfG judgement are even weaker. The negative economic effects the BVerfG is so concerned for ECB to address are not serious problems and largely reflect a set of inaccurate talking points that have dominated German economic discussions in recent years. There were more bad economic takes in this judgement than I have space to address here but I will single out four for discussion.

Losses for savers: A key supposed economic cost of the PSPP according to the BVerfG is that "there is a considerable risk of losses for private savings." (Paragraph 173). This reflects an assumption common in German economic debates that most people's savings are kept in deposit accounts and thus the return on household savings is depressed by the ECB's low interest rate policies. Leaving as ide for a moment the question of whether the PSPP actually affected deposit interest rates — most of these rates were zero prior to PSPP and have continued to be zero — this is simply not an accurate way to think about how asset purchase programmes impact the value of private savings.

For most households, the principal source of savings is the ownership stake they built up over time in the house they live in. Beyond that, there are many households with significant wealth in the form of pension assets or other financial assets. Indeed, the most recent Household Finance and Consumption Survey (HFCS) conducted by the Eurosystem in 2017 shows that financial assets only account for 19 percent of total household assets. ¹¹ And bank deposits only account for 44 percent of those financial assets with the rest being in mutual funds, bonds, shares, pension funds etc. In other words, bank deposits account for only about 8 percent of the total assets of euro area households. ¹²

This point is relevant because it is widely believed that asset purchase programmes drive up prices for assets such as stocks and housing. This means that the assets that account for the majority of household wealth have gone up in value during the PSPP rather than down.

Indeed, while the BVerfG may not be aware of it, there has been much discussion among economists (including those at the ECB) about whether asset purchase programmes increase wealth inequality by making those who have significant savings better off. ¹³ As I discussed in Whelan (2015), it is not clear that these programmes really have had much impact on wealth inequality but the idea that they disproportionately negatively affect households with savings is certainly incorrect. And even if it was correct, there is nothing in the ECB's legal mandate that requires it to consider distributional issues —

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¹⁰ See https://twitter.com/JPLandau/status/1257840241777479680.

HFCS data are available at https://www.ecb.europa.eu/pub/economic-research/research-networks/html/researcher_hfcn.en.html.

Despite the focus on bank deposits in German economic discussions, Germany is almost exactly typical of euro area countries. Financial assets account for 21 percent of German household assets and deposits account for 46 percent of these financial assets. So bank deposits account for 9.6 percent of German household assets.

See, for instance, Lenza and Slacalek (2018) for an ECB study on the effects of asset purchase programmes on wealth inequality.

whether its actions affect one group of citizens more than another — when making its monetary policy decisions.

Banks and insurance companies: The judgement makes some strange comments about the PSPP's effects on the banking sector. Paragraph 172 states:

"The PSPP also affects the commercial banking sector by transferring large quantities of highrisk government bonds to the balance sheets of the Eurosystem, which significantly improves the economic situation of the relevant banks and increases their credit rating."

This is inaccurate on several levels. As explained in ECB (2017), relatively few of the bonds acquired by the Eurosystem in the PSPP came directly from euro area banks. And given that there were active secondary markets for these bonds throughout this period, there was no need for commercial banks to rely on ECB intervention to get risky bonds off their balance sheet. The reality is the ECB's asset purchase programmes were unpopular with the banking sector. The Eurosystem paid for its assets by creating a huge amount of money in the deposit accounts that commercial banks hold with their national central banks. The decision to impose a negative depositrate, combined with the huge stock of deposits created by the Eurosystem, amounted effectively to a tax on the banking sector. Indeed, it was intensive lobbying against the negative impact of these developments on bank profitability that lead to the introduction last September of "tiering" of reserves.

There is no doubt that the low interest rate environment has been difficult for certain financial institutions. The relatively flat yield curve has had a negative impact on bank profitability and institutions that rely heavily on income from low yielding safe bonds (such as insurance companies) have also been negatively affected. The ECB monitors how these sectors are operating, consistent with its mandate for maintaining the stability of the financial system, as set out in Article 127 of TFEU. However, it is not the job of the ECB to make insurance companies profitable, nor are considerations like this part of economic policy goals of the Union as set out in Article 3 of TEU.

Structural reforms: Paragraph 170 covers a familiar ordoliberal theme:

"It is therefore undisputed that the budgetary situations of Member States benefit from the reduction of general interest rates facilitated by the PSPP. This gives rise to the risk – despite the "safeguards" referred to by the CJEU – that necessary consolidation and reform measures will either not be implemented or discontinued."

Leaving aside for a moment the dubious assumption that worsening fiscal conditions lead states to conduct "necessary reforms", it is hardly believable that the BVerfG think this is the kind of consideration the ECB should be considering when making its decision. Imagine if the ECB President said "We probably should take this action to lower interest rates to restore price stability but we are going to keep interest rates higher to maintain pressure on Italy to introduce structural reforms." It might be a popular decision in Germany but would be viewed elsewhere as a failure to pursue its primary objective and a move well outside its mandate into involvement in political decisions.

Zombie firms: Paragraph 174 expresses a concern often aired about low interest rates.

"As the PSPP lowers general interest rates, it allows economically unviable companies to stay on the market since they gain access to cheap credit".

Arguments that so-called "zombie firms" are a problem generally rely on the idea that these firms have weaker productivity than the rest of the economy and thus perhaps drag down the productivity of the economy as a whole. ¹⁴ But the observation that zombie firms have low productivity on its own

¹⁴ See, for example, Banerjee and Hofmann (2018).

means little and this debate is riddled with reverse causality problems. It is hardly surprising that the weakest, least productive, firms in the economy are more likely to carry large debt burdens and have cash flow sensitive to interest rates on their loans. It's unlikely, however, that it is the debt burden of these firms that causes them to havelow productivity. It is also unclear as to whether shutting down the least productive firms in the economy will do anything other than temporarily raise unemployment. There is little reason to think the workers and managers who operated these low-productivity firms will automatically operate at higher productivity levels once they get new jobs.

In any case, whatever value there is to this particular debate, it is surely not something the ECB should be giving much consideration to. Again, if the ECB were to announce "We probably should take this action to lower interest rates to restore price stability but we are going to keep interest rates higher so that some low-productivity firms go bankrupt because we think that might be good for productivity in the long run", it would clearly be acting well beyond its mandate.

To summarise, the negative economic impacts of the PSPP cited by the BVerfG — and which are central to its decision — are either non-existent or relatively limited in nature and, in any case, lie beyond the ECB's mandate for consideration.

It is worth asking how the court can have been so convinced by such a weak set of economic arguments and in this context it is worth noting that half of the experts called on for economic advice in this case were representatives of the German banking and insurance sector. A cynical view might be that advice was largely soughtfrom those who agreed with the pre-existing views of the judges. Rather than re-enforcing their ordoliberal "echo chamber", the Court would be well advised to listen to a wider and more representative set of economists. The German economists who are members of Monetary Expert Panel of the European Parliament's Committee on Economic and Monetary Affairs (ECON Committee) would be a good place to start if the court is open to hearing a wider range of opinions at some point in the future.

4.2.3. Evidence of consideration by ECB

A final element of the BVerfG judgement is its claim that there is no evidence that the ECB considered the negative impacts of the PSPP when taking its decisions. Paragraph 169 asserts:

"It is not ascertainable that the ECB Governing Council did in fact consider and balance the effects that are inherent in and direct consequences of the PSPP."

This claim is extraordinary. The ECB has engaged in a huge amount of public communication on the rationale for the PSPP. Detailed descriptions of the debates at ECB Governing Council meetings have been released. ECB Presidents have regularly answered questions about the potential negative impacts of the programme during their regular press conferences and during their appearances before the ECON Committee. Indeed, a look at the briefing papers prepared for the committee over the past few years shows that potential negative side effects of asset purchase programmes has been a regular topic of interest for the committee to raise in its discussions with the ECB President.

More recently, ECB Executive Board member Isabel Schnabel (2020) delivered an excellent speech in February (in Karlsruhe of all places) addressing (and rebutting) many of the negative-side-effect arguments. Far from being "not ascertainable", even the slightest bit of research would have unearthed many different signs that ECB has clearly considered these issues in depth.

The BVerfG's judgement acknowledges (paragraph 111) that there is a tension between its decisions and the other institution of the European Union.

"In principle, certain tensions are thus inherent in the design of the European Union; they must be resolved in a cooperative manner, in keeping with the spirit of European integration, and mitigated through mutual respect and understanding."

Unfortunately, by ignoring so much of the public communication on PSPP made available by the ECB and the European Parliament, the BVerfG's decision does not show respect for (or understanding of) these institutions.

5. CONCLUSIONS

At this time of global crisis, there are strong economic and legal arguments for the ECB to take exceptional action to stimulate the economy and support the economic policy objectives of the EU. The ECB was failing to meet its primary objective of price stability — defined as inflation of close to but below 2 percent — prior to the COVID crisis and without an exceptional policy response, inflation will likely move further away from its target level. So this is a moment when the ECB should consider using its money creation powers in a wide range of new and innovative ways that will support the economic policy objectives of the union and, through their positive effects on the economy, also help it move closer to meeting its price stability objective.

In practice, however, the way the EU Treaties are being interpreted by courts may curtail the ECB from taking some of the crisis prevention measures that it would like to. For example, while the ECJ declared the PSPP to be legal in its *Weiss* judgement in December 2018, it largely did so because the PSPP had a number of features that do not apply to the new PEPP. Should the PEPP be questioned at the ECJ, it may be deemed to be in violation of Article 123 of TFEU.

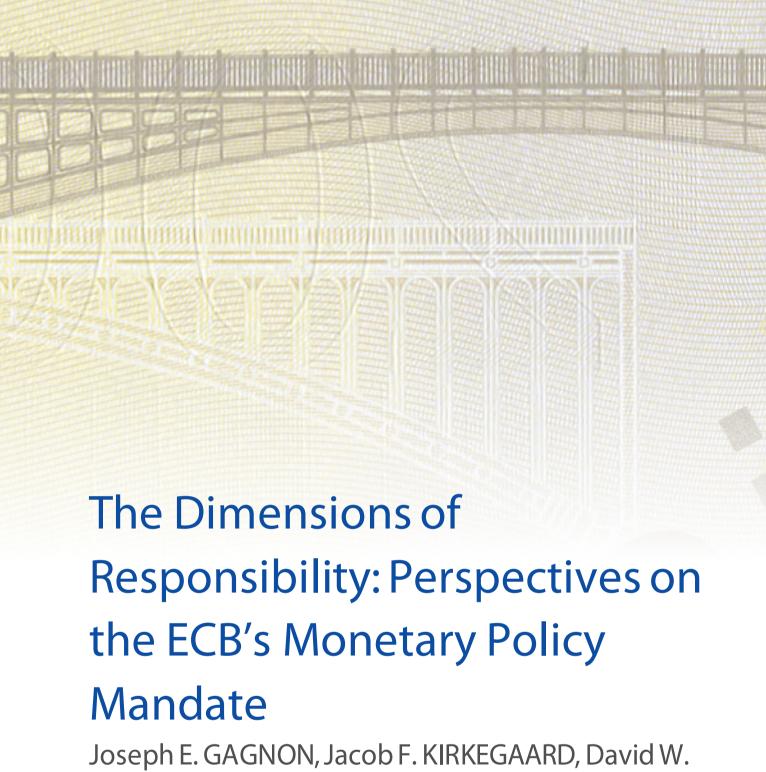
The other threat to the ECB's policies is the recent judgement of the German constitutional court, a judgement that I have argued here is flawed in both its legal and economic analysis. The ECB's response to the judgement simply takes note of it and restates that the ECJ (which must remain the final decision maker on European law) has declared PSPP to be legal. The ECB is clearly under no legal obligation to accede to the BVerfG's request to adopt "a new decision that demonstrates in a comprehensible and substantiated manner that the monetary policy objectives pursued by the ECB are not disproportionate to the economic and fiscal policy effects resulting from the programme." But there is so much evidence in favour of the proportionality of the PSPP (all of which has been ignored by the BVerfG) that a decision of this sort could more or less consist of providing a list of all the different pages on the ECB's website where these issues have been discussed. However, given the BVerfG's particular ideas about the principle of proportionality, it is unclear if this would be enough for them to change their mind.

This leaves open whether the Bundesbank can continue to be a part of asset purchase programmes. It may be that the answer is "No" and that the Bundesbank needs to sell all of its German government bonds to the rest of the Eurosystem. On its own that is not likely to be a big threat to the euro, though it raises the question of whether it would put the Bundesbank in violation of Article 271(d) of TFEU which requires national central banks to fulfil their obligations under the Treaties (assuming participation in PSPP as directed by the Governing Council is interpreted as such an obligation). However, the more the Eurosystem moves away from implementing policy measures in a coordinated and shared manner, the weaker the arguments become for having a shared currency and monetary policy.

Given the various legal difficulties associated with sovereign bond purchases, there may be an argument for the ECB to switch its focus to newer and more innovative policy approaches.

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Abstract

A strong theoretical and empirical case exists for a dual monetary policy mandate. Central banks should aim to stabilise both prices (or inflation) and output (or employment). Other objectives, such as financial stability, reversing climate change, and reducing inequality are at best secondary objectives for which better policy tools are available.

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LIST OF ABBREVIATIONS

COVID Coronavirus disease

ECB European Central Bank

EU European Union

LAW Leaning against the wind

LOLR Lender of last resort

NAIRU Non-accelerating inflation rate of unemployment

QE Quantitative easing

SSM Single Supervisory Mechanism

US United States

UK United Kingdom

EXECUTIVE SUMMARY

- This paper provides a normative analysis of how the ECB's mandate should be defined. Particular emphasis is given to the central bank's core monetary policy mandate of macroeconomic stabilisation, and whether that mandate should be limited to inflation or price stability, or should also recognise a role for promoting maximum employment. If "yes" is the answer to the latter question, the paper examines whether inflation or price stability should take priority, or whether output stabilisation should be on an equal footing. The paper also examines the extent to which a central bank's mandate should include responsibility for financial stability and possibly addressing climate change and inequality concerns.
- A strong theoretical and empirical case exists for a dual mandate for central banks comprising goals for both inflation or price and output stabilisation. Focusing exclusively on price stabilisation at a time of demographic decline risks lulling a central bank into acting too timidly against negative deviations in output, and tolerating persistent undershooting of the price stability target.
- Maintaining financial stability, including the role of lender-of-last-resort, is a crucial function of efficient modern central banking. This function is, however, best carried out via thorough and tireless financial sector supervision, and through aggressive utilisation of macroprudential regulatory tools. Financial stability should not be a first-order concern for monetary policy, due to the high costs of countering rapidly rising asset prices though higher interest rates.
- Central banks are not well equipped to directly address climate change concerns, a task best left to governments though the legislative tools at their disposal, including the introduction of comprehensive carbon pricing. Central banks must, however, be vigilant against the impacts of climate change on their price stability, output and financial stability responsibilities. Independent central banks, such as the ECB, may at their own initiative seek guidance from relevant democratically elected bodies regarding the extent to which climate change should be an explicit criterion in the implementation of the central bank's regular monetary decisions. This may be particularly relevant for central banks' design of sound asset purchase programs.
- Central banks can contribute importantly to combatting inequality by pursuing price and output stability, thereby mitigating economic contractions that invariably affect marginalised groups more than society's affluent layers. As an empirical matter, this general perspective appears valid even when central banks exercise their more recently developed policy tools, including large scale asset purchases. The positive effects on inequality from stronger job creation arising from such purchases more than offset the benefit derived by the holders of appreciating assets. As with climate change, central banks may adopt inequality concerns as a design parameter, seeking explicitly to reduce any negative effect on inequality in the implementation of its monetary policy decisions.

1. INTRODUCTION

This paper discusses issues related to the definition of a central bank's mandate in the area of monetary policy. Until relatively recently, such a discussion would have dwelt mainly on the question of whether central banks like the European Central Bank (ECB) should focus solely on inflation or price stability or whether promoting the maximum sustainable level of employment is also a useful objective. Somewhere on the periphery, but probably as something of a theoretical curiosity—forgettable in the modern era with advanced supervision and extensive systems of deposit insurance—would have been central banks' lender-of-last-resort function. Today, with the global economy in the midst of its second economic crisis in a dozen years, the lender-of-last-resort function has, unfortunately, become a routine element of the monetary policy repertoire. As the central bank for a multi-country currency area containing highly diverse national economies, this new economic reality has presented the ECB with a particular set of monetary policy challenges as well as national legal challenges, such as from the German constitutional court.

Moreover, as the global economy gradually returns to normal over the next few years, debate will resume over potential extensions of a central bank's mandate to include responsibility for combatting global climate change and the increase in economic inequality.

Of course, many central banks carry out important responsibilities in other areas as well, including financial supervision and regulation, payment systems, and community development. The fact that those other functions are not discussed here does not reflect a belief on our part that they are unimportant, but rather that they are separable from the monetary policy responsibilities that are the focus of this paper because they employ non-monetary tools.

The next section of the paper provides a very brief tour through the history of economic thought regarding the price stability and output-smoothing objectives of monetary policy. Subsequent sections consider possible extensions to encompass aspects of financial stability, climate change or economic inequality.

2. THE ORIGIN OF THE PRICE STABILITY AND MAXIMUM EMPLOYMENT MONETARY POLICY OBJECTIVES

For many centuries, money was defined in terms of specific quantities of gold or other commodities. Monetary policy as we now know it did not exist.

The philosopher David Hume first described the effects of the gold supply on the overall price level, drawing on the inflationary experience of Europe in the sixteenth and seventeenth centuries, after the conquest of the Americas and the wholesale importation of gold from Spain's new colonies. According to Hume (1752, Essay IV), "[a]Il augmentation [of the gold supply] has no other effect than to heighten the price of labour and commodities."

In wartime, countries often suspended the link to gold and printed money to finance expenditures with inflationary consequences, but this practice was viewed as an unusual and deplorable necessity to be reversed as soon as possible. In 1873, the United States joined the gold standard as part of an attempt to reverse the inflation of the Civil War, when the link to silver had been cut. Rapid population growth and a paucity of new gold mines led to roughly 30 years of deflation from the late 1860s to the late 1890s. Milton Friedman and Anna Schwartz (1963) termed the 1870s the "Great Depression" because of the widespread discontent with falling prices.¹ By the 1890s, this discontent had intensified, culminating in the 1896 presidential campaign of William Jennings Bryan, who favoured the free coinage of silver at a value that would be inflationary. Bryan famously declared "[y]ou shall not crudity mankind upon a cross of gold." ²

Perhaps inspired by this experience, the Swedish economist Knut Wicksell (1898) speculated on the possibility of operating a fiat monetary system with the aim of maintaining a stable overall price level. Wicksell argued that there is a natural rate of interest which would keep prices constant on average. The central bank's job should be to regulate the money supply to maintain interest rates at their natural level, which might change over time. Wicksell was not very influential, however, and the gold standard remained accepted by most economists and policy makers for the next few decades as the best basis for the international monetary system.

World War I forced European countries to abandon the gold standard, as war-related expenses far in excess of tax revenues, combined with supply shortages, caused significant spikes in inflation. In Germany, the Weimar government's attempt to print money to pay the gold-based war reparations laid down in the Treaty of Versailles and to support the domestic economy during the 1923 occupation of the Ruhr led to the infamous German hyperinflation of that year. The United Kingdom returned to gold at the pre-war parity in 1925, causing a sharp economic slowdown that led to the general strike of 1926. France returned to gold in 1928, but at a much depreciated parity and was able to avoid an immediate recession, though it suffered later after the United Kingdom was forced off gold in 1931 (Irwin, 2012).

John Maynard Keynes (1936) mounted the most successful challenge of gold standard orthodoxy with his General Theory of Employment, Interest, and Money. Writing in the depths of the Great Depression, Keynes rejected the classical view that economies fluctuated around a full-employment equilibrium with only short deviations that are not amenable to stabilisation by government policies. Keynes

¹ They termed what we now call the Great Depression (the 1930s) the Great Contraction.

http://historymatters.gmu.edu/d/5354/. Bryan lost the election. Ironically, new gold discoveries in the late 1890s would soon contribute to a modest upswing in prices around the world.

argued that wages and prices are sticky, especially downward, and thus the economy is slow to adjust, especially to periods of weak aggregate demand.

According to Keynes, a key implication of asymmetric wage and price adjustment is that economies spend most of the time below full employment. He wrote "the evidence indicates that full, or even approximately full, employment is of rare and short-lived occurrence" and "[i]t would be absurd to assert of the United States in 1929 the existence of over-investment in the strict sense" (Keynes 1936, locations 3061 and 3993).

Keynes decried the shackles imposed by the gold standard on a central bank's ability to manage domestic interest rates and maintain full employment. He argued that the gold standard fomented protectionist pressures and international conflict because "all measures helpful to a state of chronic or intermittent under-employment were ruled out, except measures to improve the balance of trade" (Keynes 1936, location 4774). In contrast, he wrote that "[i]t is the policy of an autonomous rate of interest, unimpeded by international preoccupations, and of a rational investment programme directed to an optimum level of domestic employment which is twice blessed in the sense that it helps ourselves and our neighbours at the same time" (Keynes 1936, location 4336).

Keynes is most famous for his advocacy of fiscal policy to combat the Great Depression. However, his advocacy of fiscal policy reflects the fact that short-term and long-term interest rates were close to zero in the 1930s and he did not imagine more creative monetary policies such as forceful use of the central bank's balance sheet.³ In the General Theory, Keynes proceeds on the assumption that reducing interest rates by increasing the money supply, when feasible, should be the default choice among policy options to fight slumps. He also confirms the then-prevailing orthodoxy that higher interest rates should be used to fight inflation. Keynes is thus the first influential economist to argue that the goal of monetary policy is to achieve the highest level of employment consistent with stable prices.

In the 1960s, a famous debate broke out between Keynesians, led by Paul Samuelson and Robert Solow, and monetarists, led by Milton Friedman, on the ability of activist monetary and fiscal policies to stabilise or boost employment without destabilising prices. The outburst of inflation in the 1970s seemed at first to vindicate the monetarists. But subsequent attempts to implement monetarist policies also proved unsatisfactory. Despite this disagreement on the means, both sides agreed on the ends. Friedman (1968) says "[t] here is wide agreement about the major goals of economic policy: high employment, stable prices, and rapid growth." Samuelson (1976, 314) says the goal of monetary policy is "to promote optimal real growth and price-level stability" while noting that central banks expand or contract "money and credit" in response to inflation and job vacancies.

We note that output and employment are closely linked as goals of monetary policy. Monetary actions to achieve one will also promote the other, unlike the trade-off commonly experienced between them and price stability. Central banks are able to choose any rate of inflation as their target, whereas they are not free to choose any level of employment or level of output in the long run. Any goal they have for output or employment is only an estimate of what the economy is capable of achieving. Accordingly, as is the case in the EU Treaty guiding the actions of the ECB, one may not regard a goal for output or employment as having the same status as the central bank's target for inflation. 4 Most

³ Keynes believed that low interest rates of the 1930s were a secular phenomenon that would reappear after a large one-time increase in the money supply (or devaluation). He did not consider the possibility that a permanent increase in expected inflation would lower the real rate of interest and boost aggregate demand. He did consider and rejected a proposal to tax banknotes that would have allowed a negative rate of interest, arguing that it would lead to the adoption of alternative moneys, including "foreign money, jewellery and the precious metals generally, and so forth" (Keynes 1936, location 4451).

⁴ The ECB accordingly initially set its price stability target as an annual consumer price index growth of below two percent. In 2003, this definition of the ECB's inflation target was clarified to "inflation rates below, but close to, two percent over the medium term". See https://www.ecb.europa.eu/mopo/strategy/pricestab/html/index.en.html.

central banks have chosen to target a rate of inflation somewhat above zero in order to increase their capability to fight recessions, and because many economists believe that sustainable employment is maximised with a rate of inflation moderately above zero.

A policy objective of stabilising output (or employment) and prices does not necessarily require policy actions that respond to output and prices. For example, Milton Friedman (1968) argued that a constant money growth rate with no response to output and prices would deliver the most stable output and prices possible. Blanchard and Galí (2007) noted that, under some assumptions, stabilising inflation is sufficient to also stabilise output—a property they termed the "divine coincidence." But they argued that while stabilising prices may be sufficient to generate high and stable growth in a particularly simple model, this property breaks down in a more general model. When stable output and prices are among the main goals of policy, it is not surprising that a policy that responds systematically to output and prices may be optimal under some conditions.

Nevertheless, some economists and central bankers have expressed concern with policies that respond to output rather than focusing exclusively on promoting price stability. There are at least two reasons for this concern: (1) as noted earlier, a central bank does have latitude to choose their preferred inflation rate (and even the price level), and can deliver on that choice over the long term, whereas the long-run level of output is determined by many factors beyond the control of the central bank, including long-run demographics and productivity growth trends; and (2) acknowledging a desire to stabilise output invites political or internal pressure to respond to output at the expense of inflation, which would lead to higher inflation over time without any lasting increase in output (Kydland and Prescott, 1977).

National historical experiences with hyperinflation and political instability, such as Germany in 1923, may lead central banks to stress their inflation objectives almost to the exclusion of their output or employment objectives. Specific national characteristics such as a low home ownership ratio may produce a heightened public sensitivity to the impact of inflation on rents without the offsetting benefit of capital gains, also leading to a higher implicit weight on stabilising inflation relative to maximising employment. Central banks should take account of perceived public preferences when permitted to set their own specific monetary policy goals, and when determining their strategies for achieving those goals. Central banks should, however, take care to do so in a manner reflecting their specialised expertise to ensure chosen policy goals are consistent with present day best practices, rather than historical experiences. In a multi-country currency union like the euro area, where public preferences may vary greatly, it is important that the central bank operate with a transparent, rigorous, practical, empirical and theoretical understanding of how the economy operates. This is the best shield against misguided biases affecting policy decisions.

In the 1990s, a "New Keynesian" consensus emerged that optimal monetary policy should be transparent, systematic and predictable. A focus on policy "rules" was motivated mainly by a desire to avoid the pitfall of discretionary policy that might respond excessively to output at the expense of price stability. John Taylor (1993) famously showed that Federal Reserve interest rate policy during a period of relative economic stability could be well described by a simple rule relating the policy rate to movements in the gap between inflation and a target level and the gap between output and its potential level. A subsequent literature grew up exploring the optimal functional form, variables, and coefficients of monetary rules. There remains disagreement over the importance of sticking to a specific rule versus retaining some discretion, but a strong consensus prevails that monetary policy should be systematic, clearly tied to the end goals, and clearly explained to the public.

⁵ Germany is the only member of the euro area with a home ownership ratio below 50 percent (OECD, 2019).

In their influential Ph.D.-level textbooks, Olivier Blanchard and Stanley Fischer (1989) and Michael Woodford (2003) assume that society's loss function (that is, the inverse of social welfare) may be approximated by the weighted sum of expected future squared deviations of inflation from a target level and output from its potential level. The job of monetary policy is to minimise this loss function; in other words, monetary policy seeks to stabilise output and inflation around their goal levels. Woodford shows that, in a generic New Keynesian model, the optimal policy rule takes the form of Taylor's (1993) rule, in which interest rates respond to deviations of output from potential and inflation from target.

Other leading monetary economists share this assumption that the goal of monetary policy is to stabilise both output and prices (or growth and inflation). Examples include Richard Clarida, Jordi Galí, and Mark Gertler (2000) and Ben Bernanke, Thomas Laubach, Frederic Mishkin, and Adam Posen (2001). The former paper estimates a Taylor-style rule using data from the terms of Federal Reserve Chairs Volcker and Greenspan. In the empirical specification, as in Taylor's original work, the interest rate responds to deviations of output and inflation from their goal levels; the paper shows that the estimated rule does in fact help to stabilise output and inflation in a small calibrated model. The latter book reviews the largely successful experiences that inflation-targeting monetary policy regimes had enjoyed to that point around the world. The authors interpret inflation targeting as a framework that restricts monetary policy to stabilising inflation in the long run while granting scope for discretionary responses to output deviations from its goal level in the short run.

Lars Svensson (2010) adopts the standard policy objective function of minimising deviations of inflation and output from respective goals but argues against backward-looking Taylor-style rules and in favour of "forecast targeting." Under forecast targeting, a central bank sets its policy rate to achieve a projection of inflation and output that maximises its objective function. An important advantage of forecast targeting is that it allows a central bank to better reflect in its policy choices information it may have about structural change or other forces bearing on the outlook.

Olivier Blanchard, Giovanni Dell'Ariccia, and Paolo Mauro (2013) argue, in the aftermath of the Great Recession, that the case for a monetary policy response to output deviations may be even stronger than previously believed. This conclusion rests on the observation that the Phillips curve seems to have become much flatter than before. Thus, monetary policy could have usefully eased more to boost recovery without incurring any significant losses from higher inflation. Indeed, one might argue—in retrospect, at least—that monetary policymakers must not have pushed hard enough during the recovery from the Great Recession because central banks in many advanced countries missed both of their objectives on the same side, with inflation running persistently below target and output running below potential.

The policy recommendation of Blanchard, Dell'Ariccia, and Mauro (2013)—that central banks should respond forcefully to deviations of output from potential—is bolstered by recent studies finding highly nonlinear Phillips curves in the United States and other advanced and emerging-market economies (Gagnon and Collins, 2019; Forbes, Gagnon, and Collins, 2020). When the unemployment rate is above the non-accelerating inflation rate of unemployment (NAIRU), as it was for many years after 2009, the Phillips curve is almost perfectly flat and changes in unemployment have essentially no effect on inflation. A central bank that responds only to inflation will forego an economic "free lunch"—that is, an increase in output and employment without any sacrifice on its inflation objective whenever the unemployment rate is above the NAIRU. 6 When the unemployment rate is below NAIRU, the Phillips

⁶ A corollary is that conventional methods for estimating the NAIRU, including those of the European Commission, the International Monetary Fund, and the Organization for Economic Cooperation and Development, are badly flawed. These methods assume a linear Phillips curve and estimate the NAIRU as the rate of unemployment that keeps inflation constant. With a nonlinear Phillips curve of the shape identified by Gagnon and Collins (2019), there is a large range of unemployment rates that are consistent with steady inflation. The

curve is steep, and changes in unemployment have substantial effects on inflation. These conclusions harken back to those of Keynes (1936), who argued that there is a wide range of employment outcomes consistent with stable prices and that central banks should set their policy interest rate to achieve the maximum level of employment consistent with stable prices.

NAIRU should be estimated as the lowest rate of unemployment consistent with steady inflation, but most published estimates do not make this adjustment. The conventional methods find excessively high values of the NAIRU whenever unemployment is high. A similar critique applies to estimated output gaps.

3. IMPLICATIONS OF DEMOGRAPHICS AND SECULAR STAGNATION

Economic growth rates and real interest rates have trended downward over the past few decades in many countries, most notably in Japan but also in Western Europe and elsewhere. The main driving force appears to be declining birth rates and aging workforces. Declining growth of labour input (and, in some countries, an outright decline in labour input) reduces an economy's potential growth rate both directly and indirectly through reduced productivity growth. For central banks that rely on a backward-looking policy rule of the Taylor (1993) type, there will be a tendency to keep policy too tight because—at least in its simplest formulation—the rule assumes a constant equilibrium real rate of interest, whereas the equilibrium real rate is actually declining. When the Phillips curve is quite flat, as it has been in advanced economies since the 1990s, the effect of excessively tight policy initially shows up mainly as excess unemployment. Central banks, like the ECB, that focus mainly on inflation are especially likely to drift into suboptimal outcomes in such circumstances. By the time downward pressure on inflation becomes noticeable, the economy is likely to be deeply depressed. The consequent reduction in long-run inflation expectations, combined with an effective lower bound on the policy interest rate, reduces the central bank's scope to support the economy when recession strikes, by cutting nominal interest rates. A deflationary spiral looms.

Demographic decline hence adds to the urgency for central banks to act forcefully and persistently against deviations of output from potential. For the ECB, which has an inflation target without a well-defined lower bound ⁹, focusing exclusively on subdued inflation poses an unusually acute risk to long-term price stability in an era of demographic decline. It is hence noteworthy that euro area inflation since 2015 has fallen into outright deflation twice, is currently 0.7 percent and, according to the ECB itself, only expected to reach 1.6 percent by 2022. ¹⁰

Demographic decline reduces business investment and capital deepening, which is a source of long-term productivity growth. Demographically induced reductions in rates of new start-up firms also reduce productivity growth (Karahan, Pugsley, and Sahin, 2019).

⁸ The excess unemployment is even worse than it appears because the natural rate of unemployment tends to decline as the median age of the workforce increases (Gagnon and Collins, 2019).

⁹ The ECB's current inflation target of "close to, but below two percent" opens up the possibility that a defacto inflation outcome of perhaps 1.5 percent or lower might become acceptable for a majority on the ECB Governing Council.

¹⁰ See ECB (2020).

4. FINANCIAL STABILITY

The global financial crisis of 2008-09 showed that imbalances in the financial system can weigh heavily on inflation and employment and hinder the ability of central banks to achieve their macroeconomic objectives. One important monetary tool used to promote financial stability is the central bank's ability to make emergency loans as the lender of last resort (LOLR). This is a monetary tool because it derives from the central bank's unique ability to create money. The standard prescription for LOLR policy is Walter Bagehot's dictum, summarised by Paul Tucker (2009) as "to avert panic, central banks should lend early and freely (i.e. without limit), to solvent firms, against good collateral, and at 'high rates." Following this dictum helps to achieve both financial stability and macroeconomic stability.

Just as financial instability has the potential to affect attainment of macroeconomic stability, so also the causality can go the other way around. For example, accommodative monetary policy in the form of low interest rates has the potential to motivate excessive risk taking by market participants and create vulnerabilities in the financial system. How should these financial stability concerns affect the way that central banks think about pursuing their mandates to promote price stability and maximum employment?

As the world's major central banks adopted flexible inflation targeting frameworks, a general consensus emerged that monetary policy should consider financial stability risks only to the extentthat they influence inflation and output. In the context of a Taylor-style rule, monetary policy will not act to preempt a financial crisis beyond its normal response to excess inflation and output. However, it should curb macroeconomic overheating before the crisis, and help the economy recover after the crisis. This influential view, put forth by Ben Bernanke and Mark Gertler (1999), posited that if investors and market participants know the central bank will raise interest rates when rising asset prices threaten to overheat the economy, and vice versa if declining asset prices threaten to induce an economic contraction, then a flexible inflation targeting framework will promote both financial and macroeconomic stability.

The crux of the argument that monetary policy does not need to concern itself greatly with issues of financial stability comes from the idea that other tools, aside from monetary policy, will be available to fight financial instability, and will be capable of doing so reasonably efficiently and without incurring broader costs (in the form, for example, of lost output). Macroprudential policies such as loan-to-value or debt-to-income limits and bank capital requirements, and other forms of bank supervision and regulation are available in many jurisdictions, including in the euro area, where it is the responsibility of the Single Supervisory Mechanism (SSM). In contrast to monetary policies, macroprudential measures can be targeted to specific segments of the economy where the risk lies. Although macroprudential policies could reduce costs in terms of output, Jeremy Stein (2014) argues these measures could push risks to less regulated areas of the financial system. Although they come with other costs, Stein argues that higher interest rates operate throughout the entire system and, therefore, "get in all of the cracks."

Stephen Cecchetti, Hans Genberg, and Sushil Wadhwani (2002) also investigate whether asset prices should play any direct role in influencing the stance of policy in a flexible inflation targeting framework. They provide some theoretical support for having the central bank react to asset price fluctuations that are not driven by fundamentals and reflect long-lived misalignments. They argue that the central bank should react to asset price bubbles but not target specific levels of asset prices.

Although the notion of a central bank using its policy rate to prevent asset price bubbles from growing too large and threatening the system has some theoretical support, many are sceptical that it is capable of doing so in practice. First, it is almost always hard to tell, in real time, if a rapid rise in asset prices is the result of improved fundamentals, or a bubble that is the result of risk preferences that could reverse

quickly. The central bank would want to offset only the bubble portion and not the portion that reflects improved fundamentals. It is not clear that a central bank is better able to identify asset price bubbles than financial market participants. Second, even if the central bank had an informational advantage allowing it to better identify bubbles, there is little evidence that monetary policy can be fine-tuned to address them effectively. It is likely that, to have an observable effect, a central bank would need to raise interest rates sharply, and those higher rates in turn would be highly costly in terms of lost output (Bernanke 2002). 11 This view is supported by the little apparent benefit to financial stability experienced by countries with higher interest rates prior to the global financial crisis. As Philip Turner (2017) notes, interest rates were significantly higher in the United Kingdom than in Canada before the crisis, and yet UK banks suffered far worse than Canadian banks despite Canada's much closer financial and economic links to the US epicentre of the crisis. Turner also argues that the sustained rise of the US policy interest rate from 2004 through 2006 had no notable impact on various measures of risky financial behaviour.

Woodford (2011) argues that a central bank need not be able to preempt asset price bubbles in order to decide that it should use the tools of monetary policy to promote financial stability. It could be, for example, that small changes in interest rate policy can promote financial stability through modest reductions in leverage and maturity transformation in the financial sector. Therefore, Woodford argues, policymakers should focus on identifying situations in which the probability of large institutions facing simultaneous distress is non-trivial.

Blanchard, Dell'Ariccia, and Mauro (2013) suggest that perhaps the central bank should assume rapid asset price increases are bubbles with slightly higher probability, rather than trying to identify with any precision what portion of a given rise in asset prices is driven by fundamentals versus a bubble. This would, in effect, strike a trade-off in which a central bank would be willing to accept higher type I errors (acting as if there is a bubble when there is not) for less frequent type II errors (missing an asset price bubble). The result is a strategy, referred to as leaning against the wind (LAW), that acts as a sort of insurance policy against the buildup of financial risks. Policymakers who choose the LAW strategy during a period of rapidly rising asset prices would be trading a cost of lower output and inflation in the short term for the benefit of reduced financial risk and potentially greater output in the long term.

Research is mixed on the net benefits of using monetary policy to lean against the wind. The costs are relatively well understood. Higher interest rates slow down the economy leading to higher unemployment and lower output, and perhaps inflation that runs below target. The benefits of reduced financial stability risk are not well estimated. Adrian and Liang (2018) and Caballero and Simsek (2020) find that, when macroprudential policy is imperfect, there are conditions when it is optimal to raise interest rates to rein in asset price booms. On the other hand, Svensson (2017) argues that the costs of LAW exceed the benefits under all plausible assumptions about economic parameters. Ajello et al. (2016) find that only very small LAW deviations from a standard policy rule are optimal under their baseline parameters, and deviations under extreme parameter assumptions are still rather modest (implying a rise in interest rates of less than 1 percentage point in a typical bubble scenario). Gourio, Kashyap, and Sim (2017) also find only small benefits in their baseline model but point to gaps in knowledge and conclude that "it is too early to say that the question is settled."

It is widely believed that macroprudential policy could have done more to prevent the buildup of financial excesses before 2008 (Bernanke 2015a). However, the presumption among many advocates of LAW that both macroprudential and monetary policy should have tightened before 2008 is not necessarily correct. Spillovers from macroprudential policies to inflation and output are likely to be at

Referring to the 1920s US stock market, Keynes (1936, location 4000) says that "a rate of interest, high enough to overcome the speculative excitement, would have checked, at the same time, every kind of reasonable new investment."

least as important as spillovers from monetary policy to financial stability. Thus, more aggressive use of loan-to-value and debt-to-income limits prior to 2008 would have reduced housing demand and might have required lower policy interest rates, not higher rates.

As the central bank for a multi-country currency zone in which bank loans account for the overwhelming majority of financing for the private corporate sector, the ECB faces a financial stability issue directly linked to monetary policy. It is imperative to ensure that the ECB's monetary policy decisions are transmitted equally through the still divergent and domestically oriented national financial systems to the wider economy in the 19 euro area members. The introduction of the European Banking Union and associated sizable increase in the capital levels of euro area banks has mitigated perhaps the most destabilising financial stability factor for monetary policy in the euro area. This came in the form of undercapitalised banks frequently unable in times of financial market stress to transmit monetary easing measures to the non-financial sector. Persistently close links between national euro area banking systems and their respective sovereign governments nonetheless continue to affect ECB monetary policy decision making. This so-called "doom loop" sees financial market stress transmitted from individual (large) banks to their national sovereign government, and from there to a general national financial crisis. Several national-level banking systems continue to hold sizable shares of owncountry sovereign debt on their balance sheets. In order to ensure an even transmission of monetary policy decisions across the euro area, the ECB is implicitly required to 1) safeguard the value of all euro area sovereign bonds, lest these otherwise become a source of financial instability in some national banking systems; and 2) ensure that all euro area banks have access to adequate liquidity so that they may transmit the ECB monetary policy signals to the real economy. This situation will raise financial stability concerns in times where monetary policy might otherwise dictate a rapid reduction in the size of the ECB's balance sheet through the selling back to private investors of sovereign bonds acquired as part of quantitative easing (QE) policies. Given the large differences in sovereign debt levels among the euro area member states, the importance of sovereign debt in some national banking systems is likely to remain an important factor for the ECB to take into account until such time as an alternative "safe asset" with euro-area-wide backing is available in adequate quantities. This would require a farreaching political decision in the euro area outside the realm of monetary policy.

In sum, current research on the associated costs and benefits indicate that there are scenarios in which it may be optimal for monetary policy to lean against the wind (LAW), in the sense of damping asset price fluctuations. But these conditions are likely to be rare and uncertain, and the implied change in the policy interest rate may be small. Monetary policymakers should work with macroprudential policymakers to monitor financial risks, but macroprudential policy should remain the first line of defence for promoting financial stability. The setup of the ECB and the SSM, with both monetary policy and macroprudential policy within the same institution, but with separate decision-making bodies, ¹² has been explicitly chosen to achieve this outcome.

¹² The SSM vice chair is also a member of the Executive Board of the ECB, and as such is a key part of both bodies.

5. CLIMATE CHANGE

In thinking about the role that climate change might play in influencing central bank decision-making, an important distinction needs to be made from the outset—a distinction essentially between two directions of causality. The first direction of causality focuses on the question of whether climate change might affect the conduct of monetary policy, even if central bankers maintain exactly the traditional objectives of limiting fluctuations in inflation and activity; the second direction of causality focuses on the question of whether central banks should modify their objectives, and change the way that they conduct policy in hopes of affecting the evolution of climate change.

With regard to the first direction of causality, there is good reason to think that central banks will indeed need to take account of the reality of climate change. After all, climate change already undeniably affects the performance of the economy, and unfortunately will do so increasingly as time goes by. Cœuré (2018) outlines a number of ways in which these effects will be manifested. First, climate change will complicate the identification of shocks, and make more challenging the task of disentangling supply shocks from demand shocks. Second, it will probably "fatten the tails," in that it will likely give rise to more shocks of extreme size. In turn, these larger shocks could cause more-frequent encounters with the effective lower bound on the policy interestrate. And third, the relative price changes that will have to occur as the economy adjusts to a lower-carbon future could destabilise inflation expectations. Central banks will do well to be highly conversant with the underlying mechanics and implications of climate change in order to deal with these implications as best they can.

Two practical considerations suggest that central banks should be capable of addressing these implications of climate change relatively naturally, in the normal course of conducting their monetary-policy business.

- First, monetary policy has a short horizon relative to the period over which climate evolves.
 Monetary policymaking committees typically meet many times per year and can recalibrate the
 stance of their policy at each of those meetings in response to the latest incoming information. By
 contrast, climate evolution takes place at the pace of many years, blurring into decades. And when
 shocks occur, the rapid adjustment speed of monetary policy implies that it can respond by
 hazarding its best guess as to the most appropriate response, implementing that guess, and then
 revisiting the question at its next meeting in light of incoming information.
- Second, monetary policymakers operate in an environment of pervasive uncertainty. It is never
 possible for them to know the structure of the economy with precision. Data are always measured
 with error, creating noise in standard economic relationships, and the structure of the economy is
 always evolving, often for reasons difficult or impossible to label with precision. In this context, the
 structural change implied by climate change is not something qualitatively new, but instead
 represents but one more source of uncertainty about the operating characteristics of the economy.

Combined, these two considerations imply that monetary policymakers must always be on the lookout for signs that the structure of the economy is shifting in some previously unforeseen way. They must be sufficiently agile to adjust the stance of their policy in response to possibly subtle signals about changes in the underlying structure of the economy, and agile as well in response to non-subtle shocks to the economic environment.

With regard to the second direction of causality, there seems an equally widely held consensus that central banks should not modify their pursuit of their traditional mandates in order to directly promote better climate-related outcomes. In the extreme, one could imagine a climate-conscious central bank deliberately and persistently running output a little short of its potential, on the theory that carbon

emissions are positively related to the pace of activity. With activity running lower than it would otherwise, emissions would be lower, and the central bank would be able to claim that it was helping to solve the problem of global climate change. However, that achievement would, of course, come at the immense cost of higher unemployment and all the economic damage attendant thereto (as well as, presumably, some cost stemming from inflation running below its target). These costs seem likely to be so high as to trigger a failure of the Tinbergen test: ¹³ The tools of monetary policy simply are not the best ones for addressing the problem of global climate change—no matter how important climate change may be.

Fortunately, even if monetary policy fails the Tinbergen test as applied to climate change, other policy instruments surely pass it. Again, to take the most obvious example, if the underlying issue is that the prices of fossil fuels do not reflect the damage that the burning of such fuel imposes on the environment and society, a more efficient approach to correcting the problem is to impose a carbon price. This can for instance be done by requiring that scarce carbon emission certificates are purchased by polluters, or in the form of a carbon tax, naturally causing those who consume fossil fuels to take due account of the consequences of their actions.

Some have proposed that other policy actions taken by central banks could be skewed in a more climate-friendly direction. For example, Olovsson (2018) suggests that a central bank could use its large-scale asset purchases to promote climate-related objectives. The central bank could, for example eschew purchasing securities issued by companies heavily involved in the fossil-fuel industry, or could over-weight the securities of companies involved in developing renewable forms of energy. Central banks are acutely aware of the economic distortions and political pressures that may arise from conducting their policies and purchases in a manner that favours some firms or individuals over others. Purchase or lending programs typically aim to cover the broadest possible range of securities or firms that meet criteria based on the central bank's macroeconomic stability objectives. Rather than formulate climate-oriented restrictions on its own, the ECB should instead solicit the guidance of the European Parliament and/or elected member governments in this matter. Restrictions on lending and purchase programs motivated by non-macroeconomic criteria should be considered carefully and used judiciously as they can diminish the central bank's ability to achieve its macroeconomic stability objectives.

Central banks must be aware of possible implications of climate change for other aspects of their responsibilities, aside from monetary policy, including financial stability and financial supervision and regulation. ¹⁴ For example, carbon spot and futures prices may fluctuate wildly, and to the extent those assets are held by financial institutions, affect their capital positions. Or a financial institution with lending heavily concentrated in a coastal area may be bearing far more risk going forward than would have been the case 50 or 100 years ago. Likewise, climate change may pose threats to financial stability if, for example, critical financial infrastructure is located in flood-prone areas. Thus, in arguing against expanding the remit of monetary policymakers to include climate change (except perhaps through restrictions on certain asset purchases), in no way do we wish to be construed as suggesting that central banks can be oblivious to climate change overall.

The EU's intention to fully decarbonise its economy by 2050 will lastly dictate that (almost) the entire European energy supply is converted into electricity and that this electricity is produced from

.

¹³ Jan Tinbergen (1952) analysed the optimal assignment of instruments to targets. When there are at least as many instruments as there are targets, instruments should be assigned to the targets that they can achieve with greatest efficiency.

See, among many others, Brainard (2019) and Lane (2017).

renewable and mostly local sources. This will greatly reduce energy commodity price volatility as a source of overall price fluctuations.

6. INEQUALITY

Different considerations pertain to the question of how central banks should take account of inequality in the course of their conduct of monetary policy. One overwhelmingly important distinction is that the basic exercise of monetary policy in normal countercyclical fashion strongly contributes to the narrowing of economic inequality. It is well known that recessions hit relatively marginalised groups much harder than relatively privileged groups. For example, in the United States, Aaronson et al. (2019) document the following sobering facts: From 1976 through the end of 2018, the unemployment rate for African-American men was always—in every calendar quarter—at least 2 percentage points greater than the unemployment rate for white men. Moreover, when the aggregate unemployment rate gap (the difference between the actual unemployment rate and its estimated "natural" or sustainable rate) widened by 1 percentage point, the gap between the rate for African American men and white men widened by 0.9 percentage point, on average. Thus, Blacks started out at a deep unemployment disadvantage even at the very strongest part of the business cycle, and their relative position deteriorated from there as the economy weakened. Similar patterns hold for African American women relative to white women, as well as for Hispanic men and women. A widely shared view is that this widening in unemployment gaps as the economy weakens reflects an increasing ability of employers to indulge whatever latent tendency they may have toward racism and other forms of discrimination no matter that such behaviour is illegal.

Data for the euro area (and EU) Member States show a similar pattern. Ho and Turk-Ariss (2018) shows persistently lower immigrant employment rates and higher cyclical immigrant unemployment sensitivity in 13 EU Member States. Their results show heterogeneity across countries, and highlight the importance of initial labour market conditions (i.e. low unemployment rates at the time of arrival favours immigrants' job prospects). This highlights the important role played by initial and ongoing economic conditions, and hence monetary policy, in reducing the economic inequality facing immigrants across Europe.

Toward the end of the most recent business cycle, just before the COVID-induced collapse, anecdotes were very common that many individuals were getting a "second chance" in the labour market, because potential employers were much more willing to overlook past histories of substance abuse, or past episodes of incarceration. Thus, as recently as only a few months ago, there was real hope that permanent repair of damage dating back to the global financial crisis might be under way. Now that damage in economies across the globe seems sure to be inflicted anew.

No serious challenge has ever been mounted to the idea that the best anti-poverty program ever invented is a strong labour market, and that the best contribution a central bank can make toward a more equal society is to work strongly to temper the downside swings in the labour market. The case is all the more compelling if spells of unemployment have long-lasting or even permanent negative effects—a phenomenon referred to as hysteresis. The evidence for hysteresis appears even stronger in Europe than in the United States (Blanchard and Summers, 1986).

Although the positive contribution of normal countercyclical monetary policy to economic equality is not strongly in doubt, a more serious question pertains to whether the same confident statements can be made now that we seem to be in a world that will involve regular recourse to tools that previously would have been regarded as "unconventional" (but now seem to be becoming all too common place). For example, can we be so sure that QE does not contribute to economic inequality? After all, as Bernanke (2015b) notes, QE does involve a central bank purchasing vast amounts of financial assets expressly for the purpose of driving the prices of those assets up. Moreover, the wealthy (by definition)

hold far more assets than the middle or lower classes. Even if everyone benefits from the action, how confident can we be that the lower and middle classes benefit relatively more?

As in many important issues in economics, this one is an empirical question. There's nothing preordained that says it has to come out one way or the other. However, in this case, the evidence seems clear: Bivens (2015) concludes that "lowering unemployment is by far the largest impact of monetary policy changes on inequality." But there are other considerations as well that reinforce the case for believing that it would be a mistake to lay too much of the widening of economic inequality at the feet of unconventional tools of monetary policy. After all, as Bernanke (2015b) notes, inequality has been trending up for decades, and was doing so long before anyone imagined that massive asset purchases would become a regular part of the central banking repertoire. Furthermore, even if the use of unconventional tools did undo some of the progress on inequality that was achieved by restoring vitality to the jobs market, that unintended side effect could be rectified through the use of other policy tools (such as progressive taxation) to achieve the distribution of economic well-being that society as a whole desires.

In the euro area, where households' stock and bond ownership and financial market exposures via pension funds and life insurance products vary significantly across Member States, Lenza and Slakalek (2018) finds results broadly similar to US results with inequality reduced from the bottom up through increases in labour income by people finding new jobs. Existing employees in the middle of the income distribution are meanwhile found to receive higher nominal and real wages following the introduction of the ECB's QE program in 2014. Wealth inequality is reduced marginally through QE's positive effect on house prices, by far the largest asset class in all but the most affluent euro area households.

All that said, and especially as central bankers develop a wider set of alternative tools for dealing with the challenges posed by the effective lower bound on short-term policy rates, a choice will be available among non-traditional tools, and taking into account the implications of each tool for the evolution of economic inequality seems perfectly reasonable. For example, if a central bank has a choice as it expands a program of QE between purchasing more equities versus more corporate or other forms of debt, consideration should be given not only to the extent of the salutary effect on financial conditions, but also to the distribution of ownership of these two asset classes. More broadly, some may argue that "helicopter money" should be used more aggressively and QE should be given a rest (Honohan, 2019). That may be a perfectly fine position, but we would argue that helicopter money is intrinsically a fiscal rather than monetary policy action. If the argument is that fiscal policy should play a larger role in fighting recessions, we are all for that, and in no small part because it offers the tools for achieving not only the overall degree of support for economic activity desired by policymakers, but also for achieving the distribution of economic well-being they desire as well.

As important as the distinctions are in the considerations pertaining to climate change and inequality in the design of monetary policy, there is one important point of similarity. In particular, it is absolutely clear that central banks must take careful account of both, as they conduct their other responsibilities aside from monetary policy. With regard to inequality, in the supervisory realm, private financial institutions be held accountable for serving the communities in which they operate in an equitable manner, to ensure they are not seeking to avoid serving riskier segments of the population. Too often in the past, to given an example from the United States, financial institutions would engage in more-or-less explicit racism, and draw boundaries around minority communities that would not be served.¹⁵

For a vivid description of one aspect of this overt discrimination—much of it sanctioned by law in the United States, see Richard Rothstein (2017) *The Color of Law: A Forgotten History of How Our Government Segregated America*, Liveright Publishing Company, New York, New York. The cover of Rothstein's book shows a map created by the Home Owners' Loan Corporation in the 1930s. The map showed in red

Vigilant supervision is similarly required to protect vulnerable consumers, including minorities facing potential language barriers, low income groups and the elderly, against deceptive financial marketing hiding extraordinarily high fee charges.

neighborhoods that were heavily populated by African-Americans, indicating that such neighborhoods would be too risky for federally backed mortgage lending to occur.

7. CONCLUSION

Modern central banks are powerful institutions imbued with the capacity to direct financial flows that have major implications for the entire economy. Perhaps for this reason, they are at this time of demographic transition, increasing political polarisation, and legislative sclerosis, being called upon with increasing frequency to exploit the full extent of their policy powers to promote a range of objectives, not always closely related to the traditional goals of monetary policy. Nowhere is this more true than in the euro area, where an incomplete economic and monetary union and frequent disagreements among Member States on joint economic policy continue to leave the ECB as the main, if not only, common institution capable of timely and potent stabilising policy actions. Exploring the foundations of and future for the ECB's mandate is hence of particular importance at this moment.

This paper provides a normative analysis of how the ECB's mandate should be defined. Particular emphasis is given to the central bank's core monetary policy mandate of macroeconomic stabilisation, and whether that mandate should be limited to inflation or price stability, or should also recognise a role for promoting maximum employment. If "yes" is the answer to the latter question, the paper examines whether inflation or price stability should take priority, or whether output stabilisation should be on an equal footing. The paper also examines the extent to which a central bank's mandate should include responsibility for financial stability and possibly addressing climate change and inequality concerns.

This paper argues that a strong theoretical and empirical case exists for a dual mandate for central banks comprising goals for both inflation or price and output stabilisation. Focusing exclusively on price stabilisation at a time of demographic decline risks lulling a central bank into acting too timidly against negative deviations in output, and tolerating persistent undershooting of the price stability target.

Maintaining financial stability, including the role of lender-of-last-resort, is a crucial function of efficient modern central banking. This paper argues however that this function is best carried out via thorough and tireless financial sector supervision, and through aggressive utilisation of macroprudential regulatory tools. Financial stability should not be a first-order concern for monetary policy, due to the high costs of countering rapidly rising asset prices though higher interest rates. As the central bank for a bank-dominated multi-country currency area, the ECB has a particular responsibility to safeguard the value of sovereign bonds, in order to avoid enabling self-fulfilling financial stress in national banking sectors.

Central banks are not well equipped to directly address climate change concerns, a task best left to governments though the legislative tools at their disposal, including the introduction of comprehensive carbon pricing, at their disposal. Central banks must, however, be vigilant against the impacts of climate change on their price stability, output and financial stability responsibilities. Independent central banks, such as the ECB, may at their own initiative seek guidance from relevant democratically elected bodies regarding the extent to which climate change should be an explicit criterion in the implementation of the central bank's regular monetary decisions. This may be particularly relevant for central banks' design of sound asset purchase programs.

Central banks can contribute importantly to combatting inequality by pursuing price and output stability, thereby mitigating economic contractions that invariably affect marginalised groups more than society's affluent layers. As an empirical matter, this general perspective appears valid even when central banks exercise their more recently developed policy tools, including large scale asset purchases. The positive effects on inequality from stronger job creation arising from such purchases more than offset the benefit derived by the holders of appreciating assets. As with climate change, central banks

may adopt inequality concerns as a design parameter, seeking explicitly to reduce any negative effect on inequality in the implementation of its monetary policy decisions.

QUESTIONS FOR MEPS

- The ECB statute enshrines price stability as the principal mandate of the ECB. However, it is standard practice in the economics profession to formulate a dual objective for monetary policy of stabilising both prices and employment. Other central banks have adopted a "flexible" approach to inflation targeting that allows a significant role for stabilising employment around its maximum sustainable level. Do you see such a dual approach as inconsistent with the ECB's statute?
- Since the current formulation of the monetary policy objective was adopted, has the economic environment changed in any way that would cause you to reconsider the asymmetric nature of the inflation target? Doesn't the decline in the "neutral" real policy instrument (often referred to as r*) cause you concern that whatever was chosen for an inflation objective earlier cannot be the right choice for today's environment? In other words, would a higher inflation target reduce the harm from the lower bound on interest rates?

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Setting New Priorities for the ECB's Mandate

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Abstract

Beyond price stability, the EU Treaties assign to the ECB a range of secondary objectives. We investigate the linkages between price stability and these objectives to assess whether they are independent, complementary or substitutable, which is important to refine the definition of the mandate. Keeping the current mandate would not provide leeway for the ECB to reach other objectives. We propose to broaden the mandate to include employment and financial stability. Enhanced coordination should contribute to fulfilling the objectives.

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LIST OF ABBREVIATIONS

Cl Confidence interval

CIFI Composite indicator of financial integration

CISS Composite indicator of systemic stress

EA Euro area

ECB European Central Bank

EP European Parliament

GDP Gross domestic product

GHG Greenhouse gas

MEP Member of European Parliament

PBSG Primary balance sustainability gap

SSM Single supervisory mechanism

TEU Treaty of the European Union

TFEU Treaty on the Functioning of the European Union

TFP Total factor productivity

VAR Vector autoregression

EXECUTIVE SUMMARY

- In a statement announcing the review of its monetary policy strategy, the European Central Bank (ECB) stated that it will, in addition to price stability, also take into account how "other considerations, such as financial stability, employment and environmental sustainability, can be relevant in pursuing the ECB's mandate". The key question is which precise objectives shall be taken into account and how the ECB might reach them, keeping in mind that some tradeoffs vis-à-vis the primary objective may arise.
- We choose relevant indicators of these secondary objectives and compute their respective correlation coefficient with the inflation rate in the euro area; hence, we illustrate the statistical interactions between these objectives and the primary objective of the ECB.
- When objectives are complementary, the ECB can achieve other objectives while still
 maintaining price stability. This may be the case, for instance, with heterogeneity of inflation
 rates. When there is no relationship, achieving price stability does not help in fulfilling the other
 objective as highlighted, for instance, for financial stability, financial integration, technological
 progress, climate change and inequality. Challenges are more complex when objectives are
 substitutable. In this case, trade-offs may arise.
- Keeping the current mandate is inevitably the baseline case to be considered but it may not enable the ECB to achieve macroeconomic and financial stability. This suggests the need to broaden the mandate of the ECB to integrate full employment and financial stability because these objectives, socially important, are closely connected with monetary policy. Yet, it must be acknowledged that this would entail a change in the Treaty, which remains a difficult task.
- We do not recommend assigning the ECB with tasks it cannot be held accountable for and which are highly political. This is notably the case with climate change or inequality. It would be hazardous to set in stone in the Treaty an objective relating, for instance, to a desired level of greenhouse gas emissions and to leave the ECB to be accountable for achieving it.
- The global financial crisis highlighted the institutional flaws of the Economic and Monetary Union (EMU). Price stability may not be enough to prevent external imbalances. The ECB might consider changing its definition of the price stability target to avoid discrepancies between national inflation rates. This change does not require to modify the Treaty as the ECB has discretion to specify its target.
- Adopting new objectives for monetary policy may require additional instruments. In any case, higher transparency is needed if the ECB implements supposedly conflicting policies as regards the primary and secondary objectives.
- The COVID-19 crisis has shown that shared identification of shocks is crucial to remove the risk of inappropriate policies (monetary contraction and/or permanent fiscal expansion after a negative supply shock). Coordinated monetary and fiscal policies help to bolster their respective effects and to achieve their objectives.
- Even if climate change does not enter the mandate, monetary policy may yet contribute to the transition to a low-carbon economy through the purchase of assets such as green bonds, as long as quantitative easing (QE) programmes are still activated. But the question whether to issue those bonds is foremost a policy decision taken by governments.

1. INTRODUCTION

The Treaty on the Functioning of the European Union (TFEU) provisions on the ECB's mandate are clear as regards the primary objective – price stability –, but they are broad regarding the so-called secondary objectives of supporting "the general economic policies in the Union with a view to contributing to the achievement of the objectives of the Union". The questions arise as of how the ECB might reach objectives like "aiming at full employment", improving "the quality of the environment", or the promotion of "technological advance" (all three mentioned in Article 3 of the Treaty of the European Union [TEU]) and whether those secondary objectives interact with the primary objective of price stability. If they do not, should monetary policy look for another instrument to complement its work? If they do and some arbitrage arises, should monetary policy be designed differently? These are the questions at the centre of this paper.

While dealing with these questions, it is noteworthy that we will focus exclusively on the economic perspective. We will not refer to legal issues pertaining to the interpretation of the ECB's mandate or the hierarchy between objectives whenever the conclusions we may reach would require a legal change in the ECB's mandate.

It is obvious that the long list of secondary objectives in the ECB's mandate may raise some trade-offs *vis-à-vis* the primary objective. It is certainly the reason why a hierarchy is introduced in the Treaty stating that the achievement of these secondary objectives should not jeopardise the primary one: trade-offs will automatically vanishand the priority of inflation targeting will prevail.

However, the economic context has substantially changed since the establishment of the ECB. The global financial crisis of 2007-2009, the subsequent sovereign debt crisis and the COVID-19 crisis have all tended to modify the priorities or preferences of policymakers: banking stability, public debt sustainability, climate change and macroeconomic stabilisation have come out as major challenges, whereas price stability was constantly achieved, with the inflation rate actually under-performing its "below, but close to" 2 percent target. Taking for granted that the ECB's mandate remains the same as the one enshrined in the TFEU, it is of utmost importance to study whether the ECB's policy oriented towards price stability has facilitated or deteriorated the achievement of other objectives.

In the following, we do not wish to take any predetermined stance on the possible merits of monetary policy to achieve secondary objectives. Although climate change is a very important issue and its mitigation an important objective, we do not take for granted that monetary policy is best suited or suited at all to deliver on this objective. What we wish to do is to analyse whether the different objectives assigned to the ECB behave as substitutes, independent from one another or complementary. For instance, has pursuit of price stability intensified climate change, has it had no impact on climate change, or has it mitigated climate change? It is only after this analysis that we proceed with some recommendations on which objectives are most worth pursuing with monetary policy in the euro area and on how to achieve them.

In our empirical analysis, we start with the investigation of the linkages between the price stability objective and secondary objectives or, expressed a bit differently, we investigate the correlation and causality between the inflation rate, as a natural indicator of the fulfilment of the primary objective, and relevant indicators of the fulfilment of secondary objectives. In a first step, we thus identify a few key indicators of "full employment", "the quality of the environment" and other secondary objectives.

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¹ Average inflation over the period 2015-2019 has not exceeded 1%.

Then, we study pairs of indicators, always including the inflation rate, and check whether a significant correlation and causal relationship arises. For each pair, there are three possible outcomes: i) no (significant) correlation, ii) a significant correlation that does not generate an arbitrage, and iii) a significant correlation that reveals an arbitrage. If, for example, price stability and financial stability are significantly correlated, a secondary objective like, e.g. financial stability, is not worth being specifically targeted: as a side effect, achieving price stability would enable to achieve financial stability. There is no arbitrage. On the contrary, if one shows that an arbitrage arises, because price stability is negatively correlated with financial stability (and the latter is among the secondary objectives), a policy oriented towards price stability may worsen financial stability. If this outcome is costly for the euro area, dealing with the trade-off is a priority. It may either require an additional instrument or dedicated communication from the central bank to explain how the trade-off is handled. It may also call for coordinating policies to reach both objectives. Now, if price stability and financial stability are not correlated, an additional monetary instrument to help achieve the latter is necessary if the achievement of the secondary instrument is considered important but, in contrast with the former case, it would not require cooperative policies (provided the new instrument has no impact on inflation).

Hence, the case for a change in the ECB's mandate may arise when an arbitrage emerges between the different objectives and it is costly to the euro area. An extension of monetary policy instruments is an option in this case. Finally, when the inflation rate is not correlated with the secondary objective and the latter has gained interest from the ECB, it may be worth discussing a clarification of the mandate and the possible extension of instruments to enlarge the scope of monetary policy.

As an important side note, the German Federal Constitutional Court (FCC)'s ruling on the Public Sector Purchase Programme (PSPP) of 5 May 2020 is quite topical. Actually, the ruling introduces a distinction between the "monetary policy objective" and the "economic policy effects arising from the programme". Thus, it ignores the necessary interactions between the monetary policy instruments, the ECB's primary objective and other macroeconomic and financial variables required to fulfil the mandate. Meanwhile, it also completely overlooks the secondary objectives of the ECB.

2. LINKAGES BETWEEN PRICE STABILITY AND SECONDARY OBJECTIVES

2.1. Relevant secondary objectives for the fulfilment of general policies

The TFEU is clear about the ECB's main price stability objective. Article 127 (TFEU) states that:

"The primary objective of the European System of Central Banks (hereinafter referred to as 'the ESCB') shall be to maintain price stability. Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Union with a view to contributing to the achievement of the objectives of the Union as laid dawn in Article 3 of the Treaty on European Union."

On the other hand, Article 3 Treaty on European Union (TEU) is only broadly defined and includes the following (paragraph 3):

"The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance."

In a statement announcing the review of its monetary policy strategy, the ECB stated that it will, in addition to price stability, also take into account how "other considerations, such as financial stability, employment and environmental sustainability, can be relevant in pursuing the ECB's mandate". Beyond whether these "other considerations" are taken into account as a means to reach price stability, the guestion of which "other considerations" should be considered remains open.

Based on the objectives mentioned in the Treaty, we consider 8 secondary objectives that the ECB could consider:

- financial stability,
- financial integration (or said differently, the prevention of financial fragmentation),
- reduction of inflation heterogeneity among euro area countries,
- sovereign debt sustainability,
- macroeconomic stability,
- social progress,
- technological progress, and
- climate change mitigation.

This paper will attempt to consider the link between those secondary objectives and the ECB's primary one, price stability.

2.2. Correlation between primary and secondary objectives

For each secondary objective enumerated above, we chose relevant indicators and first computed the correlation coefficient with the inflation rate in the euro area in order to illustrate the statistical interaction between these objectives. We interpret these correlations cautiously. The aim is to point to potential interactions and the direction of those relationships. Then, we carry additional statistical

analyses to examine further the relationship with price stability and provide more detailed conclusions.²

We conduct three complementary tests in order to estimate the dynamic correlation and the direction of the link between the ECB's main objective and the secondary objectives considered. First, we draw a scatterplot of inflation and each secondary objective variable (the regression line is accompanied by a 95% confidence interval) to assess the strength of the relationship and the influence of outliers. Second, the cross-correlogram provides evidence of a dynamic correlation between the contemporary inflation rate and each other variable at different time periods. Finally, we estimate a VAR model that includes inflation and each secondary objective variable at a time, and plot the response functions of each variable to shocks to the other. This test can be thought of as a Granger causality test and provides some insights on the direction of the link between the primary and secondary objectives and whether it is the main objective that drives the secondary or the other way. It helps to understand if the unique mandate of price stability may be detrimental or not to other objectives, and whether other objectives should be considered.

Based on the test results, three types of relation with the primary objective are defined (later summarised in Table 1):

- The primary and secondary objectives are **independent**, there is no stable link between both on which policymakers could rely.
- The primary and secondary objectives are **complementary**, the pursuit of price stability may enable to attain a second objective.
- The primary and secondary objectives are <u>substitutable</u>, the pursuit of one would be detrimental to the achievement of the other.

Our analysis has found the following results:

- Positive correlation between the inflation rate and its standard deviation: higher level of inflation seems to be linked with higher inflation dispersion across euro area countries.
- Strong negative relation is found between the inflation rate and the cross-country standard deviation of interest rates on housing loans to households: more inflation goes together with less dispersion in housing loan rates.
- Positive relation between inflation and improved debt sustainability.⁴

We document the detailed analysis for these indicators where we found a statistically significant relationship. The details for other indicators are reported in the Annex. The underlying data is available upon request.

² Table 2 in Annex shows the raw correlation between the different indicators and the headline inflation.

We provide the outcomes of these additional statistical analyses for variables whose correlation is low in the Annex and confirm that there is no stable relationship with the ECB primary objective.

⁴ To assess debt sustainability, we compute the difference between actual primary surplus and the primary surplus that would stabilise the debt-to-GDP ratio at 60 percent. This difference is called the primary balance sustainability gap (PBSG).

We also find a negative relation between the unemployment rate and the inflation rate, consistent with the Phillips curve, and that higher inflation is also associated with higher financial stability. However, these two correlations are not confirmed with the additional tests. This is consistent with the literature that provides evidence of a flattening of the Phillips curve (Coibion and Gorodnichenko, 2015; Galí and Gambetti, 2019; Del Negro et al., 2020) and Blot et al. (2015) that show that the link between price and financial stability is null in the euro area and the US.

The statistical analysis provides preliminary insights in pairwise correlations and causalities. By construction, this exercise has two shortcomings though. First, the analysis is neither based on a structural nor on a multivariate analysis, and it may not fully account for more complex interactions between objectives. For example, we cannot reject that a missing variable explains some pairwise correlation or causality. Second, the empirical tests are not informative on the impact of the actual policy tools used by the ECB on secondary objectives. Finding a complementarity between primary and secondary objectives cannot be interpreted in terms of the effectiveness of ECB's tools. For these reasons, the discussion on ECB's objectives and tools does not hinge only on the empirical results. The latter give a first research orientation that we confront with the existing literature and with current debates on the design of central banks and the definition of their mandates.

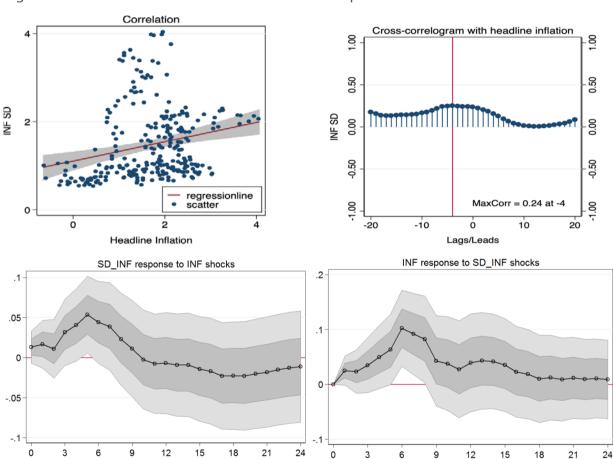


Figure 1: The link between inflation and the dispersion of inflation rates

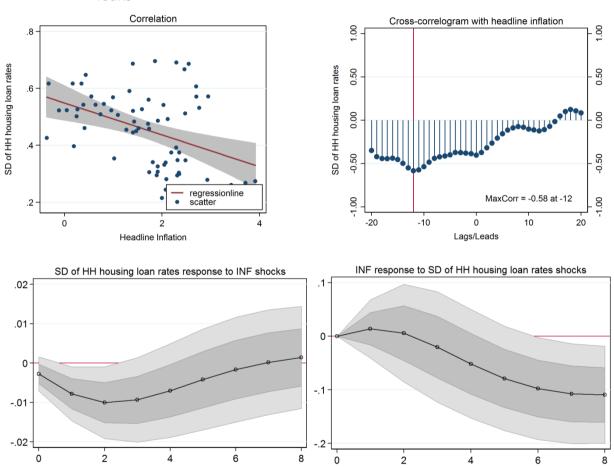
Source: Authors' computations. The dark (resp. light) grey-shaded areas represent confidence intervals for one (resp. two) standard error(s).

In Figure 1, the cross-correlogram (upper right panel) and the regression line (upper left panel) show a positive relation between inflation rate and its dispersion in the euro area. Higher inflation is associated with higher dispersion of cross-country inflation rates. The correlation is positive and stronger at lag 4: contemporary inflation is mostly related to its standard deviation 4 months before. The impulse responses give the same results: inflation dispersion has a positive effect on inflation, and inflation has a positive effect on inflation dispersion. These causalities are significant at standard levels around the 6th month. The euro area aggregate inflation rate increases by 0.1 percentage point six months after a

shock to the dispersion of inflation rates. On the other hand, the dispersion of cross-country inflation rates will increase by 0.05 points six months after a shock on inflation rates.

The positive and significant relation between these two variables suggests that inflation pressures will be associated with more fragmentation among cross-country inflation rates in the euro area. According to these empirical results, the objective of price stability and inflation homogeneity are **complementary**. The pursuit of the actual unique objective of the ECB shall help to reach the cross-country inflation rates homogeneity in the euro area.

Figure 2: The link between inflation and the dispersion of interest rates on housing loans



Source: Authors' computations. The dark (resp. light) grey-shaded areas represent confidence intervals for one (resp. two) standard error(s).

In Figure 2, the regression line (upper left panel) shows a negative relation between inflation rate and the dispersion of interest rates on housing loans. The cross-correlogram (upper right panel) confirms this result: the correlation is negative and becomes even more negative when the dispersion of housing loan rates lags inflation by 13 months. Higher inflation is associated with less dispersion and so, less financial fragmentation. Both impulse responses (lower panel) confirm this statistically negative link between the two variables: an inflation shock causes less financial fragmentation via lower dispersion of interest rates on housing loans for 3 months (lower left panel).

According to these empirical results, both objectives cannot be achieved together, so they are **substitutable** and generate a trade-off. When the ECB follows its objective of price stability, it can

increase financial fragmentation by increasing the dispersion of interest rates on housing loans. The reverse is not statistically true.

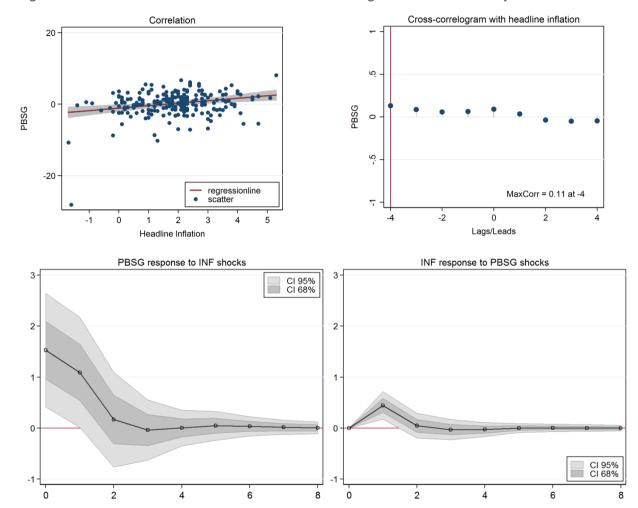


Figure 3: The link between inflation and sovereign debt sustainability

Source: Authors' computations. The dark (resp. light) grey-shaded areas represent confidence intervals for one (resp. two) standard error(s).

In Figure 3, an increase in primary balance sustainability gap (PBSG) illustrates an improvement in debt sustainability. Results indicate a positive relation between inflation rates and sovereign debt sustainability in the euro area: an increase in inflation rates is associated with improved sustainability. We find the same results in the impulse responses: the PBSG will increase the year following an inflation shock (lower left panel). The effect of a PSBG shock on the inflation rates in the euro area is also positive and significant for almost 2 years during which inflation will rise.

The stable and positive relation between inflation and sovereign sustainability generates a trade-off: these objectives are **substitutable** and cannot be achieved together. Even though monetary policy can help reduce sovereign debt costs (see Blot et al. 2020c), focusing solely on the price stability objective could deteriorate the sovereign debt sustainability in the euro area.

The results of the tests conducted are summarised in Table 1, highlighting the relationships between the price stability objective and the potential variables representing secondary objectives. The next two parts of the paper deal with the challenges raised by these three types of relationships.

If two objectives are independent, then the central bank cannot rely on the pursuit of one objective to achieve the other. In this case, if the central bank wanted to expand its objective set, a new mandate would be necessary.

The case of a complementary relationship seems to be the easy one. Achieving one objective would not be detrimental to the other objective. However, one important question to deal with is that the complementary of two objectives does not necessary mean that the instrument used to maintain price stability will also be complementary with the secondary objective.

Finally, substitutable objectives generate trade-offs since the pursuit of one of the objectives might affect negatively the other objective. This is the case for financial fragmentation and sovereign debt sustainability since lower inflationary tensions mean more financial fragmentation among housing loan rates and worsen sovereign debt sustainability of euro area countries.

Table 1: Summarised test results

Independent	Complementarity	Substitutability
Macroeconomic stability	Inflation heterogeneity	Financial fragmentation
(unemployment)	(SD of inflation rates)	(dispersion of housing loan rates)
Financial stability (CISS)		Sovereign debt sustainability (PBSG)
Asset price-based financial		
integration (CIFI)		
Financial fragmentation		
(dispersion of NFC loan rates)		
Climate change		
(GHG emissions)		
Inequality		
(top 1% / bottom 50% income)		
Technological progress (TFP)		
Financial fragmentation		
(dispersion of sovereign rates)		

Source: Authors' classification.

Note: For each variable in the table, we summarize the results of the pairwise correlation, of the time dimension of the correlation (correlogram) and of the causal tests (impulse response functions) of bivariate vector autoregressive models. For example, the variable "inflation heterogeneity" is labelled "complementary" because the pairwise correlation is positive and the correlation has been confirmed by the time dimension of the correlogram and by the impulse response functions.

3. HOW MANY OBJECTIVES FOR THE ECB?

Monetary history has emphasised that central banks have been assigned with various objectives before being namely and firstly in charge of price stability (Goodhart, 2011). At the origin, one of the main tasks of the Bank of England was to finance government expenditures, especially during periods of war. During the 19th century, the tasks assigned to central banks evolved and their main objective became financial stability through the emergence of the doctrine of the lender of last resort. It has indeed motivated the creation of the Federal Reserve System via the Federal Reserve Act of December 1913 (Bernanke, 2013) after several decades of recurrent banking crises. Macroeconomic stability became a prominent objective only after the Great Depression and World War II. Finally, Phillips curve critics and the so-called risk of inflation bias, which was pointed out during the 1980s, have pushed the price stability objective to the forefront. The establishment of the ECB and the design of its functioning and status consecrated the new paradigm of monetary theory (Vincensini and Taugourdeau, 2009).

More recently, the episodes of financial and sovereign debt crises as well as the rise of new concerns – climate change and inequality for instance – have raised issues on the role central banks can play and eventually on the objectives or the hierarchy between objectives that should be assigned to central banks. Regarding the ECB, the Treaty makes it clear that there is a hierarchy between the objectives with a priority devoted to price stability and implying that other objectives may be fulfilled only to the extent that they do not prevent the ECB from guaranteeing price stability. As emphasised in the previous section, three options arise. The additional objectives may either be independent from the main objective of price stability, complementary or substitutable with it.

In what follows, and keeping previous results in mind, several options regarding the mandate of the ECB are contemplated. However, this discussion does not hinge only on the aforementioned results but also draws on existing literature and current debates on the design of central banks and the definition of their mandates. At this stage, the discussion is restricted to the objectives assigned to monetary policy and to the instruments used by central banks in the conduct of monetary policy. It should be kept in mind that the ECB has endorsed new responsibilities since 2012 within the European Banking Union that goes beyond monetary policy *per se.* We discuss about the impact of these new responsibilities and their associated tools on the design of monetary policy in the next section.

3.1. Unchanged mandate: which objectives could be achieved?

Keeping the current mandate is inevitably the baseline case to be considered. This option is the most realistic one because it would be hard to find a political compromise on a Treaty change. In this context, price stability would remain the priority of the ECB. However, enhancing price stability could also help promote other objectives if they are complementary with it. As shown in the previous section, this might be the case for the convergence of inflation rates in the euro area. Actually, higher inflation goes generally together with higher volatility. Kim and Lin (2012) find indeed a two-way casuality between inflation and its variability consistent with theoretical models developed by Ball (1992) and Cukierman and Meltzer (1986). Even if these analyses are based on time-series, they may also hold once applied to a geographical area such as the euro area. However, it should be kept in mind that during the pre-crisis period, despite low inflation in the euro area, the dispersion of inflation rates has been significant leading to heterogeneity and increasing discrepancy in competitiveness, which has fed macroeconomic imbalances. The recent experience suggests that keeping euro area inflation close to the 2% target may not be sufficient to promote convergence and prevent the building up of imbalances.

Regarding climate change, correlation is found to be null and non-significant. Moreover, it may be pointed out that even if lower inflation would be positively correlated with less CO2 emissions, it would not necessarily lead the central bank to be able to target efficiently climate change as central banks are not equipped with instruments that could tackle this structural issue. Favouring bond purchases from corporates with low greenhouse gas (GHG) emissions is a proposition often put forward, for instance. However, it is not clear that this price distortion would indeed contribute to reducing GHG emission. Another (extreme) way to mitigate climate change is through economic activity. An economic slowdown would lower CO2 emissions. However, in the spirit of the Treaty, the price stability objective does not involve low economic growth. Inflation close to the target and output close to its potential might not contribute to reducing carbon use.

Even if the analysis carried in the previous section has not highlighted a significant correlation between inflation and output, it is sometimes argued that price stability would also enhance growth, which is called the "divine coincidence" by Blanchard and Galí (2007). However, they show that such a situation is a particular case of a New Keynesian model where there are no "trivial" real imperfections. The trade-off between inflation and output would resurface once the model allows for real wage rigidities. In the long run, high or very high inflation is certainly costly and detrimental to economic growth. The question of a trade-off in the short and medium term has been revived over the last years. Many works (see e.g. Coibion and Gorodnichenko, 2015, Galí and Gambetti, 2019; Del Negro et al., 2020) have questioned the empirical relevance of the Phillips curve. Global supply chains and international drivers of inflation suggest that the link between inflation and output may have vanished as it seems to be indicated by a simple correlation analysis. How should the ECB deal with such a potential trade-off? The answer provided by the Treaty is to set a clear hierarchy between objectives. Consequently, when the conflict arises, because of supply shocks for instance, the ECB is supposed to give priority to the price stability objective. Yet, as discussed thereafter, this particular trade-off may also motivate a dual mandate.

In the same vein, Schwartz (1988) described several channels through which price stability would promote financial stability, a view called the "conventional wisdom". If this view were true, the ECB would contribute to financial stability by keeping inflation low. This was the consensus prevailing before the global financial crisis. The evidence seems however at odds with the conventional wisdom. The period before the global financial crisis was characterised by stable and low inflation. Yet, it has not prevented the build-up of financial imbalances.

If the divine coincidence and the conventional wisdom hold, then a monetary regime primarily devoted to price stability would also foster economic growth and enhance financial stability. Consequently, the current mandate of the ECB would be the best way to achieve these additional goals, justifying a *status quo*. This may, however, not be the case, as available empirical evidence shows and as illustrated by our analysis, thus raising the issue of an extension of the mandate.

Beyond the empirical link between the primary and secondary objectives, the ECB's mandate relates to multidimensional aspects: whether the policy is structural or cyclical, whether the objective is of a very political nature (in which case the question of giving it to an independent institution would be very problematic), and whether the central bank has relevant instruments in its toolkit to tackle these secondary objectives.

3.2. Extending the mandate

In the Treaty, the priority has been given to price stability because it was thought that there was a tradeoff only in the short run. In the long run, monetary policy is supposed to be neutral in new Keynesian models so that central banks (and monetary policy) only affect prices. There is now some evidence that

the impact of monetary policy on output and employment may be long-lasting (Jordà et al., 2020). Besides, while the EU Treaty makes a clear priority, this is not the case in the United States where according to the Federal Reserve Act, the central bank pursues a dual mandate. Enlarging the mandate may also be needed in case there is a political will to integrate other objectives which are unrelated to price stability or for which there are trade-offs.

3.2.1. A dual mandate...

Contrary to the mandate where price stability is the unique or main objective of monetary policy, price stability and output (or employment) are given equal weight when central banks pursue a dual mandate. In the United States, the Federal Reserve is mandated by the Congress – in the Federal Reserve Act – to promote maximum employment and stable prices. Friedman (2008) claims that central banks generally take account of both price and macroeconomic stability, suggesting that even when the mandate is uniquely defined in terms of price stability, output stabilisation is not overlooked. Castro (2011) has found, for instance, that the output gap entered significantly in the reaction function of the ECB indicating that, at least implicitly, it accounted for output stabilisation. Under these circumstances, the rationale to change the mandate would be reduced. Yet, Friedman (2008) considers that the dual mandate, where both objectives are considered without priority, is more appropriate since trade-offs are explicitly recognised, which notably provides the central bank with more leeway to address macroeconomic stabilisation when the unemployment rate is very high (Rosengren, 2013).

3.2.2. ... or a triple mandate?

With the creation of the Banking Union in 2014, the ECB is now in charge of the supervision of the largest European banks, *defacto* enlarging the scope of its mission. Furthermore, during the financial crisis, the ECB has implemented a set of measures to meet the liquidity needs of the banking system and played the role of lender of last resort, which was not explicitly assigned in the Treaty. Blot et al. (2014) consider that the ECB has *de facto* followed a triple mandate focusing on inflation, growth and financial stability. The Banking Union not only assigns the ECB with an additional mission, it also entails a new instrument: the set of macro- and micro-prudential tools. Yet, there is also an issue regarding the role that can be played by monetary policy to enhance financial stability.

Beyond the role of financial regulation, which clearly remains the main policy instrument to deal with financial stability, some argue that monetary policy could complement this action (Woodford, 2012), implying that standard tools, such as the interest rate, would be used to dampen financial imbalances. Borio (2002) even claims that such a response should be systematic, a strategy known as "leaning against the wind". In practice, there are no central banks where this has been followed formally. There is, however, a growing literature suggesting that monetary policy may affect financial risk via the risk-taking channel. Consequently, price stability is not a sufficient condition to guarantee financial stability, which may constitute an additional argument to integrate financial stability among the objectives of monetary policy. Greenwood et al. (2016) suggest for example that monetary policy – through the size of central bank's balance sheet – may be used to promote financial stability by providing liquidity and avoiding financial markets to create riskier assets.

With the outbreak of the COVID-19 crisis, the euro area faces a new recession and requires a large public policy response. Public debt will increase, raising potential challenges for public debt sustainability. The circumstances may remind of the situation after the global financial crisis and the sovereign debt

⁶ The Federal Reserve is usually attributed a dual mandate, although as stated in the Federal Reserve Act, it should achieve "maximum employment", "stable prices" and "moderate long term interest rates".

crisis, when the role of the ECB has proven to be crucial to break the vicious circles and to avoid a wider liquidity squeeze for sovereigns. Reis (2017) analyses the role of the quantitative easing (QE) policy to enhance public debt sustainability and financial stability. When there is a risk of public default, QE enables the central bank to "take the risk of default out of the balance sheet of the banks and into the balance sheet of the central bank" by issuing reserves, which are only held by banks. However, Reis (2017) argues that QE does not constitute monetary financing of deficits so that it would not bring central banks back to its original objective. Yet, it would be more relevant to reinforce coordination between monetary and fiscal policy than to elevate public debt sustainability as a central bank objective, as suggested in the next section.

This analysis suggests broadening the mandate of the ECB to integrate full employment and financial stability, as those objectives, while being socially important, are closely connected with monetary policy. Yet, it must be acknowledged that this would entail a change in the Treaty, which remains a difficult task.

3.3. Should other objectives be introduced explicitly in the mandate?

Beyond output stabilisation and financial stability, there may be additional objectives worth integrating explicitly in the mandate. Among them, inequality, climate change, financial integration and convergence have been considered in the previous section. Under which conditions should the mandate be broadened to other objectives? Two criteria may be stressed for the possibility to elevate additional objectives in the mandate of the central bank. First, those objectives must be deemed socially important. Second, monetary policy must be able to affect those objectives so that the ECB can be held accountable for. It would indeed be misguided to assign objectives that cannot be fully controlled by the ECB. Blot et al. (2016) discuss this issue in the context of the definition of the inflation target: if euro area inflation is driven by international factors rather than domestic factors, the ECB cannot influence inflation and be held responsible for reaching or missing the target. This entails the risk to undermine its credibility and accountability.

The role of monetary policy with respect to inequality has been long neglected. It was implicitly considered that monetary policy had non-significant or indirect impact. This element has arisen recently in the policy debate and in the academic literature. Potential side effects of unconventional measures have emerged in the debate because these policies effectively inflate asset prices and could consequently raise inequality. However, there are distinct channels though which these measures affect income and wealth distribution and some have contradictory effects. In the end, conclusions regarding the sign and the magnitude of the effects of unconventional monetary policy measures on inequality are not clear. Auclert (2019) provide a description of these channels within a theoretical model with heterogeneous agents. The effect of monetary policy passes through income distribution because of its effects on employment, inflation and real interest rates affecting asset prices. He notably points out that the impact of monetary policy on income distribution is closely related to its impact on employment. Furthermore, the redistributive effect of monetary policy through asset prices is subtle and hinges on the composition of financial wealth indicating that not all financial assets holders gain from expansionary monetary policy. Empirical evidence has shown contrasting results on this issue. Besides, even if monetary policy has significant effects on inequality, the magnitude of the effect is small compared to the impact of fiscal tools (see e.g. Creel and El Herradi, 2019). Inequality is a highly political issue reflecting social choice which may differ across countries and across periods. It would therefore be hard to set in stone in the Treaty an objective relating to the desired level of inequality. This issue is highly political and assigning the ECB with this objective would inevitably bring the ECB in the realm of politics, which may not be compatible with independence. Nevertheless, it is relevant for policy makers to be aware of potential effect of their decisions on such a highly important social

objective. But instead of re-orienting the objectives assigned to the central bank, it may be more relevant to increase fiscal-monetary coordination to better internalise the undesirable effects of monetary policy on inequalities.

Regarding climate change mitigation, the terms of the debate are different. Although the aim is socially important, there is no obvious connection with existing monetary policy tools. Monetary policy may yet contribute to the transition to a low-carbon economy through the purchase of assets such as green bonds, which are issued to finance projects contributing to this transition. This would, for instance, entail re-orienting QE programmes. But whether to issue those bonds is foremost a policy decision taken by governments. To the extent that the QE tool is still activated, the ECB could *indirectly* contribute to climate change mitigation. This does not require a Treaty change.

Convergence is clearly a historical aim of the European Union. The achievement of the monetary union in 1999 was an additional step toward European integration. The global financial crisis, however, highlighted the institutional flaws of the EMU. Despite low inflation in the euro area – from 1999 to 2007, the average inflation was indeed close the 2% target –, divergence has been growing and macroeconomic imbalances have triggered a crisis of the euro with the threat of a split that peaked in 2012 and in 2015 with the Greek crisis. As pointed in Blot et al. (2019a), "nominal divergence has led to financial imbalances and to real divergence within the euro area". The ECB has played a key role during this period – through dedicated programmes such as the SMP (securities markets programme) and OMT (outright monetary transactions) – to avoid more dramatic consequences. Therefore, nominal divergence and financial fragmentation are linked and monetary policy has some power to fix the fragmentation of sovereign markets. It is also important for the ECB to deal with fragmentation as it impairs the transmission of monetary policy. It was by the way, the main motivation of the ECB for the implementation of non-standard measures (Durré et al., 2014). Since tools are at the disposal of the central bank, there may be a debate on the opportunity to add convergence in the list of objectives assigned to monetary policy.

Finally, Blot et al. (2019b) also raised the issue of a change in the definition of the target for price stability. Instead of seeking to achieve a 2% inflation for the euro area as a whole, the ECB might seek to avoid strong discrepancies between national inflation rates and then the divergence that has been at the origin of the euro area crisis. They claim that such a change may be achieved without changing the Treaty as the ECB has leeway for defining its target. However, the ECB could be constrained in accounting for nominal imbalances if convergence is added to the list of monetary policy objectives.

4. NEW TOOLS OR ENHANCED COORDINATION TO ACHIEVE SECONDARY OBJECTIVES?

The empirical characterisation of the linkages between the primary and secondary objectives joined with a discussion on the merits of extending or clarifying the mandate of the ECB raise two issues: first, the appropriate number of instruments at the ECB's disposal and, second, the requirement of enhanced cooperation with governments.

4.1. Tools to foster financial stability and financial integration

We already highlighted three worthy elements: first and foremost, empirical correlation and causality results (section 2) between inflation rates, on the one hand, and measures of financial stability or financial integration, on the other hand, have concluded that they were independent one from another. Second, this empirical result does not object that monetary policy should target price stability and financial stability, for instance (section 3); the empirical result makes this kind of double mandate even easier to achieve, provided the tools used to achieve one target do not interfere with the other one. Third, the creation of the Banking Union has given the ECB macro-prudential and micro-prudential tools to achieve banking stability. To these regulatory tools, one should also add the different features of non-standard monetary policies (like Targeted Long-Term Refinancing Operations, and asset purchase programmes) that have alleviated the funding costs of banks and their balance sheet risks.

The ECB is already well-equipped with many tools that, according to the Tinbergen principle, permit achieving several targets. If we take for granted that the chosen tools are effective at achieving their allocated target, it remains that there are three pitfalls to escape.

The first one is to investigate whether the tool used to achieve the secondary target, e.g. financial stability, is symmetric. Heterogeneity in economic and financial frictions across good and bad times – for example, rising and plummeting asset prices – may produce asymmetric effects of monetary policies. Blot et al. (2020a) have shown that monetary policy has asymmetric effect on stock price imbalances in the euro area.⁷

The second pitfall is transparency and communication. Assume the ECB implements supposedly conflicting policies as regards the primary and secondary objectives, like raising the policy rate and easing banks' capital requirements. While both policies would be intended to achieve two independent objectives, they may go in opposite directions, contraction in the former case and accommodation in the latter. To limit misunderstanding on the actual stance of monetary policy, the ECB should use two policy tools that do not have cross-effects on its primary and secondary objectives. However, they may be very difficult to find and both instruments may well impact both objectives. Hence, the ECB would be left with only one option: that of exposing that it has taken into account their inter-relationships in its policies. We stress that communication on this is crucial. It is all the more crucial that the strict legal separation between the Single Supervisory Mechanism (SSM) and the monetary policy role of the ECB, enshrined in the SSM regulation, does not permit to coordinate both policies explicitly, that is the monetary policy role of the ECB on the one hand, and its financial stability role on the other hand.

The third pitfall relates to the dispersion of housing loan rates. The price stability objective runs counter to the reduction in the dispersion, hence intensifying this source of financial fragmentation. This is an

⁷ For the US, Blot et al. (2020b) find that restrictive monetary policies have more traction on stock price bubbles than expansionary decisions.

important issue because it impairs the transmission channel of monetary policy (via increased heterogeneity on credit rates) and also weigh on inequality (via heterogeneity in the access to housing and non-financial wealth). While monitoring of this dispersion mechanism is key, it might be in the interest of the euro area to see the ECB develop common regulatory tools on housing loan markets to have a more uniform transmission of policy rates to housing loan rates.

4.2. Enhanced coordination of monetary and fiscal policies

Beyond the discussion regarding the definition of the mandate assigned to the ECB and the instruments that can be used to reach objectives, it is also crucial to account for interplays with other instruments, which may be at the disposal of other institutions. Even if one considers that price stability remains the main priority, the ECB may also account for the interactions between monetary and fiscal policy. The difficulty to reach the "below, but close to" 2% target has illustrated that other forces might counteract the effect of monetary policy and drive the ECB away from its objectives.

Under these circumstances, there may be a need to reinforce coordination between the institutions that implement policies which weigh on the primary objective of the central bank, unless monetary policy decisions are so powerful that they internalise the effect of the other instrument. Alignment with fiscal policy is crucial for macroeconomic stability whether it involves price stability only or a dual mandate. Achieving financial stability and assigning monetary policy with a role towards this objective may also imply a better coordination with the institutions in charge of financial supervision (prudential tools).

5. CONCLUDING REMARKS ON THE ROLE OF COORDINATION

Finally, coordination may be useful if monetary policy can help other institutions to achieve an objective not assigned to the central bank.

Empirical results in section 2 have shown that there was an apparent conflict between the objectives of price stability and debt sustainability. This conflict is not new: it is well-known that most periods of very high public debts have been followed by higher inflation. Moreover, the independence of the ECB is associated with the prohibition of monetary financing. That being said, debt sustainability is certainly key to the achievement of balanced economic growth. For the ECB, endowed with a secondary objective of so-called balanced economic growth, the interaction between its monetary policy decisions and debt sustainability should be closely monitored. Here again, coordination of policies of the ECB and euro area governments is much needed. Not only is the short run policy mix important to maximise the effectiveness of monetary policy, but also to remove default risk.

We have already argued that monetary policy may not be best equipped to cope with climate change and inequality: public policies can better deal with incentives and externalities via shifts in taxes and in transfers. However, the latter may not be easily coordinated between 19 governments, whereas a federal institution like the ECB would prove useful at giving a common impetus. Hence, cooperation may be required between the ECB and euro area governments to foster both goals. This would not be detrimental to the primary objective of the ECB. The ECB could well dedicate a given share of its asset purchases to "green bonds". It would require governments to back "green spending" by dedicated and easily identified bonds that the ECB may purchase (on secondary markets) with a priority. Their relative prices may turn out to be higher that non-green bonds, hence providing the former more liquidity.

Results in section 2 also report that inflation, on the one hand, and total factor productivity (TFP) and macroeconomic stability, respectively, on the other hand, do not share a stable link. While the extension of the ECB mandate to macroeconomic stabilisation has been discussed previously, the commitment of the ECB towards technological progress seems less obvious. Nevertheless, indicators of macroeconomic stabilisation (e.g. unemployment rates) and technological progress (TFP) are useful at identifying demand and supply shocks, respectively. In this respect, it is important that the ECB and euro area governments cooperate closely on the identification of shocks in the euro area, either idiosyncratic or common, either supply or demand, to ensure an appropriate policy mix. The COVID-19 crisis has shown that shared identification is crucial as it removes the risk of inappropriate policies (monetary restriction and/or permanent fiscal expansion after a negative supply shock). It has also shown that coordination of monetary and fiscal policies helps to bolster their respective effects and to achieve their objectives: monetary expansion reduces the interest costs of the fiscal expansion and helps the latter be more effective at dampening the fall in demand while the fiscal expansion helps monetary policy achieve its inflation target.

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ANNEX: EMPIRICAL RESULTS

Table 2: Correlation with euro area inflation

Financial stability					
Composite Indicator of Systemic Stress (CISS)	0,16				
Financial fragmentation					
ECB financial integration composite indicator - price-based	0,23				
Cross-country standard deviation of interestrates on loans below €1M to non-financial corporations	-0,09				
Cross-country standard deviation of interest rates on housing loans to households	-0,40				
Standard deviation of euro area ten-year sovereign bond yields	0,08				
Inflation heterogeneity					
Standard deviation of euro area inflation rates	0,24				
Sovereign debt sustainability					
Sovereign debt sustainability indicator (pbsg1)	0,23				
Macroeconomic stability					
GDP growth	0,10				
Unemployment	-0,45				
Social progress					
Top 10% average income / Bottom 50% average income	0,17				
Technological progress					
EA countries' total factor productivity	0,13				
Climate change					
Consumption emissions per capita	0,12				

Sources: ECB, Eurostat, World Inequality Database, AMECO, United Nations database, Peters et al. (2011, 2012), Fiscal Space World Bank Database, Authors' computations. Note: inflation, CISS, CIFI, interest rates, unemployment data have a monthly frequency, GDP a quarterly frequency, and consumption emissions, inequality indicator, TFP and sovereign debt sustainability are annual. Estimations are realised over a sample spanning from 1998 to 2019.

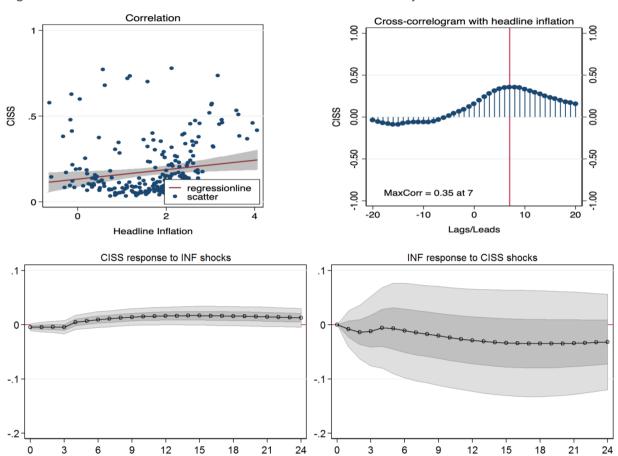


Figure 4: The link between inflation and financial stability

In Figure 4, the upper left graph represents the scatterplot and the regression line of the CPI inflation and the CISS. It shows a weak although positive relation between CPI inflation and CISS suggesting that higher inflation level is associated with more financial risks. The correlogram (upper right) give us clue about the dynamic relation estimated for each correlation coefficient between CISS at different time period and contemporary CPI inflation. It is positive and peaks at 7 months leads. Price and financial stability seem to be positively correlated in time. However, both impulse responses (lower) resorting from the VAR model show that the relationship between inflation and CISS is not significantly different from zero: inflation shocks seem to affect the financial stability and the reverse is also true.

The tests reject evidence of a stable relationship between price stability and financial stability. Those two objectives are **independent**, contrary to what is suggested by conventional wisdom. It confirms Blot and al. (2015) who find no stable link between price and financial stability for the euro area. Pursuing the actual unique objective of price stability does neither satisfy nor interfere with financial stability.

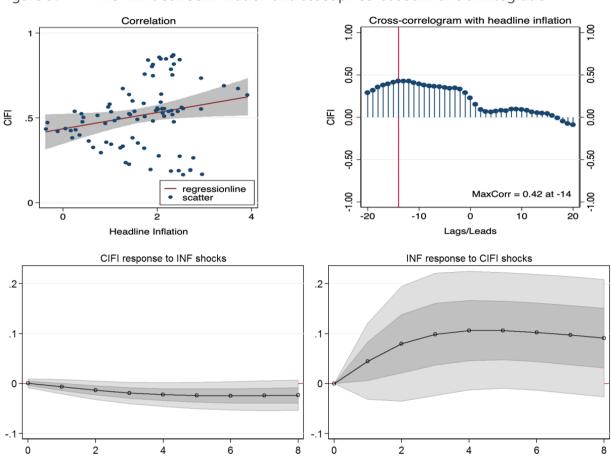


Figure 5: The link between inflation and asset price-based financial integration

In Figure 5, both regression line (upper left) and the cross-correlogram (upper right) indicate a positive relation between inflation and CIFI. CIFI is an asset price-based financial integration indicator and the higher its value, the lesser financial integration. The correlogram shows that the 12-month lagged value of CIFI is the most positively correlated with contemporary inflation rate. Higher inflation level is associated with lesser financial integration. However, impulse responses show that the relationship is not significantly different from zero: there is no evidence of a causality relation between price stability and financial integration.

Price stability and financial integration are two **independent** objectives, which is consistent with the previous results for financial stability.

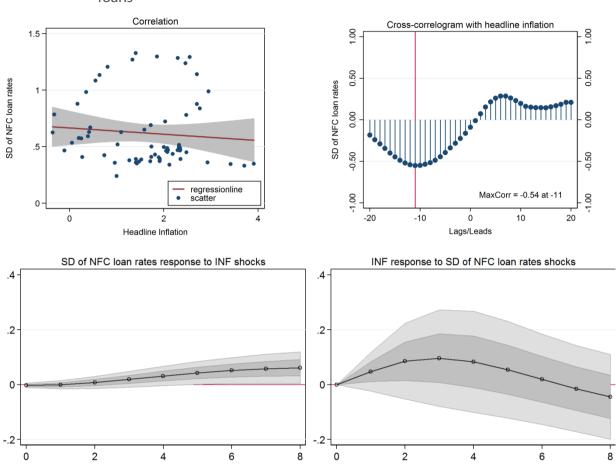


Figure 6: The link between inflation and the dispersion of interest rates on corporate loans

In Figure 6, the first two tests (upper left and right panels) show a low negative correlation between inflation and dispersion of interest rates on corporate loans below EUR 1 million. Although the contemporaneous correlation coefficient between these two variables is close to zero, the correlogram shows that the correlation is more strongly negative at lag 11 months. Higher inflation is associated with less dispersion, so less fragmentation. The correlogram becomes positive after 5 months meaning that the correlation is not stable over time. The impulse responses (bottom panel) show no statistically-significant evidence of a stable relation between inflation and dispersion of interest rates on corporate loan.

Price stability and financial stability through less fragmentation in corporate loan interest rates are two **independent** objectives. By providing price stability, the ECB has no effect on financial fragmentation in the euro area.

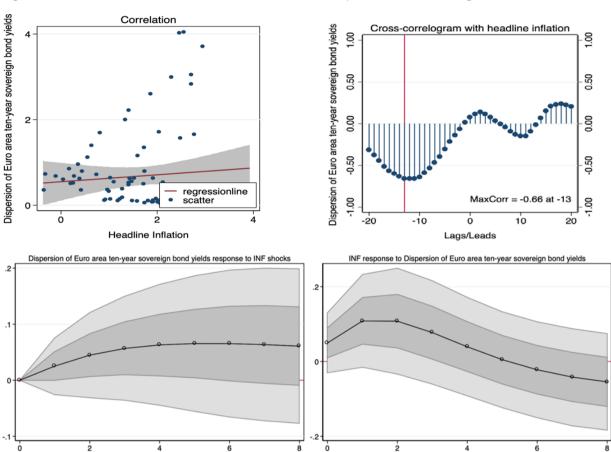


Figure 7: The link between inflation and the dispersion of sovereign bond rates

In Figure 7, the contemporaneous correlation between inflation and dispersion of sovereign bond rates in the euro area is close to zero but it becomes strongly negative at lag 13 months (upper right). Higher inflation is associated with less fragmentation among sovereign rates. However, neither of both impulse responses is significant (lower panel): there is no evidence of a stable relation between inflation and dispersion of sovereign bond rates.

Those objectives are <u>independent</u>. The actual mandate of price stability of the ECB does not interfere, positively or negatively, with a potential objective of homogeneity of sovereign rates in the euro area.

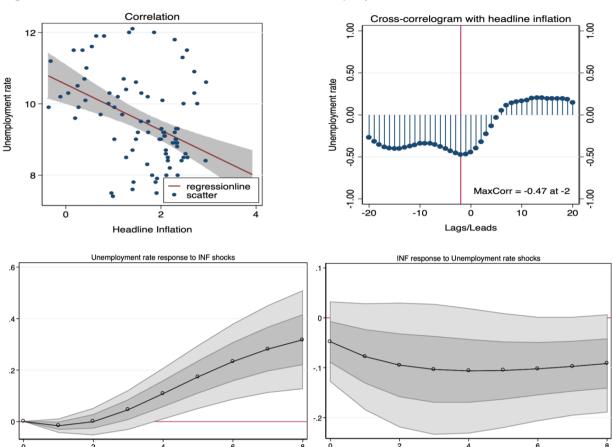


Figure 8: The link between inflation and unemployment

In Figure 8, as expected from the Phillips curve, the correlation between inflation rates and unemployment rate is negative. The correlogram (upper right) shows that the correlation is the strongest with the 2-month lagged unemployment rate. The complementary of these objectives hinges on the nature of the shocks affecting the economy. The response functions illustrate this. A demand shock - unemployment shock (lower right) - has no significant effect on inflation. However, an inflation shock (lower left), interpreted as a supply shock, is followed by a significant increase in unemployment but only 4 years after the initial shock (which seems to be a weak empirical result).

Even though the initial correlation is negative, these objectives do not display a significant and stable link and they are <u>independent</u>. The ECB's pursuit of price stability in the euro area does not contribute to reaching low unemployment.

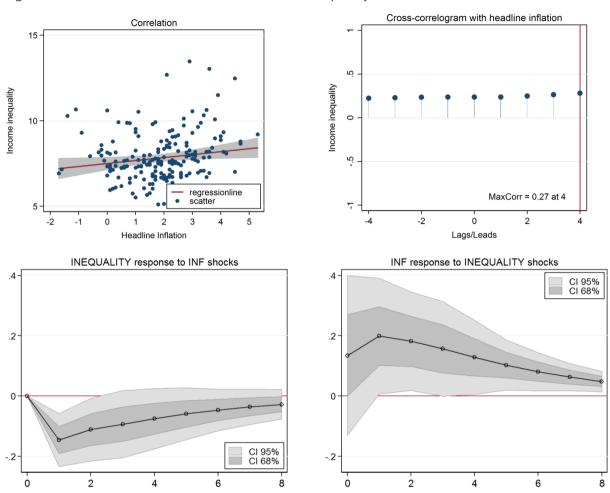


Figure 9: The link between inflation and inequality

In Figure 9, the correlation between inflation and inequality in the euro area is positive (upper right and left). Higher inflation is therefore associated with higher income inequality. However, the response functions show that the link is not that stable: inequality shock increases inflation rates in the euro area (lower right), but inflation shocks decreases inequality on a prolonged period (lower left).

Price stability and inequality do not display a stable link so they are <u>independent</u>. It runs counter to Doepke and Schneider (2006)'s results for the US. They find that inflation provides redistribution wealth at the benefit of young, middle-class households with mortgage debt.

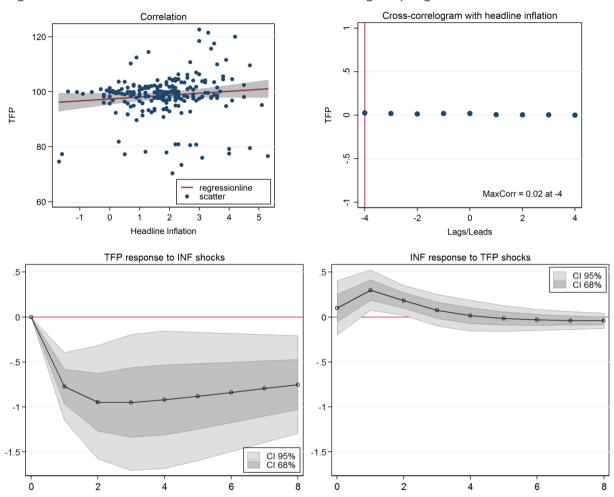


Figure 10: The link between inflation and technological progress

In Figure 10, we find a positive but low correlation between inflation and technological progress (upper left and right). Inflation is associated with higher total factor productivity (TFP) in the euro area. The impulse responses show an unstable link between the two variables. Technological progress decreases by almost 1 percent 2 years after an inflation shock (lower left). However, the effect of a TFP shock on inflation rate is lower and significant only for two years.

The actual objective of the ECB and this secondary objective display a stable link, so they are **independent**.

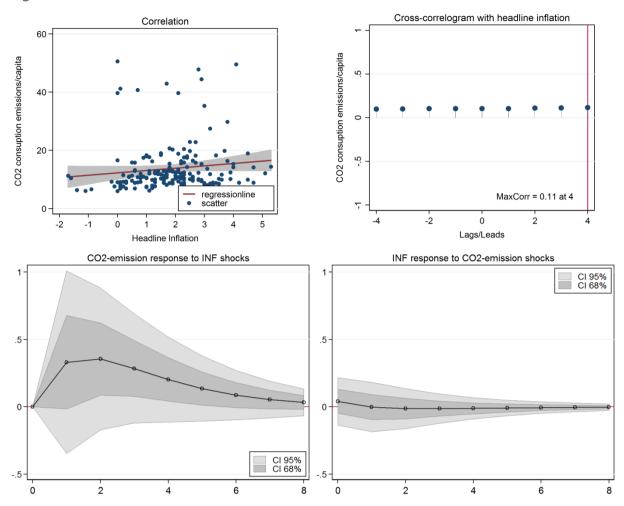


Figure 11: The link between inflation and GHG emissions

In Figure 11, results display a positive but low (and non-significant) correlation between inflation and CO2 emissions. Response functions (lower left and right) confirm that the link is not significant although both variables are very likely to be driven by economic activity and a variable could be omitted hence introducing a bias in the model.

The relation between inflation rates and GHG emissions is unstable. These objectives are **independent**. The actual mandate of price stability does not interfere with a potential objective of limiting the GHG emissions in the euro area. Symmetrically, the pursuit of this secondary objective would not interfere with the actual mandate. However, it would bring monetary policy in structural territories, well beyond its macroeconomic stabilisation objectives.

The ECB in the COVID-19 Crisis: Whatever it Takes, Within its Mandate

Grégory CLAEYS



Abstract

To keep the euro-area economy afloat, the European Central Bank (ECB) has announced a large number of measures since the beginning of the COVID-19 crisis. This response has triggered fears of a future increase in inflation. We discuss the risks that the ECB is unable to fulfil its price-stability mandate, and also whether these new measures respect legal limits set by the EU Treaties. We conclude that the measures introduced by the ECB during the crisis and the resulting increase in the size of its balance sheet, even if it were to be permanent, should not restrict its ability to achieve its price-stability mandate in the future, within its legal obligations.

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LIST OF ABBREVIATIONS

€STR Euro Short-Term Rate

ABSPP Asset Backed Securities Purchase Programme

bps basis points

CBPP Covered Bond Purchase Programme

CJEU Court of Justice of the EU

CPI Consumer Price Index

CSPP Corporate Sector Purchase Programme

ECB European Central Bank

EURO Overnight Index Average

ESCB European System of Central Banks

GCC German Constitutional Court

GDP Gross Domestic Product

HICP Harmonized Index of Consumer Prices

LTROs Longer-Term Refinancing Operations

MO Monetary base

M3 Broad monetary aggregate

MROs Main Refinancing Operations

OMT Outright Monetary Transations

PELTROs Pandemic Emergency Longer-Term Refinancing Operations

PEPP Pandemic Emergency Purchase Programme

PSPP Public Sector Purchase Programme

QE Quantitative Easing

SMP Securities Market Programme

TEU Treaty on European Union

TFEU Treaty on the Functioning of the European Union

TLTROs Targeted Longer-Term Refinancing Operations

VLTROs Very Long-Term Refinancing Operations

EXECUTIVE SUMMARY

- Central banks have taken a number of drastic steps to keep their economies afloat during the COVID-19 lockdowns. In the euro area, the European Central Bank (ECB) has eased significantly the conditions of its refinancing operations and has announced a new asset purchase programme to ensure that its monetary policy continues to be well transmitted to all countries of the monetary union. This response has triggered fears of a significant increase in inflation, and concerns about whether the ECB measures are compatible with its price stability mandate and with the limits set by the EU Treaties.
- We believe that accelerating inflation is not an immediate threat, as the euro area will experience in 2020 its deepest recession ever recorded. Initially, the pandemic took the form of a supply shock, but second-round effects have now generated a massive aggregate demand shock. The overall impact on prices will depend on which of these two shocks dominates. At this stage, it seems that the fall in demand is going to be greater than the fall in productive capacity. Combined with the direct effect of the substantial fall in oil prices, this means that deflationary forces are likely to dominate and bring headline inflation into negative territory in the near future.
- With deflation risks mounting, and inflation expectations drifting downwards, an expansionary monetary policy is clearly warranted today for the ECB to fulfil its price stability mandate. Moreover, given the severity of the shock, there is currently no trade-off between the ECB's primary mandate and its secondary macroeconomic objectives, which all point in the same direction.
- We also believe that the new measures implemented by the ECB respect the legal boundaries set by the EU Treaties and the criteria set by the EU Court of Justice in its rulings on previous ECB asset purchase programmes.
- However, the legal situation has been complicated by the 5 May 2020 ruling of the German Constitutional Court (GCC) on the ECB Public Sector Purchase Programme, which was launched in 2015. The ECB is not under the jurisdiction of the GCC, and should not comply directly in order to avoid setting a dangerous precedent. The legal situation is currently unfolding and it is difficult to predict how it will be resolved, but from an economic perspective, if the ECB were to abide by the more stringent rules dictated by the GCC in the future, it would make it more difficult for the ECB to fulfil both its primary mandate and secondary objectives.
- In the long-run, there are some fears that the current increase in the money supply will at some point lead to too much credit and inflation. However, in modern economies central bank reserves play a marginal, if any, role in credit creation. A high level of liquidity should not prevent the ECB from influencing credit creation or from tightening its policy if needed, as long as the ECB retains control over short-term interest rates and is able to influence the benchmark risk-free yield curve.
- Our analysis suggests that the ECB's current actions and the increase in the size of its balance sheet, even if it were to prove permanent, do not restrict significantly its ability to increase rates to fulfil its price-stability mandate in the future. The ECB would have enough tools at its disposal to counter a surgein inflation if it were to happen.
- Moving away from the current crisis, we conclude by discussing how the ECB should deal
 with trade-offs between different objectives when they arise. While the ordering is clear
 between its primary price stability mandate and its secondary objectives, the secondary goals are

not ranked by priority. Sometimes, the solution to achieve multiple objectives at the same time is simply to use multiple tools, but when this is not possible what should the ECB do? Dealing with difficult trade-offs is essentially a political task and should, as much as possible, be taken out of the hands of unelected policymakers. That is why, in these particular cases, the ECB should welcome some clear guidance from the European Parliament and EU Council on which secondary objectives are the most relevant for the EU in a particular situation.

1. INTRODUCTION

Central banks and governments have taken a number of drastic steps to keep the economy afloat during the COVID-19 lockdowns, and to try to avoid a depression. This massive response from public authorities has triggered fears of a significant increase in inflation (see for instance Goodhart and Prahdan, 2020). In Europe, the question has been asked of whether the current measures implemented by the European Central Bank (ECB) are compatible with the mandate given to it by the EU Treaties.

The ECB's, and the Eurosystem's, primary objective is clearly spelled out in the EU Treaty: the ECB must ensure price stability in the euro area (Article 127.1 of the TFEU, see Box 1). However, although the Treaty clearly establishes price stability as the ECB's main objective, it does not give a precise definition of what price stability means in practice. That is why the ECB's Governing Council has explained since 2003 that it intends to maintain inflation "below, but close to, two percent over the medium term".

Beside this primary mandate, the same article of the TFEU also assigns secondary objectives to the ECB. These should be pursued as long as they are not at the expense of price stability. The ECB must in particular contribute to financial stability in the euro area by ensuring the "smooth operation of payment systems", and also because it has been tasked by EU member states with "the prudential supervision of credit institutions" since 2014. In addition, the ECB should "promote general economic policies" and "contribute to the objectives of the Union". These objectives, enshrined in Article 3.3 of the TEU, include in particular "sustainable growth", "full employment", and the "improvement of the quality of the environment" (see relevant excerpts of the EU Treaties in Box 1).

Box 1: Excerpts from relevant articles of the EU Treaties

Article 3 (3) of the TEU: The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance. It shall combat social exclusion and discrimination, and shall promote social justice and protection, equality between women and men, solidarity betweengenerations and protection of the rights of the child. It shall promote economic, social and territorial cohesion, and solidarity among Member States. It shall respect its rich cultural and linguistic diversity, and shall ensure that Europe's cultural heritage is safeguarded and enhanced.

Article 5 (1) of the TEU: The limits of Union competences are governed by the principle of conferral. The use of Union competences is governed by the principles of subsidiarity and proportionality.

Article 5 (2) of the TEU: Under the principle of conferral, the Union shall act only within the limits of the competences conferred upon it by the Member States in the Treaties to attain the objectives set out therein. Competences not conferred upon the Union in the Treaties remain with the Member States.

Article 5 (3) of the TEU: Under the principle of subsidiarity, in areas which do not fall within its exclusive competence, the Union shall act only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States, either at central level or at regional and local level, but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level. The institutions of the Union shall apply the principle of subsidiarity as laid down in the Protocol on the application of the principles of subsidiarity and proportionality. National Parliaments ensure compliance with the principle of subsidiarity in accordance with the procedure set out in that Protocol.

Article 5 (4) of the TEU: Under the principle of proportionality, the content and form of Union action shall not exceed what is necessary to achieve the objectives of the Treaties. The institutions of the Union shall apply the principle of proportionality as laid down in the Protocol on the application of the principles of subsidiarity and proportionality.

Article 123 (1) of TFEU: Overdraft facilities or any other type of credit facility with the European Central Bank or with the central banks of the Member States (hereinafter referred to as "national central banks") in favour of Union institutions, bodies, offices or agencies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States shall be prohibited, as shall the purchase directly from them by the European Central Bank or national central banks of debt instruments.

Article 125 (2) of the TFEU: The Council, on a proposal from the Commission and after consulting the European Parliament, may, as required, specify definitions for the application of the prohibitions referred to in Articles 123 and 124 and in this Article.

Article 127 (1) of TFEU: The primary objective of the European System of Central Banks (hereinafter referred to as "the ESCB") shall be to maintain price stability. Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Union with a view to contributing to the achievement of the objectives of the Union as laid down in Article 3 of the Treaty on European Union. The ESCB shall act in accordance with the principle of an open market economy with free competition, favouring an efficient allocation of resources, and in compliance with the principles set out in Article 119.

Article 127 (2) of TFEU: The basic tasks to be carried out through the ESCB shall be [...] to promote the smooth operation of payment systems.

Article 127 (5) of TFEU: The ESCB shall contribute to the smooth conduct of policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system.

Article 127 (6) of TFEU: The Council, acting by means of regulations in accordance with a special legislative procedure, may unanimously, and after consulting the European Parliament and the European Central Bank, confer specific tasks upon the European Central Bank concerning policies relating to the prudential supervision of credit institutions and other financial institutions with the exception of insurance undertakings.

Article 130 of TFEU: When exercising the powers and carrying out the tasks and duties conferred upon them by the Treaties and the Statute of the ESCB and of the ECB, neither the European Central Bank, nor a national central bank, nor any member of their decision-making bodies shall seek or take instructions from Union institutions, bodies, offices or agencies, from any government of a Member State or from any other body. The Union institutions, bodies, offices or agencies and the governments of the Member States undertake to respect this principle and not to seek to influence the members of the decision-making bodies of the European Central Bank or of the national central banks in the performance of their tasks.

Article 267 of the TFEU: The Court of Justice of the European Union shall have jurisdiction to give preliminary rulings concerning: (a) the interpretation of the Treaties; (b) the validity and interpretation of acts of the institutions, bodies, offices or agencies of the Union; Where such a question is raised before any court or tribunal of a Member State, that court or tribunal may, if it considers that a decision on the question is necessary to enable it to give judgment, request the Court to give a ruling thereon. Where any such question is raised in a case pending before a court or tribunal of a Member State against whose decisions there is no judicial remedy under national law, that court or tribunal shall bring the matter before the Court. If such a question is raised in a case pending before a court or tribunal of a Member State with regard to a person in custody, the Court of Justice of the European Union shall act with the minimum of delay

Article 284 (3) of TFEU: The European Central Bank shall address an annual report on the activities of the ESCB and on the monetary policy of both the previous and current year to the European Parliament, the Council and the Commission, and also to the European Council. The President of the European Central Bank shall present this report to the Council and to the European Parliament, which may hold a general debate on that basis. The President of the European Central Bank and the other members of the Executive Board may, at the request of the European Parliament or on their own initiative, be heard by the competent committees of the European Parliament.

Bank: The national central banks are an integral part of the ESCB and shall act in accordance with the guidelines and instructions of the ECB. The Governing Council shall take the necessary steps to ensure compliance with the guidelines and instructions of the ECB, and shall require that any necessary information be given to it.

Article 35 (4) of the Statute of The European System of Central Banks and of the European Central Bank: The Court of Justice of the European Union shall have jurisdiction to give judgment pursuant to any arbitration clause contained in a contract concluded by or on behalf of the ECB, whether that contract be governed by public or private law.

Article 35 (6) of the Statute of The European System of Central Banks and of the European Central Bank: The Court of Justice of the European Union shall have jurisdiction in disputes concerning the fulfilment by a national central bank of obligations under the Treaties and this Statute. If the ECB considers that a national central bank has failed to fulfil an obligation under the Treaties and this Statute, it shall deliver a reasoned opinion on the matter after giving the national central bank concerned the opportunity to submit its observations. If the national central bank concerned does not comply with the opinion within the period laid down by the ECB, the latter may bring the matter before the Court of Justice of the European Union.

Sources: Treaty on European Union (TEU), Treaty on the Functioning of the European Union (TFEU), Statute of The European System of Central Banks and of the European Central Bank.

Despite a narrower focus in its primary mandate than its counterpart in the United States (where the Fed shall "promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates" 1), the ECB considers that price stability is best achieved through broad macroeconomic stability. Most of the time, there is essentially no trade-off between the ECB's various objectives set out in the EU Treaties, because growth, high employment and financial stability are all necessary conditions to achieve price stability in the medium term.

This "divine coincidence" (as put by Blanchard and Galí in 2005) allows the ECB to write on the webpage that explains its objective that: "given that monetary policy can affect real activity in the shorter term, the ECB typically should avoid generating excessive fluctuations in output and employment if this is in line with the pursuit of its primary objective" ². That is why, in practice, the literature (see for example Castro, 2011) generally suggests that the ECB's decisions are guided by inflation developments but also contribute to minimising the output gap in the euro area. During the previous crisis, in particular, some of its decisions reflected the broad concerns of the ECB Governing Council and showed that it considered that playing the role of lender of last resort (for banks as soon as August 2007, and for sovereign debt markets with the announcement of the Outright Monetary Transactions (OMT) in 2012) was necessary to safeguard financial stability and to ensure the transmission of monetary policy to all parts of the monetary union, in order to be able to deliver price stability in the euro area.

The relevant question today is thus how current ECB decisions, taken in the midst of the COVID-19 crisis, fit with its primary mandate and its secondary objectives, both in the short- and the long-run.

See Fed website: https://www.federalreserve.gov/aboutthefed/section2a.htm.

² See ECB website: https://www.ecb.europa.eu/mopo/intro/objective/html/index.en.html.

2. THE COVID-19 CRISIS AND THE ECB'S MANDATE

2.1. What has the ECB announced since the beginning of the COVID-19 crisis?

The ECB has been very active since the beginning of the COVID-19 crisis and has announced a large number of measures, including some announcements outside of its regular Governing Council meetings:

- On 12 March: as lockdown measures began to be implemented in various euro-area countries, the
 ECB announced a package of measures: liquidity provision through eased conditions on its
 targeted longer-term refinancing operations (TLTROs) (with a rate cut by 25 basis points (bps)
 below the deposit rate for banks fulfilling their benchmarks on lending to the real economy) and
 additional LTROs, and an increase in the envelope of its main asset purchase programme by EUR
 120 billion until the end of the year. On the same day, the ECB banking supervision arm announced
 measures to provide capital and operational relief to banks during the crisis.
- On 15 March: the ECB announced that it was ready to provide US dollars to the euro-area banking sector thanks to its currency swap lines with Fed.
- On 18 March: after an emergency Governing Council meeting following an undesirable and significant increase in the yields of some countries over the previous week³, the ECB announced the creation of a new Pandemic Emergency Purchase Programme (PEPP), amounting to EUR 750 billion until the end of 2020 (ECB, 2020a). The purchases are allocated by the ECB's Executive Board in a flexible way, with respect to capital keys in the short term, are not constrained by the issuer limits of other asset purchase programmes, and reinstate a waiver to include Greek sovereign bonds (ECB, 2020b). The Corporate Sector Purchase Programme (CSPP) was also expanded to new asset classes, such as commercial papers. Moreover, the Governing Council made it clear that it was ready to do more and increase the size and adjust further the composition of its asset purchases if needed.
- On 20 March: the ECB started providing euros to the Danish Central Bank through swap lines (these lines were extended on 15 April to the Croatian central bank and on 22 April to Bulgaria's central bank). The ECB also changed the timing of its USD swap operations from weekly to daily.
- On 7 April: the ECB announced collateral easing measures (with in particular a 20 percent reduction in collateral haircuts).
- On 15 April: the ECB endorsed macroprudential policy measures taken by national authorities.
- On 22 April: the ECB announced it would freeze credit ratings as of 7 April as far as its collateral framework is concerned to avoid the pro-cyclical effect of potential downgrades on collateral.
- On 30 April: the ECB announced that it would further ease the conditions of its TLTROs by cutting
 the applicable rate between June 2020 and June 2021 by a further 25 bps, to as low as -1 percent
 (i.e. at 50 bps below the deposit facility rate), and introduced new refinancing Pandemic Emergency
 Longer-Term Refinancing Operations (PELTROs) for banks hitting the TLTRO bidding limits, banks

The quick rise in spreads in the previous week, during which the spread between Italian and German yields almost reached 300 basis points, was in part self-inflicted by the ECB, after ECB President Christine Lagarde declared during the ECB's 12 March press conference that "we are not here to close spreads". This created some doubt among market participants about the readiness of the ECB to honour its 2012 promise to do "whatever it takes" to safeguard the euro area and to ensure the adequate transmission of monetary policy in all countries.

with non-eligible lending (real estate, loans to public entities), and banks for which the TLTROs are operationally too complex.

As a result, the balance sheet of the ECB increased by almost EUR 700 billion in only two months (from EUR 4 702 billion on 6 March to EUR 5 395 billion on 1 May, see Figure 1). Given the volume of asset purchases and the potential take-up of the ECB's refinancing operations, the size of the ECB's balance sheet could reach around EUR 7 trillion (the equivalent of around 60 percent of euro area GDP) by the end of 2020 (Ducrozet and Gharbi, 2020).

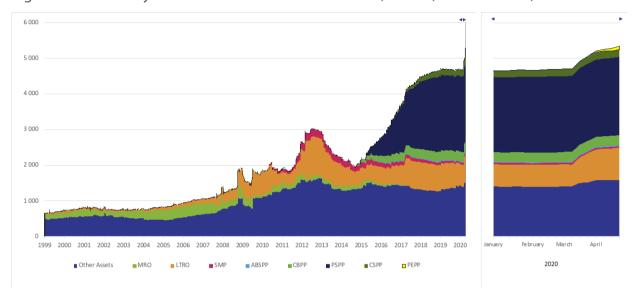


Figure 1: Eurosystem's consolidated balance sheet, assets (in EUR billions)

Source: Bruegel based on ECB.

Notes: The left-hand side panel shows the evolution of the Eurosystem's balance sheet since 1999, while the right-hand side panel zooms in on the developments since the beginning of 2020; MRO: Main Refinancing Operations, LTRO: Long Term Refinancing Operations (includes all types of LTROs, including VLTROs and TLTROs), SMP: Securities Market Programme, ABSPP: Asset Backed Securities Purchase Programme, CBPP: Covered Bond Purchase Programme, PSPP: Public Sector Purchase Programme, CSPP: Corporate Sector Purchase Programme, PEPP: Pandemic Emergency Purchase Programme.

2.2. What is the outlook for inflation?

In the short to medium-term (i.e. in the ECB's policy horizon), taking into account the first estimates available for the first quarter of 2020, it is now very likely that the euro area will experience its deepest recession ever recorded⁴. As for what will happen after that, although it is difficult to make precise forecasts because of the high uncertainty and the exceptional nature of the current shock, some elements suggest that, after the initial free fall of the economy, there are elevated risks that the euro area will experience a slow recovery. The ECB's early forecasts (Battistini and Stoevsky, 2020) predict that, even in their more optimistic scenario, output is not going to reach its pre-crisis trend before the end of 2022. In their mild and severe scenarios, output will not even return to its pre-crisis level by then.

There are good reasons to forecast such a dire outcome. In particular, a protracted demand shortfall is to be expected given the situation. Consumption from households will probably be subdued because of precautionary saving, continued social distancing, higher unemployment and low wage growth.

PE 648.814

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⁴ The IMF (2020) expects GDP in the euro area to fall by 7.5 percent in 2020 in its central scenario, while the European Commission (2020) expects a fall of 7.7 percent.

Meanwhile, because of high uncertainty about possible relapses and new lockdowns, and because of the large increase in corporate debt during lockdown and the possible failure of some companies, corporate investment will probably trend lower in the next few months, possibly until a vaccine or a cure for COVID-19 is found.

What does that mean for inflation? Even if the pandemic took initially the form of a supply shock through the breakdown of global value chains and disruptions to production caused by the lockdowns, second-round effects have now generated a massive aggregate demand shock. The overall impact on prices will depend on which of these two shocks dominates. At this stage, it seems that the fall in aggregate demand is probably going to be larger than the fall in productive capacity (see Guerrieri et al, 2020, for an explanation on how this is theoretically possible). Combined with the direct effect of the substantial fall in the prices of oil and non-food commodities, this means that deflationary forces are likely to dominate and bring headline Harmonised Index of Consumer Prices (HICP) inflation into negative territory in the near future.

There might be some significant relative price changes with increases in the prices of some indispensable goods, including food and medical equipment, and some increases in some other prices arising from pent-up demand when lockdowns are eased. However, prices of services and other goods could decline because of the fall in aggregate demand and more structural behavioural changes resulting from the pandemic (e.g. in entertainment services, tourism, mobility, etc). In fact, the HICP estimates for March and April 2020 (even if these must be taken with a pinch of salt given the difficulty of collecting prices during the lockdowns and the changes in consumption patterns) already point towards a decrease in overall inflation in the euro area⁵.

Moreover, this downward pressure on consumer prices has resulted in falling inflation expectations since the beginning of the crisis. Markets have heavily revised downwards their expectations. They now expect headline inflation to fall into negative territory over the next 12 months, and, more worryingly, to stay below 1 percent – i.e. well below the ECB's definition of price stability – for the next decade (Figure 2).

⁵ Headline HICP inflation in the euro area in April fell to 0.4 percent year-on-year while core inflation fell to 0.9 percent y-o-y. See https://ec.europa.eu/eurostat/documents/2995521/10294696/2-30042020-AP-EN.pdf/695df4c4-1a67-bf92-3a0f-69534046cbfe.

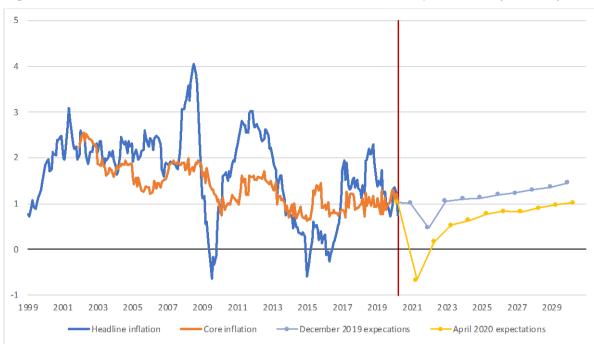


Figure 2: Euro-area inflation, core, headline and market expectations (year-on-year, %)

Source: Bruegel based on Eurostat and Bloomberg.

Note: Inflation expectations are derived from inflation zero-coupon swaps of different terms (1 year, 2 years, up to 10 years), which provide information on market expectations of average yearly inflation over the contract term. Expectations for 2021 inflation, for instance, are derived through expected inflation over the next year (2020), given by the 1-year swap, and expected inflation over the next two years (2020 and 2021), given by the 2-year swap. Expectations related to the Eurostat Harmonized Index of Consumer Prices (HICP) excluding tobacco.

2.3. Are the recent decisions of the ECB guided by its price-stability mandate?

Given the short-termoutlook for inflation, and with deflation risks mounting in the ECB policy horizon, potentially leading inflation expectations further downwards, we think that an expansionary monetary policy is clearly warranted today for the ECB to fulfil its price-stability mandate, as defined by an inflation rate "below, but close to, two percent in the medium term", and by the ECB's "commitment to symmetry".

To ease its monetary policy, the ECB is following two main paths: easing financial conditions to support the real economy, and ensuring that there is no liquidity crisis either in the private or in the public sector. Are these the appropriate tools to fulfil its mandate?

First, the ECB decided to provide accommodative financing conditions and encourage credit provision to companies to limit the destruction of productive capacity during the lockdowns. Cutting the TLTRO lending rate below the deposit facility rate (as the ECB did on 12 March and again on 30 April), conditional on banks reaching a benchmark volume for loans, provides a new way for the ECB to cut its rates to ease financial conditions. This allows the ECB to take a more expansionary stance without lowering its deposit rate further, thus avoiding the negative impact on banks' profits and therefore, possibly, on bank lending. It indeed gives banks a strong incentive to take out long-term loans from the ECB, given that the rate is lower than what they will pay to deposit excess liquidity there. This allows them to make more loans, which in turn will mechanically increase their reserve requirements, since

these are calculated as a ratio of a bank's liabilities – mainly its customers' deposits. Considering the new tiering system on reserve remuneration, their exempted reserves would also be increased, even more than proportionally. This ultimately should create a virtuous cycle for bank profitability and incentivise banks to lend to the economy, despite negative policy rates (or more precisely thanks to a negative spread between the deposit rate and the TLTRO rate).

The only caveat comes from the fact that the ECB will actually lose money on these operations. However, this should not be a major source of concern, given that, as discussed in Chiacchio *et al* (2018), while it is preferable for central banks to achieve profits rather than to record losses, they are not profit-maximising institutions and their overriding mandate is price stability. As such, recording losses in the short-to-medium term⁶ when seeking to fulfil its macroeconomic function should not stop the ECB from using such a policy if it is effective (Cameron et al., 2020).

Second, the ECB decided to adopt significant measures to avoid liquidity issues that would impede the transmission of monetary policy and endanger financial stability and ultimately price stability. In particular, the ECB launched on 18 March a new asset purchase programme, the PEPP, aimed at diminishing "any risks to the smooth transmission of its monetary policy in all jurisdictions of the euro area" (ECB, 2020a). The objective is clearly to avoid a bad equilibrium in some national sovereign debt markets that would break down the monetary policy transmission channel, and to ensure that euro-area governments can borrow massively to limit the fall both in aggregate demand and in aggregate supply (to maintain them as much as possible at the pre-crisis level), which in turn ensures both price stability and financial stability.

In our view, at the current juncture, a new form of 'divine coincidence' is taking place as the various macroeconomic objectives of the ECB (its primary mandate of price stability, as well as its secondary objectives, i.e. financial stability, and the need support growth and employment) all point in the same direction and towards the same policies.

2.4. Do these decisions respect the limits on the ECB's actions set by the EU Treaties?

In addition of complying with its mandate, the ECB's actions must respect two main legal constraints in the EU Treaties. First, the ECB is prohibited from financing directly member states or EU institutions (see Article 123 of TFEU in Box 1). Second, like all EU institutions, the ECB should not act beyond its assigned competences and should thus be constrained by the proportionality and subsidiarity principles, i.e. it may only exercise the powers granted to it to the extent necessary to fulfil its mandate (Article 5 of the TEU, Box 1).

Refinancing operations, as an ECB tool, have never been challenged in courts and thus pose no problem at this stage, but two ECB asset purchase programmes – Outright Monetary Transactions (OMT) announced in 2012, but never implemented, and the Public Sector Purchase Programme (PSPP) launched in 2015 – have been legally challenged in Germany. The Court of Justice of the EU (CJEU), which was consulted in both cases, considered that asset purchases are a legitimate tool of the ECB as long as there are "sufficient safeguards". The CJEU considered that the safeguards present in OMT and in PSPP ensured that the Treaties were respected. The safeguards were: no certainty about ECB buying and holdings, no disincentive for sound fiscal policy, no selective purchases, stringent eligibility criteria

⁶ Assuming that the negative spread of 50 basis points between the deposit rate and the TLTRO rate would in the end apply to a volume of between EUR 500 billion and EUR 1 trillion in loans, this would lead to losses on these operations of between EUR 2.5 and 5 billion, compared with an average of EUR 14 billion of distributable profits per year for the Eurosystem from 1999 to 2017 (Chiacchio *et al*, 2018).

⁷ The unwarranted loss of market access or default of a euro area country in the midst of the crisis would have very damaging implications in terms of financial stability, clearly endangering price stability.

for the selection of assets, temporary and limited nature of the programme, and purchase limits (CJEU, 2015 and 2018).

What does that mean for the PEPP? Does the new programme include sufficient safeguards? The technical details of the PEPP are actually quite similar to the PSPP and it thus fulfils mechanically most of the criteria listed above. However, the one notable difference is that, to be credible in the current dire situation and to have enough flexibility and possibly increase significantly the volume of asset purchases in the next months, the ECB announced in the PEPP legal act that the programme would not be subject to its self-imposed 33 percent issuer limit.

Could that make the PEPP illegal in the eyes of the CJEU? In our view, relaxing the 33 percent limit should be considered legal by the CJEU. As noted by Grund (2020), in its judgement on the PSPP (CJEU, 2018) the EU Court did not prescribe a specific share for the purchase limits ¹⁰. In fact, it seemed to consider that, in theory, the relevant limit of the PSPP compatible with the EU Treaty is not to buy all the bonds issued. The ruling stated that the European System of Central Banks (ESCB) is "not permitted to buy either all the bonds issued by such an issuer or the entirety of a given issue of those bonds" and that monetary financing is avoided when "a private operator necessarily runs the risk of not being able to resell them to the ESCB on the secondary markets, as a purchase of all the bonds issued is in all cases precluded". The 33 percent issuer limit was thus seen by the CJEU as a sufficient safeguard, but not as a necessary one, and could thus be relaxed significantly in our view.

However, the current situation has been complicated by the 5 May ruling of the German Constitutional Court (GCC) on the ECB's PSPP (BVerfG, 2020). The German Court considered that the CJEU did not assess sufficiently well the proportionality of the ECB's actions. To keep the German Bundesbank participating in the ECB asset purchase programme, the GCC gave three months to the Eurosystem to produce a proportionality assessment justifying that the "economic and fiscal policy effects" of its programme do not outweigh its objectives.

First, from an economic perspective, the Court's argument that the ECB has taken insufficient account of the economic effects of the PSPP appears to be relatively weak, given the large number of papers, speeches by ECB's Executive Board members and discussions during the Governing Council's meetings (visible in the accounts of these meetings published by the ECB) dedicated to the effects of its asset purchase programmes since 2015. Moreover, a strict proportionality assessment of the sort requested by the GCC appears to be logically inconsistent with the strict ordering of the objectives of the ECB in the EU Treaties, in which price stability comes first and other goals after, and only as long as they do not affect price stability. This ordering does not allow a trade-off between price stability and other objectives. The fact that quantitative easing (QE) might have side effects (in particular on "savers or insurance policy holders" or by "keeping afloat economically unviable companies", BVerfG, 2020) is irrelevant 11. Such a proportionality appraisal would imply that the ECB would have to constantly balance price stability with other - potentially conflicting and not well-defined - objectives, exactly the kind of political trade-off that the EU Treaties wanted to take out of the hands of independent unelected policymakers. On the other hand, the interpretation of the proportionality principle by the CJEU is quite different, and in our view more consistent with the ECB's obligations under the EU Treaties. The CJEU indeed considers that the ECB's actions would be disproportionate if they were on

⁸ See Grund (2020) for a detailed analysis.

⁹ "The consolidated holdings under Article 5 of Decision (EU) 2020/188 of the European Central Bank (ECB/2020/9) should not apply to PEPP holdings" (ECB, 2020b).

¹⁰ It is also noteworthy that the OMT programme, which passed the CJEU's assessment (CJEU, 2015), had no such feature.

These particular side-effects highlighted by the GCC are even more irrelevant in that they do not constitute official objectives of the EU and should thus not even be considered, unlike e.g. growth and employment, as secondary objectives by the ECB.

a scale beyond what is needed to fulfil its mandate (e.g. sustained monetary easing when price stability is achieved) or if some legal constraints on its action (e.g. monetary financing) were not respected, but not because a particular interest would not have been taken into account in the ECB's decision.

More generally, as an EU institution, the limits on the ECB's actions should be arbitrated by the CJEU and not by national courts, as dictated by Article 267 of the TFEU and Article 35(4) of ESCB statute (see Box 1), and as confirmed by the CJEU (2020) in its reaction to the GCC ruling. The ECB itself is not under the jurisdiction of the German Constitutional Court, and should not comply directly in order to avoid setting a dangerous precedent. However, the German Constitutional Court ruling puts the Bundesbank in a very delicate position as it is legally obliged to apply the ECB Governing Council's decisions (Article 14.3 of the ESCB statutes) and could be requested to do so by the CJEU (Article 35.6 of the ESCB statutes). But, as a German public institution, it must also respect the rulings of the German Constitutional Court¹².

Nevertheless, aside from the more general problem that this ruling might pose to the EU legal order, and the principle of supremacy of EU law and of the EU Court of Justice as its sole guardian ¹³ (which is outside of the scope of this paper), the more direct issue in terms of monetary policy is that the GCC ruling intends to reduce further than the CJEU the ECB's margin of manoeuvre. In particular, the issuer limit would be more stringent, as the 33 percent limit might no longer be considered as a sufficient condition (as it was for the CJEU), but as a necessary one. Moreover, the GCC also considers that the holding of the bonds purchased by the ECB can only be temporary, in order to respect the prohibition of monetary financing.

The legal situation is unfolding at time of writing and it is difficult to predict how it will be resolved. However, if the ECB were to abide by the more stringent rules dictated by the GCC, it would make it more difficult for the ECB to fulfil both its primary mandate and secondary objectives. In particular, we believe that it is crucial for the ECB to be able to avoid sovereign liquidity crises in stress periods to ensure financial stability and thus price stability (as this is necessary to maintain a homogenous transmission of monetary policy through the whole euro area).

The GCC ruling applies only to the PSPP and not to the PEPP, which was not the object of the case. But the principles applied to the PSPP in the ruling would certainly apply to the PEPP if it was challenged in courts and if the GCC had to reach a verdict about it, which is likely to be the case in the future.

More importantly, the GCC ruling also highlights a more fundamental problem of the euro architecture: two decades after the ECB was created, there is still some uncertainty about what the central bank is allowed or not allowed to do to fulfil its mandate ¹⁴. This is damaging because this reduces the credibility of its policies (and in the current situation of the PEPP) in the eyes of the markets. This could lead to the re-emergence of bad self-fulfilling equilibria in euro area sovereign bond markets, similar to what happened during the euro crisis before the ECB's OMT was established.

See Pistor (2020) for details on the legal discussion.

This is why on 10 May 2020 the President of the Commission (Von der Leyen, 2020) published a statement indicating that the European Commission was analysing the ruling and looking into possible next steps, including the opening an infringement procedure against Germany.

¹⁴ Maybe Article 125 (2) of the TFEU, which allows the European Council to specify the definition of monetary financing, could offer a way out of this problem and allow elected policymakers to clarify the situation and offer some guidance on this question.

3. COULD CURRENT ECB'S ACTIONS ENDANGER PRICE STABILITY IN THE FUTURE?

The ECB's major increase in the monetary base (similarly to other major central banks around the world) has raised fears about a future acceleration of inflation¹⁵. As discussed in Section 2, this will probably not be the case in the short term, during which deflationary forces will dominate. However, some fear that it could be a risk in the medium term as the economy picks up, especially if the ECB decides to keep the assets purchased on its balance sheet for a long period, to avoid introducing too much volatility into euro area sovereign debt markets ¹⁶. In fact, the debate on the size of the ECB's balance sheet and the potential risks associated with a large balance sheet when the economy recovers is not new and pre-dates the COVID-19 crisis (Claeys and Demertzis, 2017).

3.1. Will a larger central bank balance sheet inevitably result in higher inflation in the long run?

The most intuitive argument brought forward against having a large balance sheet is the classical monetarist argument. A high level of central bank liquidity could result in rapid credit creation by the banking sector and ultimately in an acceleration of inflation above target, which would endanger the price stability mandate of the ECB.

In theory, according to the money multiplier principle, the relationship between the central bank's monetary base (M0) and the broad monetary aggregate (M3) should be relatively stable, because holding more reserves should enable banks to provide more loans to firms and households, which should in turn boost inflation (according to the quantity theory of money).

However, empirically, the money multiplier is not a mechanical relationship and has not been stable over time. In particular, since 2007 and the significant injections of liquidity into the system by the ECB, first through its refinancing operations and later through its asset purchases, the multiplier has fallen considerably, with the two variables clearly decoupling. The increase in M0 during the crisis has not led to a proportional increase in M3, nor has the ECB's 2012 decision to divide by two the reserve requirements led to a doubling of broad money through a quick expansion of credit in the euro area (Claeys and Demertzis, 2017).

The causal relationship between the monetary base and broad monetary aggregates is often misunderstood. As explained by the ECB (2017), the increased provision of central bank reserves before 2007 was in fact demand-driven and mirrored the increase in broad money because of the rise in the supply of credit to the non-financial sector that was taking place at the time. The increase in M0 after 2007 was of a different nature. From 2007 to 2012 it was related to an increase in banks' demands for reserves in refinancing operations, not because they were increasing credit (quite the opposite), but because they were seeking to insure themselves against liquidity shortfalls when short-term money markets were dysfunctional. After asset purchases began and expanded greatly in 2015, with the inclusion of sovereign assets, the increase in base money was entirely supply-driven and induced mechanically by the creation of reserves by the ECB to pay for its asset purchases. In such a scenario, minimum requirements are not binding and increasing the reserves does not steer credit automatically. In the end, trying to increase credit by increasing M0 could be seen as 'pushing on a

¹⁵ See for instance: https://www.wsj.com/articles/get-ready-for-the-return-of-inflation-11587659836.

The creation of an *ad-hoc* programme – the PEPP – to purchase assets during the pandemic instead of using an existing instrument such as the PSPP, opens up the possibility of distinguishing them clearly from the assets previously purchased and rolling it over indefinitely if necessary.

string' because the money multiplier is a mathematical inequality – i.e. a limit on money creation – not an equality (Claeys and Demertzis, 2017).

In fact, QE does not work through the money multiplier channel but through other indirect channels (such as portfolio rebalancing, wealth effects, signalling effects or the easing of financing conditions through a flattening of the yield curve). This explains to a great extent the smaller effect on inflation than some predicted when such programmes were first launched a decade ago ¹⁷. In any case, if really needed, in a strong upturn, the ECB could reduce the size of its balance sheet by reducing the volume of refinancing operations, which still represent a major share of its assets (Figure 1) ¹⁸. In addition, even though they have not been deployed to this end in recent decades ¹⁹, reserve requirements could also be used to avoid a quick expansion of credit if they become binding (rationing reserves could be seen as 'pulling on a string'). The ECB could thus increase minimum reserve requirements to drain excess reserves and provide a disincentive to deter money creation by banks²⁰.

However, in practice, in modern economies credit creation by banks is mainly determined by the level of interest rates and the corresponding demand for loans from firms and households, the credit risk assessment of banks, their financial health and the prudential regulation affecting them. Overall, reserves play a marginal, if any, role. Therefore, a high level of liquidity should not prevent the ECB from influencing credit creation or from tightening its policy if required by the inflation outlook, as long as the ECB retains control over short-term interest rates and is able to influence the benchmark risk-free yield curve.

3.2. Will the ECB's current actions prevent it from raising rates in the future if needed?

The most relevant question is thus whether the ECB can control short-term market rates with a large balance sheet. In particular, the question is whether today's ECB decisions could constrain its ability to raise rates if inflation surges in the future. This could happen not necessarily because of the increase in the monetary base during the crisis itself, but for other reasons, including possible structural changes induced by the pandemic, such as deglobalisation, which, if it were to happen, could lead to higher prices and lower productivity in the medium term.

Before 2007, the ECB controlled the short-term Euro Overnight Index Average (EONIA) rate through its variable-rate fixed-volume refinancing operations (weekly Main Refinancing Operations [MROs] and monthly 3-month LTRO), the corridor rates of its deposit and marginal lending facilities, a relatively small balance sheet and reserve requirements for banks at 2 percent. This was a very simple and efficient operational framework in which the interbank rate fluctuated very close to the MRO rate, the ECB's main instrument at the time. However, a large balance sheet prevents the ECB from conducting monetary policy in the same way. The existence of excess liquidity reduces the influence of MROs on the EONIA rate. For banks to bid for a rate near the MRO rate, it is necessary for the banking system to have a liquidity deficit relative to the central bank. Otherwise banks can just use their own reserves to

See for instance https://blogs.wsj.com/economics/2010/11/15/open-letter-to-ben-bernanke/.

It is also important to realise that if the ECB were to decide to keep the bonds purchased until maturity, or even if they were to decide to roll over the current purchases indefinitely, current excess liquidity would gradually be absorbed by the growth of currency in circulation and reserve requirements that increase mechanically with the size of economy.

¹⁹ As explained in ECB (2011), in the pre-GFC operational framework, the role of the ECB's reserve requirements was to contribute to the creation of a structural liquidity shortage vis-à-vis the central bank in order to push the banks to participate in the ECB's main refinancing operations and control better the interest rate inside the corridor of ECB rate and bring it closer to the MRO rate.

Other possibilities for draining liquidity from the system that could be considered by the ECB include using reverse repo operations or issuing ECB securities that would be sold to the banks via weekly tenders.

fulfil their reserve requirements and the interbank market rate will clear at a level close to the deposit facility rate (Claeys and Demertzis, 2017).

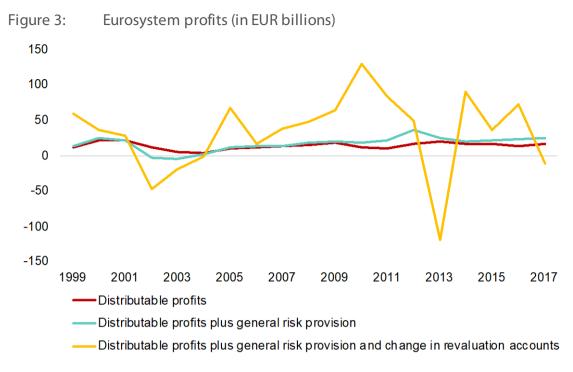
If excess liquidity becomes a permanent feature of the system, the ECB would need to continue using the deposit rate (i.e. the rate paid on excess reserves) as its main tool to ensure that the monetary policy stance is correctly transmitted to the economy through short-term interest rates. But what really matters is that the ECB controls the benchmark short-term market rate (in particular the euro short-term rate [€STR], which has recently replaced the EONIA as the short-term interest rate benchmark), not the way it does it.

However, a potential side effect of increasing its deposit rate while having a large balance sheet and a lot of excess liquidity, is that the increase could reduce the ECB's profits and increase the risk of financial losses, as highlighted recently by Blanchard and Pisani-Ferry (2020). This will happen if the central bank holds a large portfolio of long-term, low-yielding assets, while its liabilities are short-term and remunerated (which is the case for reserves) and the interest rate paid on these liabilities is increasing²¹. Even though central banks are not profit-maximising institutions, positive profits ensure the financial independence of central banks and facilitate their operational independence (Sims, 2016) from a political perspective²².

Nevertheless, central bank losses should only be a transitional problem during the interest rate 'normalisation' because in the long run, if the central bank were to decide to maintain permanently a large balance sheet by reinvesting the principal from maturing assets in new bonds, these assets would benefit from higher yields so there should be a positive spread between medium to long-term bonds on its asset side and the short-term reserves on its liability side (Claeys and Demertzis, 2017). In addition, in the short-run (and actually during the whole period preceding the rate increase, which could last a while), the Eurosystem would also make significant profits as a result of the current purchases as the assets being purchased have higher returns than the deposit rate applied to the reserves created to make the purchases. Given the Eurosystem's usual practice of setting aside significant buffers, and more generally of smoothing its distributable profits over time thanks to its accounting practices to ensure they are always positive and relatively steady (documented by Chiacchio et al, 2018, and visible in Figure 3), this could allow the ECB to avoid reporting actual financial losses during the transition, which would limit the risks to its independence.

By contrast, when a central bank has a small balance sheet, the liability side is predominantly composed of non-interest-bearing cash and required reserves (remunerated at the MRO rate), while on the asset side (as Figure 1 shows), as liquidity is scarce, commercial banks need to participate in refinancing operations for which they will pay interest (approximatively the MRO rate). The difference between the two leads to positive seignoriage profits for the central banks.

The net profits of central banks are generally transferred to governments (see Chiacchio *et al*, 2018, for the details on how this is done in the euro area). Politicians might not like policies that result in lower or even no transfers from the central bank to the budget for a long period of time (even if these transfers are quite marginal compared to the overall size of budgets), which could potentially endanger central bank independence and/or reduce their ability to use unconventional monetary policies in the future.



Source: Chiacchio et al (2018) based on ECB and national central banks' annual accounts, Eurosystem.

Note: Distributable profits are defined as net profits before allocation. See the annex in Chiacchio et al (2018) for the exact methodology.

As a last resort, a simple solution to avoid central-bank losses altogether during the transition could be to increase the banks' reserve requirements (to make liquidity scarce again) and to stop remunerating these required reserves. The drawback would be that the opportunity cost for banks could be significant. Ultimately the shortfall for banks resulting from such a measure could be higher than the cost of the negative deposit rate currently, but would have the advantage of being counter-cyclical: when policy rates are high the opportunity cost from holding high, unremunerated required reserves would be high, but when rates fall to 0, the cost would be nil. This would not be unprecedented – the Fed did not remunerate required reserves until October 2008.

3.3. An alternative scenario: the possibility of a low-inflation/low-interest rate environment for a long period

Finally, it is also important to consider another scenario: it is perfectly possible that inflation will remain very low for many years for pre-existing structural reasons, which could even be amplified by the crisis. In that case, the ECB would not face the problems described above as it would have to leave its rates at a low level and keep its balance sheet large for a long time to fulfil its price stability mandate ²³.

Jordà *et al.* (2020) found some evidence that pandemics have long-lasting effects. In particular, they show that, following previous pandemics, the natural rate of interest – the interest rate compatible with low and stable inflation and an economy at its potential – tended to decline for decades, reaching its low point about 20 years after the health crisis, with the natural rate around 150 basis points lower

²³ This would nevertheless create other problems for the ECB as this would drastically reduce its room for manoeuvre to use the interest rate as a main instrument in the case of future negative shocks (see details in Claeys *et al*, 2019). For governments, on the contrary, this scenario could help with debt sustainability and increase the fiscal space to mitigate the consequences of the pandemic and boost the recovery.

than if the pandemic had not taken place. They also show that pandemics have very different macroeconomic effects to wars which tend to increase the natural rate.

It is of course possible that the COVID-19 pandemic will prove to be radically different to previous pandemics, and that its macroeconomic effects will be different. However, the view that the fall in the neutral interest rate is going to be long-lasting appears to be supported by the fall in expectations for short-term interest rates since the beginning of the crisis. Markets now expect overnight rates to stay negative until 2030 (Figure 4). Combined with the long-run inflation expectations shown in Figure 1, this implies that markets now believe that in the long-run (i.e. in equilibrium), the real interest rate is negative, as expected inflation is around 1 percent and the expected nominal rate is around 0 percent in 2030.

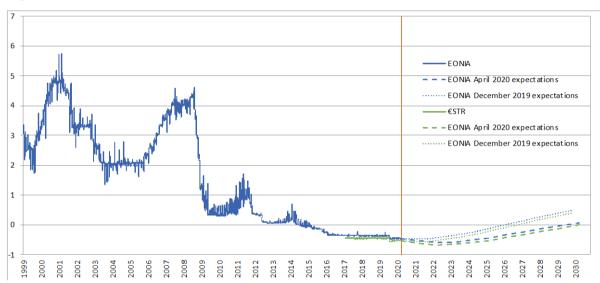


Figure 4: Short-term rates (EONIA and €STR) market-based expectations (in %)

Source: Bruegel based on Bloomberg.

Note: Interest rate expectations are derived from EONIA and €STR zero-coupon swaps of different terms (1 year, 2 years, up to 10 years), which provide information on market expectations of the compounded overnight EONIA/€STR over the contract term. Expectations for 2021 interest rate, for instance, are derived through expected compounded EONIA/€STR over the next year (2020), given by the 1-year swap, and expected compounded EONIA over the next two years (2021 and 2022), given by the 2-year swap.

4. CONCLUDING REMARKS: HOW CAN THE ECB DEAL WITH TRADE-OFFS WHEN THEY ARISE?

It appears from our discussion that accelerating inflation is not an immediate threat, and that in any case the ECB would have enough tools at its disposal to counter a surge in inflation if it were to happen. Our discussion suggests that the ECB's current actions and the increase in the size of its balance sheet, even if it proves permanent, do not restrict significantly its ability to fulfil its price stability mandate in the future ²⁴. In addition, given the severity of the shock, there seems to be no trade-off between the ECB's primary mandate and its secondary macroeconomic objectives, which all point towards putting in place a very accommodative monetary policy at the current juncture.

In the long term, however, a potential threatfor inflation-targeting central banks is the risk of a harmful form of fiscal dominance, a situation in which the central bank would be forced by the government to change its reaction function and accept to inflate the government debt away at the expense of its price stability objective. This could destroy the credibility of the central bank and of the money which value it defends. We believe this outcome is unlikely in the euro area given the current institutional framework, the independence of the ECB (ensured by Article 130 of TFEU, Box 1) and its clear Treaty-based mandate.

On a more general note, and moving away from the current crisis, it is nevertheless true that the EU Treaties offer some degree of discretion to the ECB, in particular over how to deal with secondary objectives to support EU goals, as long as they are compatible with price stability. As we have seen, most of the time, this is not problematic when there is a 'divine coincidence' and all objectives can be served by the same policies. But what should the ECB do when there is a trade-off between different objectives?

To take an example that was at the heart of the pre-COVID-19 crisis debate, this problem could arise if the ECB had to choose between supporting the EU in pursuing its 'full employment' goal and its 'quality of the environment' goal. A solution, in that particular case, could be for the ECB to use different tools or to tweak its tools slightly so it can pursue apparently conflicting goals. For instance, Schoenmaker (2019) recommended that the ECB participate in the EU fight against climate change by imposing higher haircuts on brown assets when they are taken as collateral by the ECB in its refinancing operations, and by over-allocating green assets in its corporate bond purchases (when these are needed to fulfil its price stability mandate) in order to internalise negative externalities from brown investments (which makes sense for a public institution).

Using multiple tools to achieve multiple objectives can also sometimes be used to achieve primary and secondary objectives at the same time. For instance, if neutral rates have really fallen to low or even negative levels, this will force central banks to keep their rates low for a very long time to fulfil their price stability mandates. However, this could, in turn, lead to the rise of financial stability risks. That is why central banks would need to use other tools to prevent these risks from materialising. In that case, supervision and macro-prudential policies will be crucial to achieve financial stability ²⁵.

But what if using different tools to achieve different objectives is not possible? Then, who should rank the objectives of the ECB? Dealing with difficult trade-offs is essentially a political task and should, as much as possible, be taken out of the hands of unelected policymakers such as central bankers. That is

²⁴ Keeping the assets purchased during the crisis on the ECB's balance sheet for a long period to avoid destabilising euro-area sovereign debt markets could be considered as a benign (welfare-improving) form of fiscal dominance, as long as price stability is not threatened.

²⁵ The effective macroprudential measures taken by the supervisory arm of the ECB since the beginning of the crisis are a good sign in this respect.

why, in these particular cases, the ECB should seek some guidance from elected policymakers. The ECB is primarily accountable to the European Parliament as the representative of EU citizens, but also has to report regularly to the Council of the EU, which represents Member State governments. These two European institutions could thus play a role in establishing a ranking of objectives to guide the ECB. The European Parliament could use its yearly report on the ECB annual report to do that, while the Council could issue clear statements to indicate which secondary objectives are the most relevant for the EU in a particular situation.

This report is published once a year when the ECB explains its actions and presents its own annual report to the European Parliament to fulfil the obligations laid out in Article 284 (3) of the TFEU.

²⁷ The Eurogroup's final communiqué from its 9 April 2020 meeting (Eurogroup, 2020) mentioned for instance that the euro-area finance ministers "welcome the resolute action taken by the European Central Bank".

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