DE GRUYTER Account. Econ. Law 2023; 13(2): 217–242

Christopher Andrew Hartwell*

What Is the European Central Bank *Supposed* to Do?

Recommending a Review of the ECB as an Institution in Light of Two Decades of Crisis

https://doi.org/10.1515/ael-2020-0035
Published online January 25, 2023

Abstract: In July 2021, the European Central Bank (ECB) published a new monetary policy strategy, the first time in 17 years that it had undertaken a review of its monetary policy. In the intervening time, the world – and the economic challenges facing the ECB – have changed immensely but partly as a result of the ECB's own maneuvering. In particular, monetary policy has been relied upon for every single malaise facing the global economy, including and up to the coronavirus pandemic. This paper argues that a review of central banks as an institutional mechanism in general, and in particular the ECB, was overdue but should not have been limited to policies; instead, an opportunity was missed to have an institutional review to examine whether or not it has been performing as intended. In particular, the vast experiment of unconventional monetary policy/issuance should have been more scrutinized from an institutional level as it appears to have contributed to the current problems the European economy faces. Europe and the ECB would be well served by taking stock of its actions over the past two decades and especially during the era of unconventional monetary policy to find a sustainable route forward.

Keywords: European Central Bank, monetary policy, institutions, uncertainty, central bank independence

JEL Classification: B52, E02, E58

Table of Contents

1 Introduction
2 Creating a Backward-Looking Assessment
  2.1 What Is the ECB Supposed to Do?
    2.1.1 Mandate

***Corresponding author: Christopher Andrew Hartwell**, ZHAW School of Management and Law (CH), Winterthur, Switzerland; and Kozminski University (PL), Warsaw, Poland,
E-mail: chartwell@kozminski.edu.pl. https://orcid.org/0000-0003-3340-1276

© 2023 CONVIVIUM, association loi de 1901

2.2 What Truly Is the Central Bank of the Eurosystem in Place to Do?
2.3 What Is the Balance Between Rules and Discretion, to Return to the Debate Popularized by Fischer (1990), Envisioned for ...
2.4 If Additional Responsibilities Are Desired, Why Are These Not Written Into the Statutes Governing the Bank?
2.5 If Additional Responsibilities Are Envisioned and Are Not Deemed Appropriate at the Treaty Level (Due to a Perceived Ne ...
2.6 Are the Goals of the ECB and Is Its Mandate Immutable or Are They Allowed Shifting Over Time?
2.6.1 Institutional Position/Positioning
3 How Has the ECB Performed in the Past?
4 Planning for the Future
4.1 Continuing Demographic Decline
4.2 Climate Change
4.3 Technological Innovation
5 Conclusions and Policy Recommendations
References

Central Banking: Current Challenges and Future Perspectives

1. Central Banking in Perilous Times: An Open-Ended Chronicle, by Yuri Biondi, https://doi.org/10.1515/ael-2023-0007.
2. The Future of Central Banking, by Hiromi Yamaoka, https://doi.org/10.1515/ael-2019-0003.
3. Independence of Central Banks: The Need for an Urgent Revamp!, by Philippe Moutot, https://doi.org/10.1515/ael-2019-0070.
4. Two Major Economic Crises in the Early Twenty-First Century and their Impact on Central Bank Independence, by Marek Dabrowski, https://doi.org/10.1515/ael-2020-0139.
5. What Is the European Central Bank *Supposed* to Do?, by Christopher Andrew Hartwell, https://doi.org/10.1515/ael-2020-0035.
6. Central Banks of the Visegrad Group States in the Light of Constitutional Regulations, by Martyna Wilmanowicz-Słupczewska, Maciej Serowaniec and Jacek Wantoch-Rekowski, https://doi.org/10.1515/ael-2019-0078.
7. Book Commentary on "Financial Citizenship: Experts, Publics, and the Politics of Central Banking" by Anne-Lise Riles, by Clement Fontan, https://doi.org/10.1515/ael-2019-0017.

1 Introduction

In July 2021, in the middle of the coronavirus pandemic and over 18 years since its last undertaking of this kind, the European Central Bank's (ECB) published a new monetary policy strategy. By any stretch of the imagination, such a reappraisal was overdue, as the world that the ECB faced was a much different one than the one it confronted in 2003. Indeed, since the last official stock-taking of the ECB's work – done a mere four years after the introduction of the euro – the world had gone through an asset price bubble, a global financial crisis, a sovereign debt crisis

localized on the euro area, enormous injections of liquidity by nearly all central banks, the rise of populism, additional members joining the euro, the emergence of blockchain and crypto-currencies, continuing and persistent anaemic growth in much of the euro area, a global pandemic and lockdowns, and the looming threat of another global recession. Just the massive response to the global financial crisis alone, comprising all manner of unconventional monetary policies and asset buying programs (Hartwell, 2019a), represented an enormous expansion of the ECB's mandate and its powers unlike anything contemplated at the turn of the 21st century.

Given the long time, both temporally and spatially, between reviews, it is urgent that economists, policymakers, and the ECB itself continues a stock-taking exercise of its monetary policies within a much broader framework than "policy instruments" in order to inform the right sort of policymaking going forward in the post-global financial crisis, post-coronavirus crisis, and current back-to-the-1970s world. A review such as this should not be taken lightly and is a rare opportunity to rethink the entire monetary structure within which the ECB resides. In other words, the ECB should have welcomed not just the *policy* review mechanisms which it is comfortable with, but an *institutional* one. In this sense, the 2021 review fell far short of where it should have gone and even it has been surpassed by events; written to address a low inflation world, the review ignored the complex and chaotic effects which its own policies and its institutional situation created in Europe in the 2000s and 2010s. An institutional review would thus go beyond the mere tools of policy (inflation targeting, financial stability, asset buybacks, etc.) and examine the situation of the ECB as an institution amongst many and its performance as an institution in the past and into the future.

This institutional assessment is necessary in addition because the *ad hoc* nature of ECB policy over the past decade, especially with relation to the global financial crisis and the use of unconventional monetary policy up to an including the coronavirus pandemic, has been matched by *ad hoc* assessments of various ECB programs (see *inter alia* Altavilla et al. (2016) or Fratzscher (2016)), considering programs or success metrics in isolation from the overall mandate of the bank or from its position in the institutional web of the EU and Member States. This piecemeal approach obscures the reality of what the ECB is, that is, an institution charged with a narrow mandate as well as influenced by the complex web of political institutions in which it operates (Hartwell, 2018). Thus, a comprehensive assessment must be undertaken to create a holistic picture of where the ECB is fulfilling its mandate, where it has gone off script (or even what the script is!), and what it should be doing as a unique institution standing astride the monetary policy of nowadays 27 disparate nations. Such an assessment would have to ask hard questions, including looking at the ECB's own internal structure, tools, external constraints, relations with Member States, and ultimate objectives. Importantly, given the (now) long track record of the ECB (especially as compared to its record in 2003 and even from 2021), there should be a rigorous and quantitative assessment of the ECB's performance

vis a vis key economic metrics beyond the narrowest of monetary aggregates or liquidity measures. Has the ECB achieved what it set out to do in an institutional sense? What exactly is it supposed to do? What tools worked best and which were not effective? And can we define "success" for a supra-national central bank?

In addition to a review of the past 20 years of ECB operations, any institutional review would also necessarily have a forward-looking component also focused on the ECB's tools and mandates: what are the pros and cons of the current inflation targeting regime for the future (in light of the past)? Part of this was addressed in the 2021 review but, as mentioned, focused on a world which does not exist anymore, that is, the weak growth but no inflation world of the 2010s. Should the ECB's mandate be expanded to include additional issues (e.g. climate change)? This was also suggested in the run-up to the 2021 review but again as a technical, rather than constitutional, question. Yes, the ECB can deal with climate change but *should it* as an institution? And does the ECB's dual mandate of financial stability and price stability make sense for future financial challenges? Do we need a fundamental rethink of the model of central banking which the ECB has relied on through various crises, given that its organization and composition makes it "a central bank like no other" (Kirkegaard, 2011)? This forward-looking review would necessarily be less precise, but this forecast uncertainty should be built into the methodology; that is, the uncertainty of any challenges occurring, judged by their probability ex-ante, should inform the design of policy going forward (in recognising the complexity of economic systems in general).

This article is meant to suggest the structure of such a review in a manner which may be more effective in helping policymakers going forward with their overall conception of the proper role of monetary policy within an institutional web. This takes us beyond the "central bank independence" (CBI) debate, which, as noted previously (Hartwell, 2018), is an institutional argument without actually using institutional analysis; in fact, it is a call for bringing institutional analysis more explicitly into understanding central bank operations, such as with the ECB. In particular, I highlight the details of the two facets of the review just mentioned, fleshing out how both an ex-post and an *ex-ante* assessment should be conducted and what the scope of these assessments should be. Importantly, I also delve into the most important policy question of the past two decades, namely the ECB's prolonged use of unconventional monetary policy, and how this might factor into such an institutional review. Finally, we conclude with some policy recommendations which follow from the design of the review, touching on the institutional arrangement of the ECB and what actually is the proper role of a central bank in a modern economy.

2 Creating a Backward-Looking Assessment

Given the substantial change of circumstances, both internal to the ECB and external in the form of the euro-zone and global economies, a review of ECB monetary policies

was long overdue. However, as mentioned in the introduction, it fell short and required a more comprehensive institutional review. Such a review would be comprised of two parts, with the most obvious portion being the backward-looking assessment. The purpose of this section is to describe what such an assessment would look like and, crucially, what topics need to be covered. The ascending order of the review should be from mandate to institutional placement, with the capping portion of the review an economic evaluation of how well the ECB has performed its existing mandate, with its existing tools, thus far.

2.1 What Is the ECB Supposed to Do?

2.1.1 Mandate

The first, and perhaps most important sub-component of the backward-looking assessment is to carefully scrutinise why the ECB exists in the first place. As a supranational institution overseeing the monetary policy of many disparate sovereign nations, the ECB is very different than the Federal Reserve in the United States (although the differences across American states can be thought of as challenging to an optimal currency area) or the Bank of England. Historically as well, the evolution of the ECB in terms of mandate has been colored by this different institutional structure, leading to a divergent path from other central banks such as the Bank of Japan (Gerdesmeier et al., 2007). All other questions, including the institutional placement of the ECB in the Eurosystem and the European Union (as well as the global economy), the effectiveness of its policies, and an assessment of its tools, should flow from this first principle.

Of course, one could submit that there are easy answers to understand why the ECB exists as an institution, chiefly related to the legal framework which governs the ECB: in particular, the Treaty on the Functioning of the European Union (and especially Article 127[1]) notes that "the primary objective of the European System of Central Banks (hereinafter referred to as "the ESCB" [and commonly referred to as the Eurosystem]) shall be to maintain price stability." However, there is massive latitude within the Treaty for other objectives as well, Article 127(1) goes on to state that "*Without prejudice to the objective of price stability* [emphasis mine], 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 objectives listed in the aforementioned Article of this Treaty are a laundry list of good outcomes, including peace, freedom, security, full employment and social progress, and protection of the environment; all of these issues stray very far from a single-minded focus on price stability, notwithstanding the caveat that price stability is supposed to be *primus inter pares*. Quickly moving on from this point, the rest of the terms of reference of the ECB and the ESCB are laid out

in a strictly technical fashion, including reference to foreign exchange operations and foreign reserves (Article 127), issuing banknotes (Article 128), the independence of the institution (Article 130), and its right to make regulations and issue fines (Article 132).

Given the malleability of the legal framework under which the ECB operates, it is not surprising that nearly all manner of economic intervention can be interpreted as (a) not being incompatible with price stability and (b) under the mandate of the ECB. Indeed, as Borger (2016) notes, the global financial crisis allowed precisely this mission creep at the ECB, as price stability was actually redefined to include financial stability, a change which worked its way to (and was affirmed by) the European Court of Justice[1] after being found in contravention by the German Federal Constitutional Court (see Murswiek, 2014).[2] Indeed, the leeway given to the ECB in its legal mandate has been interpreted by the ECB to mean 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.”[3] As a consequence, disruptions which may necessarily cause fluctuations in the short term (e.g. unwinding of mal-investments after a monetary boom) are meant to be prevented at all costs; this is a prescription for policy inertia, especially if the consequences of withdrawing a policy such as quantitative easing might cause “excessive fluctuations.”

It can be seen that, even by making recourse to the legal documentation governing the ECB, the ECB’s mandate is quite expansive in reality. Thus, the mandate should be the first point of scrutiny in any review of the ECB and especially as part of an institutional review. Questions that need to be asked and areas that need to be examined under a review should include, but are not limited to:

2.2 What Truly Is the Central Bank of the Eurosystem in Place to Do?

That is, what is the ultimate objective of the ECB within the European Union? Is price stability really the be-all, end-all of the ECB, and should it be? And is the ECB serving the euro, the euro-zone, or the European Union? There is some ambiguity on this last question, given that the ECB is simultaneously promoting price stability within the

1 ECJ – Case C-62/14, Peter Gauweiler and others v. Deutscher Bundestag, Judgment of the Court (Grand Chamber) of 16 June 2015, EU:C:2015:400.

2 Bundesverfassungsgericht [BVerfG – Federal Constitutional Court], Case No. 2 BvR 2728/13 of January 14, 2014.

3 Wording quoted from the ECB website, https://www.ecb.europa.eu/mopo/intro/objective/html/index.en.html, accessed November 6, 2019.

euro area but is charged with fostering the ideals of the EU (full employment and "social progress"), as well as global goals ("improvement of the quality of the environment"). Where should the ECB's focus be? And how does this impact its organizational structure?

2.3 What Is the Balance Between Rules and Discretion, to Return to the Debate Popularized by Fischer (1990), Envisioned for the ECB?

The current mandate sets price stability at the heart of the ECB's mandate but also allows for discretion in pursuing these additional goals, a reality which has been eagerly seized on by the ECB during the previous two crises and the ongoing third one currently. Should the ECB's legal mandate have the open-ended caveat that it can take on additional responsibilities in addition to price stability, in order to maintain said discretion? Or should there be a clear elucidation of what the ECB should and, more importantly, should not do? Are any of the EU's goals more important for – and should be circumscribed to – the ECB, while others (social justice, environmental progress) clearly far out of bounds of what a central bank should be doing? And how will this play out politically, given the special situation of the ECB as a central bank standing astride various Member States?

2.4 If Additional Responsibilities Are Desired, Why Are These Not Written Into the Statutes Governing the Bank?

An extension of the rules versus discretion debate, should there be a codification of discretion in the governing treaties? Or, going the other way, if the focus remains on rules (just more of them), why are these specific rules not put into law? Why is there so much leeway given to the ECB?

2.5 If Additional Responsibilities Are Envisioned and Are Not Deemed Appropriate at the Treaty Level (Due to a Perceived Need for Some Discretion), Is There a Need to Codify Bank Goals Within the ECB Itself?

Perhaps there is a need to retain flexibility at the Treaty level (as in the Treaty on the European Union and its myriad of desired outcomes), with the operational level of

the ECB being the more appropriate layer in which to set strategic goals and objectives. But if the ECB is allowed to set its own policy goals, and there are indeed multiple objectives, can a ranking of priorities which can be codified if these objectives happen to be contradictory or have claims on the same resources? For example, is financial stability a more important goal than price stability? Is rescuing the sovereign or corporate bond market via monetary policy (to say nothing of fiscal policy, see Biondi (2018a)) more important than the deleterious consequences of unconventional monetary policy? And how strict will this ordering of priorities be?

2.6 Are the Goals of the ECB and Is Its Mandate Immutable or Are They Allowed Shifting Over Time?

In a similar vein, and applicable at either the Treaty or ECB level, is there a chance that price stability could fall by the wayside in favour of financial stability during a crisis, only to have price stability re-emerge as key point afterwards? How would one decide in which situations specific goals would predominate, and are there quantifiable metrics to describe these states?

Answering these questions will help to provide a guideline for the rest of the review and should be based on the perceived needs of the Member States, the European economy, and the bountiful scholarship on the effectiveness of various mandates and instruments. The ECB should not shy away from thinking big (and possibly even outside the box) to challenge the current conception of the ECB's mandate, if such an exercise can improve the ECB's functioning and/or economic outcomes in the EU. This in and of itself would be a major gain for policymaking, as the wake of the global financial crisis and especially the sovereign debt crisis in the euro area resulted in a uniform doubling down on economic integration (which the coronavirus pandemic exposed as problematic and, unfortunately, unsustainable). What if the solution is more integration at the operational level (i.e. capital markets or banking) and less at the national level (i.e. the euro)?

2.6.1 Institutional Position/Positioning

Along these lines, once the decision has been made (or reaffirmed) on the necessity of the ECB and its specific mandate, this portion of the review should answer the question if the ECB as it exists now is appropriate to fulfilling its mandate(s)? It is here that the institutional review really begins to take shape as, once the purpose of the ECB has been agreed upon for the future, an analysis of its internal structure and its relationship with external stakeholders is crucial to translate the mandate to reality.

In the first instance, the ECB (and/or external auditors such as the Commission and especially the European Parliament) should focus on the internal structure and organisation of the institution. If the internal organisation of the ECB is not

conducive to fulfilling its mandate, then reforms must be undertaken to ensure some harmonisation of internal resources and outcomes. As Kalthenhalter et al. (2010: 1261) noted at the height of the global financial crisis, “distrust of the ECB is a function of individuals believing the bank cannot be counted on to fulfil the duties that Europeans have assigned it.” Thus, the first portion of the institutional review will need to take a historical view, assessing the evolution of the ECB from its inception until today. Based on the original mandate of the ECB, has the organisational structure of the Bank kept pace?

In this sense, the institutional review will follow a standard management consulting or public administration review approach, in that the goals/objectives of the organisation must be arrayed against its procedures, processes, and resources (why it is crucial to have a handle on the mandate before exploring the internal operations of the Bank).[4] Seen as a management process improvement exercise, the institutional review could then help to better organise the ECB in a coherent manner, especially in light of the ad hoc addition of responsibilities which has occurred over the past decade. In management jargon, the review would thus provide a “refocusing” of the organisation on its core mission, allowing for a unification of planning and management (Jensen, 1982).

However, as a modern organisation undergoing constant scrutiny, it is unlikely that very many inefficiencies can be uncovered which will help to fulfil the ECB’s mandate in an easier way. Therefore, the institutional review should also consider the ECB’s relations with external entities, especially if such relations can impede its monetary and economic goals or create conflict with agencies and make it more difficult for the ECB to operate (Tokic, 2018). Unfortunately, undertaking such a review of the ECB’s external environment – and its placement within the Eurosystem – will immediately run into a legal and policy question, related namely to the issue of central bank independence.

As noted above, the independence of the ECB (as understood in economic literature, such as canonical pieces by Cukierman et al. (1992)) is enshrined in the Treaty on the Functioning of the European Union, and has been treated as sacrosanct, at least with regard to what Member State governments could do *vis a vis* the ECB (the issue of the ECB offering policy advice to Member States has been a further prerogative of the ECB since the global financial crisis, see especially Beukers (2013)). Indeed, in many ways the ECB is regarded as the most independent central bank in the world, an odd distinction for an institution which faces so many external

4 The innovation here is of course that the institutional form of the central bank – and not just its organizational form (budget, employees, etc.) – is what is under scrutiny. What is the bank, as an institution, made to do? How does its organizational processes, its policy levers, its place within the institutional web of a country, and its external constraints.

constraints but perhaps logical precisely *because* it has so many pressures operating on it. However, such a devotion to independence has derailed similar attempts at institutional reviews of the Federal Reserve in the United States (see the Federal Reserve Transparency Act of 2015), with central bank employees arguing that any attempt to examine the functioning of the monetary institution (especially in relation to external actors) represents undue political pressure and threatens operational (if not policy) independence (a point made repeatedly by former Chair of the Federal Reserve and now Secretary of the Treasury Janet Yellen). There are two specific points that can be offered to refute the elevation of independence above all else: one, if independence is untouchable as a tenet of monetary governance, literally any attempt to reform monetary governance can be seen as an "assault on independence." This reality puts the public administration reformer in a catch-22; independence might be problematic, but it cannot be challenged because it would be an assault on independence, even if independence is the problem. Rather than seeing independence as a corner solution, it should be seen as a point on a continuum of governance (Elgie, 1998), with different central banks positioned differently based on their agreed-upon mandates and objectives and different institutional arrangements contemplated.

This state of affairs would also mean that perhaps accountability in some sense is also a complementary pillar of independence (or, rather, another dimension of the continuum), although this too is a challenge to refine correctly: too far in one direction means that banks are given little policy independence (with all of the political business cycle problems which come with this) while too far in the other direction results in banks independent from all other bodies. Aligned with this difficulty of fashioning "accountability" is the question of accountability to whom? To the executive, the legislature, the "people," voters, other institutions, or someone else? Seen as an institutional arrangement (Hartwell, 2018), central banking is nowhere near perfection, and tough questions such as this must be asked regarding the possibility of accountability in order to help improve the institution and the institutional arrangement of monetary policy.

The second point is an adjunct to this issue but also offers a including direct challenge to the idea of what independence actually means, especially given the reality that the Eurosystem is a web of interlocking governments, banks and other financial institutions, individuals, and supra-national agencies. As Giovanni (1993: 191) said 30 years ago, "the presence of a variety of financial systems and institutions in the EC member countries is not compatible with the establishment of a single currency managed by a single central bank." While this reasoning is not entirely airtight – every financial system is comprised of a variety of financial institutions leading to a unique financial system (Biondi & del Barrio, 2018), there is a dimension here which is relevant: Hartwell (2018) noted that the ECB is not really independent as no governance institution birthed from politics can ever be independent, always subjected to political whims even if not under direct oversight of

other political institutions. Similarly, the specific financial sector of a country will create different pressures on different monetary authorities differently and, in the case of the ECB, will spawn a myriad of financial pressures unlike those faced by a central bank in a single country. Thus, if the ECB is not actually independent in reality, the focus on central bank independence is a bit of a red herring for understanding monetary policy outcomes. That is, instead of central bank independence being a corner solution, it may be an intermediate step towards a better institutional arrangement which can help the Euro-system to achieve its mandate *and* satisfy the desire for independence.

Along these lines, the biggest issue facing the ECB's execution of its mandate is one which has been repeated innumerable times, namely the lack of a fiscal union (or at least a coordinated fiscal policy, see Le Cacheux (2010)). While the ECB is lauded as one of the most independent central banks in the world (Arnone et al., 2009), it is fighting a rear-guard action with monetary policy against 27 separate fiscal policies (20 of whom have the euro and 7 of whom do not), meaning that its tools are necessarily limited (Hartwell, 2019a). But, as Hallett (2017: 188) notes, "there are many ways to reach fiscal integration without one size fits all policies, a single finance ministry and finance minister, or even euro-bonds," including, as he suggests, a managed federalism with a central budget but substantial autonomy, perhaps via the use of GDP-linked bonds. However, given that fiscal union remains a mirage, the institutional environment which could help to facilitate monetary rectitude (and other goals under the ECB mandate as well) should be part of the review, including various ideas of fiscal coordination. Of course, this also turns independence on its head, as the ECB would be suggesting what Member States, or the organs of the EU, could be doing to better make its mandate a reality. But if there is a serious will to understand the complexity of monetary policy – and that monetary consequences do not solely just issue forth from a technocratic central bank – the fiscal dimension must be part of this review.

Beyond the merely fiscal constraints should also be a careful assessment of the political *consequences* of monetary policy; as noted earlier and in Hartwell (2019a), monetary policy is highly complex and has institutional as well as economic effects. Much of the criticism levelled at the ECB during and after the twin crises (the financial one of 2007–09 globally, and the sovereign one of 2010–12 in EU) was not about its inefficacy but that it has become too powerful, aggrandising powers to itself that were rightly reserved for national governments or the markets (again, a point illustrated by Beukers (2013) but comprehensively formulated as a critique in Tucker (2018)). Additionally, some researchers have noted that the actions of central banks have overstepped their bounds not in terms of the instruments they have used, but merely because of the knock-on effects such policies (as in the fight against "deflation") would have on other policy goals and governance institutions (Tokic, 2018), substituting supra-national authority for sovereignty at the national

level. Finally, a case has been made (Hartwell, 2019a) that monetary policy can have a direct effect on the evolution of other institutions in an economy, including property rights, rule of law, and styles of democratic governance, with unconventional monetary policies having the largest effects. The chaotic and complex nature of monetary policy, and how prices underpin the entire market economy, makes any monetary manipulation have substantial real effects throughout an economy, affecting the working of institutions which rely on these prices; as Hartwell (2018, 2019a) shows in the context of inter-war Poland and post-war Hungary respectively, unchecked inflation has a negative effect on rule of law, political liberalization, and further economic growth, as it invites "strong leaders" to help dealing with the chaotic effects of such inflation.

Given the institutional effects which monetary policy can cause, an important part of the institutional review will be to trace the influence and impact of ECB policies elsewhere in the EU. While these effects may be difficult to trace due to their chaotic and interlocking nature, it must be undertaken so that a holistic picture can be created of how the ECB fits into the Eurosystem – and the myriad of goals set under the Treaty on European Union. Put another way, it would be ironic if some of the mechanisms employed by the ECB actually undercut some of the broader goals enshrined in Article 3 of the Treaty on European Union, including economic cohesion, justice, and solidarity between generations. The end goal of this portion of the institutional review would be to see if the ECB's position in the political mechanisms of the EU is appropriate and to explore the feasibility of alternatives. Are mechanisms such as those suggested by Goodhart and Lastra (2018) – i.e. a judicial review process to oversee central bank decisions and actions, as has already happened in Germany (see above and Murswiek (2014)) – feasible or desirable? Is there a way to either minimise or maximise the influence of national policies in ECB policy-setting, depending upon which is deemed more appropriate (as shown in Badinger and Nitsch (2014))? Are financial stability and monetary policy two sides of the same coin (Beck & Gros, 2013)? Or are they a symptom of a bank already being used to pursue politically determined goals and/or favor specific interests (Masciandaro & Volpicella, 2016)? And what hand does the ECB have in supporting political stability or in fostering instability – and can this be changed?

While these areas under examination are unconventional to say the least, the institutional review will need to examine all of these questions in order to ensure that the ECB, as operating, is in line with both narrow monetary policy goals and broader EU-wide objectives. It is only by asking the difficult questions, set in proper context, can policymakers and the citizens of the European Union understand the goals and effects of ECB monetary policy.

3 How Has the ECB Performed in the Past?

Perhaps the most rigorous part of the backward-looking portion of the review, taking into account the mandate, placement of the ECB in the European economic and political system, and the tools it uses, is to measure the ECB's past performance against a clearly defined metric of success. Have the tools that it was already granted been effective against a host of success metrics? And what actually is "success" for the ECB? This last question is most important, moving beyond the policy question, and focusing on the institutional raison d'être for the bank.

In many ways, the first question has already been tackled by researchers globally, It is a well-known tenet of public administration that measuring government programs or bureaus is difficult because they operate on outputs rather than outcomes (Hatry, 1978): however, for an organisation such as a central bank, there are quantifiable outcomes which occur as a direct result of bank actions, and thus it is easier to plot central bank actions against these outcomes than, for example, a Ministry of Health's programs versus disease incidence. Given that central banks such as the ECB are explicitly crunching numbers and observing the economy via a series of macroeconomic and financial analyses to inform monetary policy, it should be far easier to contrast policy versus actual conditions.

One area which should definitely be scrutinized within the ECB and arrayed against the definition of "success" is the unconventional monetary policy that the ECB has been pursuing since the global financial crisis and which has only recently abated in the face of inflation unlike that seen since the 1970s.[5] Understanding the effect of unconventional monetary policy is crucial because, even throughout the pandemic-triggered global recession (exacerbated by government lockdown policies), the ECB had been using its monetary policies to their maximum. Over at least 13 years, the ECB tried to simultaneously control both main levers of monetary policy over the past decade, specifically, interest rates and money aggregates. To be more explicit, central banks have long faced the constraint of targeting monetary aggregates (and then letting interest rates adjust as they may due to monetary supplies) or, as done more recently, setting interest rates and dealing with the monetary supply consequences. Indeed, interest rates have been the preferred method of policy control between the 1990s and the 2000s (Biondi, 2018b), as money growth was an admittedly noisy and chaotic (Solomon & Solomon, 1991) tool (although Benhabib et al. (2002) showed that interest rate targeting could also be chaotic). However, the scale of the global financial crisis, and the charge towards "whatever it takes," led central banks – paramount among them the ECB – to believe that they were able to

5 An anonymous reviewer suggested that the policy debate has moved on but I would argue that the debate has moved on precisely because the effects of ECB policy in the 2010s are manifesting.

control both levers simultaneously, using their “normal” interest rate levers and supplementing this with monetary growth levers such as asset purchases or interventions in corporate bond markets.

This can be seen in the actions of both the US Federal Reserve and the ECB, as the plummeting of interest rates to zero or lower was accompanied by quantitative easing, asset buy-backs, and other direct injections of liquidity; while it may appear that money growth is no longer part of any monetary policy in the developed world, such a view ignores the explicit goal of ECB (and Fed) policy over the past 10 years (and of Japan for the past 20 years at least). Massive injections of liquidity have targeted money supplies, meaning that central banks have tried to have the best of both worlds and use both a “targeted” interest rate tool and blunt monetary injection. Moreover, this approach differs from the old school version of monetary targeting by not having an explicit monetary aggregates target, instead targeting asset classes such as corporate bonds and done on an asset-by-asset basis. This targeting of assets thus masquerades as part of the broader unconventional monetary approach, tied to the pressing economic objective of preventing a precipitous decline and/or ensuring liquidity, but in reality is a less constrained new take on an old policy tool. By masquerading as such, its use remains unmoored and potentially hazardous.[6]

Of course, this attempt was accompanied with a lack of understanding of the effects of central banking in economy and society. It was enabled by swathes of the academic community and its reliance on a-theoretical models such as vector auto-regressions or co-integration, which merely modelled equilibrium relationships as if they would hold forever and ever (with the warning of Lucas (1976) not heeded), not seeking to understand the underlying economic incentives or interactions. Getting into the weeds of the statistical properties of the data but without understanding the economics of human action led to papers in respectable journals such as Carstensen (2006), using new techniques to tease out policy recommendations which were wholly worthless from a policy standpoint: Carstensen’s (2006) entire last paragraph says that perhaps excess liquidity was too high in the euro area, or perhaps it was not, depending upon where one arbitrarily set the reference point.[7] With such wide margins of confidence emanating from academic circles, it was little wonder that central banks joined in to believe that they could really have it all. That is, there existed ways in which they could simultaneously abnegate the time value of money – by setting interest rates near or below zero – while also inflating money stocks by

---

6 Thanks to the Editor for suggesting this framing.

7 As it turned out, Carstensen (2006) appeared to come down on the side that excess liquidity in the euro area was not an issue, a prediction on the eve of the global financial crisis which, in hindsight, seems as misguided as Irving Fisher’s assertion of a “permanently high plateau” for stocks in October 1929.

infusing cash into bond markets but without having it translate into price inflation (or, if it did, such as in asset markets, it was actually a gain for holders of various asset classes). Research such as Belongia and Ireland (2018) supported this, promising that central banks could both enact interest rate decreases and monetary targeting, especially once the zero lower bound had been reached. And of course, the entire premise of "modern monetary theory" (MMT) as espoused by Kelton (2020), is that the economy is never at its full potential and thus inflation is always a net positive.[8]

However, what these analyses overlooked was precisely what Lucas (1976) predicted, in that the fundamental relationships among variables would change due to reactions to policy (a reality which was explicitly eschewed in the models that econometricians were using). In particular, single-shot models of "money demand functions" ignored the cumulative effect of utilization of so many instruments, with little ability to say what a package of policies at time t might do to expectations or demand at time $t + 5$. More critically, these models had little predictive power if external conditions were to change dramatically, say if economic growth were to slow or other exogenous shocks – like a global pandemic – were to strike; similarly, these models had very little to say about the role of financial intermediaries and their active role in transmission of a shock. More complex models such as agent-based modelling (ABM) may be able to handle the dynamics of a financial crisis better (Bookstaber, 2017) but they thus far have also not been utilized to actually predict such a crisis (Richiardi, 2017). And even where ABM has been applied to post-crisis monetary modelling, researchers admit that "It is much more difficult to test the role of, say, monetary policy when one wants to study different behaviours of the central bank which are related to the endogenous evolution of the system" (Giri et al., 2019: 44).

Unfortunately, this eventuality is precisely what the euro area is confronting as its next recession has descended. With central bankers having run out of instruments via continuing to try and influence monetary supplies *and* interest rates, the only solutions which have been explored in academia and the popular press (and possibly read by the central bankers at the ECB itself) have been more and more extreme: "helicopter money" (Belke, 2018), continued asset purchases (Claeys, 2020), or a recourse to "modern monetary theory" (where fiat money can be utilized in pursuit of "justice," see Connors and Mitchell (2017)). All of these "solutions" might have even more deleterious consequences for the real economy and cannot be expected to rescue the euro area. But the fact that they were brought forward shows just what a bind the ECB has put itself in by exhausting all possible realistic options *during an expansion.*

---

8 Of course, MMT is slightly more nuanced than that, resting on countries having their own currency. But the policy prescription is basically that central banks should be stimulating forever.

Thus, a key point of examining the ECB's reason for existence is understanding how it has performed in the past, with paramount among these examinations the look at unconventional monetary policy and the drivers of why it came to be, how it was able to be accepted for so long, and how a supposedly non-political institution was informed by political pressures to keep it in place. For many researchers, the question of "success" has already been decided, with much of the research that has been done on the effectiveness of the post-global financial crisis approach predicated on the short-term imperatives of "saving the financial system" or restoring growth as soon as possible. For example, Neely (2015) notes that central bank communication and policies helped to keep yields low, showing that central banks still had influence even at the zero lower bound. Researchers from the Eurosystem (perhaps unsurprisingly) also found that the massive quantitative easing pursued by the ECB led to less output decline and kept inflation more sustained than would have occurred otherwise (Mouabbi & Sahuc, 2019). Ironically, as Acharya et al. (2019) note, unconventional monetary policy also did not help the financial sector, as it banks remained weakly capitalized and any lending helped firms to build cash reserves rather than invest. Any institutional review of the ECB would start from defining what "success" was – was it stopping a needed correction? Was it keeping prices high? Was it rescuing the financial sector, with restructuring to be settled later (if at all)?

As a follow-on to this point, and although it may be difficult, it is imperative that modellers and policymakers also envision a world in which the ECB did not exist. That is, what could have happened with regard to economic aggregates or success metrics in the absence of the ECB as it stands now? What would have the economic recovery looked like without unconventional monetary policy? The impossibility of establishing counterfactuals is well-known, but statistical tools developed over the past decade have made such analyses within the realm of the possible. Simulations which are informed by reality but go beyond empirical evidence are a way to attempt to capture such effects. Unfortunately, movement in this area is at a nascent stage (see Biondi and Righi (2016) and Biondi and Zhou (2019)) but may also point the way to understanding the counterfactuals of monetary policy across a number of interconnected institutions.

Perhaps more developed are empirical exercises such as the synthetic control method (SCM) of Abadie et al. (2010), which allows for the modelling of counterfactuals based on a synthetic simulation using existing countries with similar characteristics and then projecting forward after a shock. SCM has already been utilised in the euro area in a number of studies, including Koehler and König (2015) on the stability and growth pact, Gomis-Porqueras and Puzzello (2015) on incomes with and without the euro, Zúdel and Melioris (2016) on Slovakia's economy after the euro, Hope (2016) on current account balances in the euro area, and Verstegen et al. (2017) on overall benefits to countries of being in the euro area. I believe that SCM can be

utilised in a much more systematic manner as part of the review for the entire euro area (or for individual countries) against the broad panoply of economic success metrics noted above as well, showing what could have occurred if certain ECB policies had not been followed. In this manner, the SCM analysis will form a mirror image of the event studies, providing a rough sketch of the road not taken. Such an empirical exercise will also help to inform where the ECB should, if at all, array its resources in the future.

4 Planning for the Future

Finally, if it is decided that the ECB as an institutional arrangement should be preserved and that the mistakes of the past (arrayed against a plausible definition of "success") can be rectified, one needs to look ahead to the possible challenges of the future. The global landscape has become almost unrecognisable since 2003 and, given the lack of an institutional lens in the 2021 review, also from the vantage point of just a few years ago. Looking back to the 2003 review, the euro area itself is not just a grouping of original members of the European Union (save a few exceptions), it is a conglomeration of old and new, including Member States who had not yet acceded to the EU in 2003. Indeed, five of the euro area's new members since 2003 (26 percent of the current total members) are new accession countries from Central Europe, while another two current EU Member States were also added in this timeframe (Cyprus and Malta). The sheer diversity of the new euro area, especially as compared to the original 11 members, has provided a challenge for the ECB going forward, especially if laggard (and Eurosceptic) countries such as Czechia, Poland, or Hungary ever join the common currency. To some extent this was recognized in the 2021 review, but the continued friction within the EU regarding institutional roles was overlooked in favour of a (as mentioned) narrow focus on policy instruments.

In addition to the internal makeup of the euro area, the economic and financial world that the ECB operated in changed vastly between its last two reviews. In 2003, the world was in the midst of a recovery coming after the rolling emerging market crises of the late 1990s and the dot-com bust and aftermath of the September 11th terrorist attacks in the United States. At the same time, the euro appeared to be on an inexorable climb, breaking through parity with the US dollar in 2003, while the innovation economy was starting to integrate the benefits of the internet (and minimise the exuberance which characterised the dot-com boom) and reshape both services and productivity. While political uncertainty related to terrorism and conflict continued to drag on financial markets, a boom was just around the corner. In short, the world was very different.

Fast forward to 2021, when the last monetary policy review was conducted, the world had been through the earth-shattering financial crisis of 2007–08, the euro area went through a follow-on sovereign debt crisis shortly thereafter, governments shut down economies worldwide as part of the coronavirus, and the financial sector in Europe still appeared brittle (especially compared to its US counterparts) but simultaneously dominated by too-big-to-fail firms. Within Europe, the EU itself was rocked by internal disagreements on migration policy and rule of law, while populism has made nationalism and sovereignty *en vogue* once again, derailing the dreams of ever more integration and forcing policymakers to confront the political backlash of various economic policies. Moreover, the innovation economy was more disruptive than forecasted, creating a backlash from policymakers and "old economy" stalwarts who want to have their quasi-monopolistic positions preserved. And, despite a decade of unconventional monetary policy (or likely because of it), growth in the euro area went from anaemic to facing recession. In short, the world *was* very different.

This recap of reality shows just how difficult it would have been to forecast the challenges facing the ECB in 2021 from the vantage point of 2003. Even capturing the main economic event of the past two decades, the global financial crisis, or the effects of the global pandemic and the clean-up of the policies surrounding it, was difficult for the vast majority of economists even on the edge of the crisis. But this reality is not just apparent from the space of time which elapsed since the 2003 review, we can easily replace "2003" with "2021" in this analysis, accounting for the last monetary policy review, which was completed during a time of low inflation but in the midst of the coronavirus pandemic. From the vantage point of 2021, the exact longer-term effects of unconventional monetary policies, the rise of populism, and government-induced recessions turning into actual recessions could not be foreseen by politicians, not to mention the prognostication that non-Eastern European specialists would have needed to see the full-scale Russian invasion of Ukraine coming (as opposed to the low-intensity conflict which had been raging since 2014). Placed against the difficulties of reality over a two-year time span, longer-term trends and technological innovation are even more difficult to predict for a monetary institution. And very difficult to predict when thinking about what a monetary institution such as the ECB should do.

This does not mean that an institutional review should shy away from such forecasts, but it does mean that the complexity of economic and structural change should force policymakers away from certainties and more towards generalities. This also means that the necessity of explicitly delineating the ECB's mandate is paramount, to ensure that the Bank does not undergo "mission creep" in response to every possible and additional challenge. For example, a clear mandate for the ECB as an institution might help the ECB to set out its response to the following tempting

policy issues which are likely to face Europe (or are already facing Europe but have not, as yet, filtered through to requiring monetary responses):

4.1 Continuing Demographic Decline

The demographic trends in most EU Member States continue to appear bleak, especially when lined up against the public expenditures and entitlements promised via welfare states in Europe. Unlike Malthus (or, for that matter, Paul McCartney) who lamented that there were "too many people," population growth is by no means a death sentence for an economy. In fact, Kremer (1993) shows the connection between population growth and technological innovation. However, welfare states require workers to be paying into the system to generate revenue in order to redistribute, and the fewer new workers which come on-line, the smaller the pot of revenue to redistribute (Razin & Saka, 2005).[9] The more extensive the social safety net, the more dramatic such a decline will be. This will also have knock-on effects for the financial sector, as savings and investment declines (older persons eventually dissave rather than save, even if the microeconomic evidence is not conclusive on this), and of course broader effects for the real economy as a whole.

As Figure 1 shows, the natural change of population in both the EU and the euro area (live births minus deaths) has been negative since mid-2014 and shows no sign of abating. This state of affairs means that governments and their carefully cultivated tax policies will be stretched by a reduction in revenue, leading to difficulties in maintaining high levels of public expenditure (with concurrent increased outlays on both health and pensions due to the changed age structure of society). This longer-term trend has the ability to alter financial innovation and investing strategies (creating "longevity risk," see Kim and Choi (2011)), as well as shift risk appetites for investors (with a concomitant effect on real interest rates). However, despite attempts by Member States to avoid demographic disaster using fiscal policy (see Poland's "500+" program), it appears that there is little that the ECB can or should do in this instance, besides monitoring how the disjoint between revenue and expenditures can affect price stability. With a clarification of the ECB's mandate, focusing on its institutional relationship with other key institutions, such a recommendation might become apparent.

9 At the same time, this connection to quantity ignores the idea of quality, i.e. the productivity of workers, emphasizing sheer numbers for revenue generation rather than effective workers for growth.

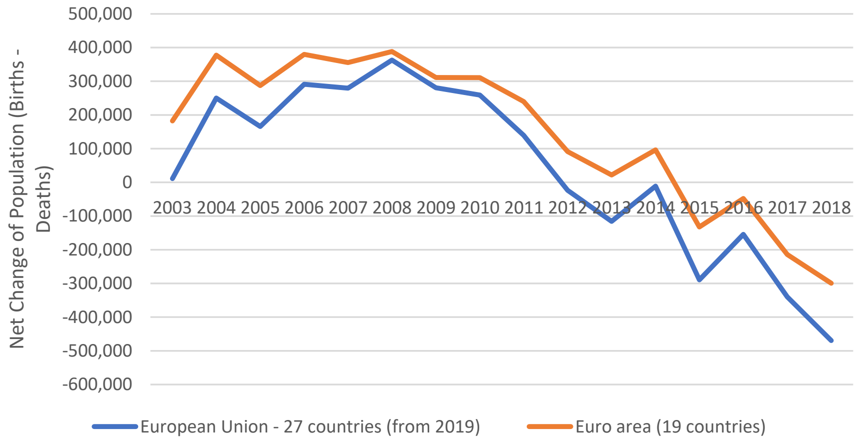

Figure 1: Demographic decline in the EU and the euro area.
Source: Based on data from Eurostat.

4.2 Climate Change

Many policymakers internationally took the extra powers obtained during the pandemic as a signal that they could forcibly restructure society (Edgell et al., 2021; Lewkowicz et al., 2022) and the EU in particular doubled down on its pursuit of a "green transformation" or "European Green Deal." Despite the Russian invasion of Ukraine showing the ill-advised nature of pushing for energy transformation without having made adequate preparations – and the inability for alternative sources of energy, save nuclear, to exist without massive government subsidies – policymakers worldwide have persisted with this move. Alongside the top-down regulation of such a transformation has been an attempt to bring central banks into the fray, a role which many (including) the ECB have embraced, including (more benignly) reducing carbon-heavy industries in central bank portfolios (Schoenmaker, 2021) to the potentially disastrous advocacy of monetization of support to the centrally directed transformation (Boneva et al., 2022). In reality, the uncertainty surrounding (a) the exact sources of climate change at a global level and the best ways to mitigate it, (b) the exact costs to be borne as a result of various scenarios of climate change, and, most importantly, (c) the spatial distribution of costs and benefits makes any attempts to use monetary policy to combat climate change a hasardous proposition.

As with demographic decline, the issues surrounding climate change are ones of incentives, and these are properly mediated either through fiscal policy (if a polity decides this is the correct approach) or through the market (allowing for more

accurate aligning of prices and incentives). Given that the effects of climate change also may have longer-term consequences such as demographics, from the standpoint of the administrative ordering that is the EU, the proper place to mitigate these effects is at the Member State level, with the ECB merely responding to the world that is thus created in order to focus on price stability. Again, the structural issue of climate change likely does not necessitate direct ECB intervention or support but will instead shape the landscape that the ECB will face in the future. And again, a closer reading and codification of the ECB's institutional mandate *vis a vis* other institutions and broader systemic goals might bring us to this conclusion.

4.3 Technological Innovation

Perhaps the most important issue that the ECB will face is that of technological innovation, including the move towards artificial intelligence (AI), further mechanization of supply chains and production, and the creation of new and disruptive technologies which cannot even be imagined (including some which make a massive impact on the possible effects of climate change). For the short-term especially, technological change will have the most disruptive effect on national economies (barring further lockdowns), causing dislocations in employment, increases in productivity, and spurring change in the financial sector. Technological change is also the wildest card in the deck, in the sense that it is the most difficult to forecast based on current trends: as an example, if one were to forecast the size of mobile telephones in 2010 from the vantage point of 2003, it was plausible to assume that the trend towards compactness was to continue, with phones becoming smaller and streamlined. However, advances in technology allowed for a proliferation of activities to be done via smartphone, necessitating larger and larger screens (according to proprietary data from Alex Barredo, the average screen size went from 3 inches to 5 inches from 2007 to 2014).[10] Thus, a forecast done in 2003 based on then-current trends would have gotten the reality entirely wrong and called for an entirely backwards set of recommendations.

This is exactly the issue that the ECB faces while attempting to forecast out technological changes for the future, an exercise that is best perhaps handled in the aggregate, assuming positive technological shocks of unknown form. In this manner, and as part of the review, the ECB can attempt to see what effects such shocks would have, either in a business-cycle framework (where cycles come about from technology shocks) or as part of more standard endogenous growth modelling, where it

10 See the analysis at https://medium.com/@somospostpc/a-comprehensive-look-at-smartphone-screen-size-statistics-and-trends-e61d77001ebe.

comes about precisely from the research and development of profit-seeking firms. In either instance, the likelihood that a technology shock will suggest a shift in the tools or mandate of the ECB is highly unlikely; it is more probable that a technology shock will suggest a regime shift in price formations or expectations which the ECB will then have to handle accordingly, even if this technology shock relates directly to monetary policy, as with the emergence of cryptocurrencies. But, as with the previous two trends, this is a structural change and not something that can be handled pre-emptively with monetary policy – indeed, attempting to forestall the disruption of technological innovation can create conditions where the innovation does not emerge in the first place. This complexity would also be addressed in a broader institutional review.

Given these potential challenges to the ECB, the forward-looking portion of an institutional review should thus concentrate on how the ECB can measure up to the potential consequences of using its mandate and its role in the euro system. The economic conditions facing Europe at the end of 2022 are much more of the "normal" problems that a central bank faces, namely one of price stability in the face of fiscal profligacy. Taking on new mandates should not be contemplated until one can assess how the ECB has done with its old mandates. Thus, creating a much more scenario-based analysis (but backed up with quantitative work), for an institutional review would help the ECB to be more prepared for reacting to different eventualities in the future rather than being more actively involved in making these possible risks less likely.

5 Conclusions and Policy Recommendations

This paper has taken an expansive look at a possible institutional review of the ECB's monetary policy strategies, focusing on the need to measure the ECB's actual outcomes versus its mandate and its tools. In the time since this paper was first put together and its reaching a broader public in this special issue, the ECB has actually undertaken a monetary policy review but, unfortunately, it suffered from an institutional myopia, the policy equivalent of begging the question: that is, assuming to be true what is to be argued. By focusing on policies within the monetary policy realm – and, like the earlier version of this paper, coming forth in a very different world of low (and hidden) inflation – the review was too narrowly delineated and avoided hard questions on the ECB's existence. The key takeaway from the examination in this paper is that the ECB needs to look inward for what it actually supposed is to do within the euro area. "Price stability" is admirable and even crucial, but this is a policy goal: why does the ECB exist as a unique monetary policy institution and what is its overall function in relation to other economic institutions within the European

realm? Once this first principle is decided upon, the placement of the ECB as a political and monetary institution needs to be reviewed, with an eye on quantifying, in a holistic manner, just what effect the ECB's previous monetary policy strategy has had for the euro area economy. This is not merely noting that "growth was not as bad as it could have been" or that "bond markets were kept liquid," but the understanding of monetary policy as a complex and chaotic influence on institutional development (Hartwell, 2019b). Only by placing the results of the past 20 years against what the ECB was actually trying to achieve – and placing these results in a much larger framework of financial and economic stability – can the possible challenges to the future be tackled.

As was suggested in Section 2, one of the outcomes of this review might be a reappraisal of the ECB's role at the centre of the euro area economy. Some of the questions which may arise – especially regarding the political effects of the ECB and its role as a political creature – are far beyond what is considered conventional wisdom in Brussels, Frankfurt, or Strasbourg, and some directly challenge the orthodoxy regarding the set-up of the ECB and its place in the euro system. However, this is precisely the point of a far-reaching review, especially one which takes place so soon after the last monetary policy review but where the world has changed demonstrably even since that review was completed. The hard questions *need* to be brought to bear on the functioning and position of the ECB, if only just to affirm that the original mandate is still desired. In this sense, the ECB needs to be subjected to a Nietzschean "philosophizing with a hammer," smashing the idols before it to see which are sound and which are hollow.

And it is only by building this foundation of the ECB's mandate that we are able to then proceed on to the challenges facing the ECB for the next two decades. As Shown in Section 4, these problems are potentially large, difficult to fathom, but, for the most part, are structural and not monetary in nature. This includes the burgenoning energy crisis in Europe related to the Russian invasion of Ukraine and especially the massive shock of the coronavirus pandemic and related containment policy, which were real productivity shocks to the economy but was in no way directly related to monetary movements – however, much of the post-coronavirus weakness in Europe can be traced to previous monetary policies. Thus, the ECB should retain flexibility in order to deal with the consequences of demographic or climate change as they relate to price fluctuations, but it is my opinion that the ECB should not attempt to interject themselves directly into solutions. Incentives are the product of institutions and, without a clear idea of what the ECB is to do as an institution, these solutions should be left to the marketplace of ideas.

Acknowledgements: The analysis underpinning this paper began life as two separate policy briefs for the European Parliament's Monetary Policy Dialogue and

has since been updated, expanded, revised, and overhauled in light of events in the intervening three years. I thank Dario Paternoster and Drazen Rakic from the European Parliament for their encouragement and comments, Stanislav Bieliei of CASE-Center for Social and Economic Research for his support, and four anonymous referees and especially the Editor for their patience.

References

Abadie, A., Diamond, A., & Hainmueller, J. (2010). Synthetic control methods for comparative case studies: Estimating the effect of California's tobacco control program. *Journal of the American Statistical Association*, *105*(490), 493–505.

Acharya, V. V., Eisert, T., Eufinger, C., & Hirsch, C. (2019). Whatever it takes: The real effects of unconventional monetary policy. *Review of Financial Studies*, *32*(9), 3366–3411.

Altavilla, C., Giannone, D., & Lenza, M. (2016). The financial and macroeconomic effects of the OMT announcements. *International Journal of Central Banking*, *12*(3), 29–57.

Arnone, M., Laurens, B. J., Segalotto, J. F., & Sommer, M. (2009). Central bank autonomy: Lessons from global trends. *IMF Staff Papers*, *56*(2), 263–296.

Badinger, H., & Nitsch, V. (2014). National representation in supranational institutions: The case of the European Central Bank. *Journal of Comparative Economics*, *42*(1), 19–33.

Beck, T., & Gros, D. (2013). Monetary policy and banking supervision: Coordination instead of separation. CEPS Policy Brief, (286).

Belke, A. (2018). Helicopter money: Should central banks rain money from the sky? *Intereconomics*, *53*(1), 34–40.

Belongia, M. T., & Ireland, P. N. (2018). Targeting constant money growth at the zero-lower bound. *International Journal of Central Banking*, *14*(2), 159–204.

Benhabib, J., Schmitt-Grohé, S., & Uribe, M. (2002). Chaotic interest-rate rules. *The American Economic Review*, *92*(2), 72–78.

Beukers, T. (2013). The new ECB and its relationship with the Eurozone Member States: Between central bank independence and central bank intervention. *Common Market Law Review*, *50*(6), 1579–1620.

Biondi, Y. (2018a). The financial sustainability conundrum in central government. *Accounting, Economics, and Law: A Convivium*, *8*(3), 1–3.

Biondi, Y. (2018b). Banking, money, and credit: A systemic perspective. *Accounting, Economics, and Law: A Convivium*, *8*(2), 1–26.

Biondi, Y., & del Barrio, C. (2018). The single market's catch-22: Supervisory centralisation in a fragmented banking landscape. In *Financial stability conference-FSC research workshop 2018, November 1*. https://ssrn.com/abstract=3283829

Biondi, Y., & Righi, S. (2016). What does the financial market pricing do? A simulation analysis with a view to systemic volatility, exuberance and vagary. *Journal of Economic Interaction and Coordination*, *11*(2), 175–203.

Biondi, Y., & Zhou, F. (2019). Interbank credit and the money manufacturing process: A systemic perspective on financial stability. *Journal of Economic Interaction and Coordination*, *14*(3), 437–468.

Boneva, L., Ferrucci, G., & Mongelli, F. P. (2022). Climate change and central banks: What role for monetary policy? *Climate Policy*, *6*, 770–787.

Bookstaber, R. (2017). Agent-based models for financial crises. *Annual Review of Financial Economics*, *9*(1), 85–100.
Borger, V. (2016). Outright monetary transactions and the stability mandate of the ECB: Gauweiler. *Common Market Law Review*, *53*(1), 139–196.
Bundesverfassungsgericht [BVerfG – Federal Constitutional Court]. Case No. 2 BvR 2728/13 of January 14. 2014.
Carstensen, K. (2006). Stock market downswing and the stability of European Monetary Union money demand. *Journal of Business & Economic Statistics*, *24*(4), 395–402.
Claeys, G. (2020). The European Central Bank in the COVID-19 crisis: Whatever it takes, within its mandate. Bruegel Policy Contribution Issue no. 9, May. http://hdl.handle.net/10419/237645
Connors, L., & Mitchell, W. (2017). Framing modern monetary theory. *Journal of Post Keynesian Economics*, *40*(2), 239–259.
Cukierman, A., Web, S. B., & Neyapti, B. (1992). Measuring the independence of central banks and its effect on policy outcomes. *The World Bank Economic Review*, *6*(3), 353–398.
Edgell, A. B., Lachapelle, J., Lührmann, A., & Maerz, S. F. (2021). Pandemic backsliding: Violations of democratic standards during Covid-19. *Social Science & Medicine*, *285*, 114244.
Elgie, R. (1998). Democratic accountability and central bank independence: Historical and contemporary, national, and European perspectives. *West European Politics*, *21*(3), 53–76.
European Court of Justice (ECJ). Case C-62/14, Peter Gauweiler and others v. Deutscher Bundestag, Judgment of the Court (Grand Chamber) of 16 June 2015. EU:C:2015:400.
Fischer, S. (1990). Rules versus discretion in monetary policy. *Handbook of Monetary Economics*, *2*, 1155–1184.
Fratzscher, M. (2016). Rules versus human beings, and the mandate of the ECB. *CESifo Economic Studies*, *62*(1), 68–87.
Gerdesmeier, D., Mongelli, F. P., & Roffia, B. (2007). The eurosystem, the US federal reserve, and the Bank of Japan: Similarities and differences. *Journal of Money, Credit, and Banking*, *39*(7), 1785–1819.
Giovanni, A. (1993). Central banking in a monetary union: Reflections on the proposed statute of the European Central Bank. *Carnegie-Rochester Conference Series On Public Policy*, *38*, 191–230.
Giri, F., Riccetti, L., Russo, A., & Gallegati, M. (2019). Monetary policy and large crises in a financial accelerator agent-based model. *Journal of Economic Behavior & Organization*, *157*, 42–58.
Gomis-Porqueras, P., & Puzzello, L. (2015). *Winners and losers from the euro*. Economic Series 2015_2, Deakin University, Faculty of Business and Law, School of Accounting, Economics and Finance.
Goodhart, C., & Lastra, R. (2018). Populism and central bank independence. *Open Economies Review*, *29*(1), 49–68.
Hallett, A. H. (2017). Fiscal autonomy vs. fiscal federalism in the euro zone. *Economia Politica*, *34*(2), 179–188.
Hartwell, C. A. (2018). On the impossibility of central bank independence: Four decades of time-(and intellectual) inconsistency. *Cambridge Journal of Economics*, *43*(1), 61–84.
Hartwell, C. A. (2019a). Complexity, uncertainty, and monetary policy: Can the ECB avoid the unconventional becoming the 'new normal. *The Economists' Voice*, *16*(1), 1–13.
Hartwell, C. A. (2019b). Short waves in Hungary, 1923 and 1946: Persistence, chaos, and (lack of) control. *Journal of Economic Behavior & Organization*, *163*, 532–550.
Hatry, H. P. (1978). The status of productivity measurement in the public sector. *Public Administration Review*, *38*(1), 28–33.
Hope, D. (2016). Estimating the effect of the EMU on current account balances: A synthetic control approach. *European Journal of Political Economy*, *44*, 20–40.

Jensen, D. R. (1982). Unifying planning and management in public organizations. *Public Administration Review*, *42*(2), 157–162.

Kaltenthaler, K., Anderson, C. J., & Miller, W. J. (2010). Accountability and independent central banks: Europeans and distrust of the European Central Bank. *Journal of Communication and Media Studies*, *48*(5), 1261–1281.

Kelton, S. (2020). *The deficit myth*. Public Affairs.

Kim, C., & Choi, Y. (2011). Securitization of longevity risk using percentile tranching. *Journal of Risk & Insurance*, *78*(4), 885–906.

Kirkegaard, J. (2011). The next strategic target: De Gaulle's EU legacy. *VoxEU. org*. https://cepr.org/voxeu/columns/next-strategic-target-de-gaulles-eu-legacy

Koehler, S., & König, T. (2015). Fiscal governance in the Eurozone: How effectively does the stability and growth pact limit governmental debt in the Euro countries? *Political Science Research and Methods*, *3*(2), 329–351.

Kremer, M. (1993). Population growth and technological change: One million BC to 1990. *Quarterly Journal of Economics*, *108*(3), 681–716.

Le Cacheux, J. (2010). How to herd cats: Economic policy coordination in the Euro zone in tough times. *Journal of European Integration*, *32*(1), 41–58.

Lewkowicz, J., Woźniak, M., & Wrzesiński, M. (2022). COVID-19 and erosion of democracy. *Economic Modelling*, *106*, 105682.

Lucas, R. E. (1976). Econometric policy evaluation: A critique. *Carnegie-Rochester Conference Series On Public Policy*, *1*(1), 19–46.

Masciandaro, D., & Volpicella, A. (2016). Macro prudential governance and central banks: Facts and drivers. *Journal of International Money and Finance*, *61*, 101–119.

Mouabbi, S., & Sahuc, J. G. (2019). Evaluating the macroeconomic effects of the ECB's unconventional monetary policies. *Journal of Money, Credit, and Banking*, *51*(4), 831–858.

Murswiek, D. (2014). ECB, ECJ, democracy, and the Federal Constitutional Court: Notes on the Federal Constitutional Court's referral order from 14 January 2014. *German Law Journal*, *15*(2), 147–165.

Neely, C. J. (2015). Unconventional monetary policy had large international effects. *Journal of Banking & Finance*, *52*, 101–111.

Razin, A., & Sadka, E. (2005). *The decline of the welfare state: Demography and globalization*. MIT Press.

Richiardi, M. G. (2017). The future of agent-based modeling. *Eastern Economic Journal*, *43*(2), 271–287.

Schoenmaker, D. (2021). Greening monetary policy. *Climate Policy*, *21*(4), 581–592.

Solomon, T. H., & Solomon, E. H. (1991). Money stability and control: The perverse effects of feedback loops. In *Electronic money flows* (pp. 89–108). Springer.

Tokic, D. (2018). Central bank independence and deflation. *Public Administration Review*, *78*(5), 803–808.

Tucker, P. (2018). *Unelected power: The quest for legitimacy in central banking and the regulatory state*. Princeton University Press.

Verstegen, L., van Groezen, B., & Meijdam, L. (2017). *Benefits of EMU participation: Estimates using the synthetic control method (No. 2017-032)*. Tilburg University, Center for Economic Research.

Zúdel, B., & Melioris, L. (2016). Five years in a balloon: Estimating the effects of euro adoption in Slovakia using the synthetic control method. *OECD Economic Department Working Papers*, (1317).