# IN-DEPTH ANALYSIS

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Monetary Dialogue Papers, December 2019



# The Urgent Need for a Review of the ECB's Monetary Policy Strategy: Towards an Institutional Review





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## **Abstract**

It has been sixteen years since the European Central Bank has undertaken a review of its monetary policy. In the intervening time, the world – and the economic challenges facing the ECB – have changed immensely. This paper argues that a review is overdue but that it should not be limited to policies; instead, an *institutional* review is needed. This would consist of a backward-looking assessment of outcomes versus mandates, coupled with a forward-looking scenario planning exercise.

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# **LIST OF ABBREVIATIONS**

**ECB** European Central Bank

**ECJ** European Court of Justice

**ESCB** European System of Central Banks

**GARCH** Generalised Autoregressive Conditionally Heteroscedastic

**HICP** Harmonised Index of Consumer Prices

MIDAS Mixed Data Sampling

**QE** Quantitative Easing

**SCM** Synthetic Control Method

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## **EXECUTIVE SUMMARY**

- Sixteen years is a long time. In the period since the European Central Bank (ECB) underwent its last monetary policy review, Europe has been through a global financial crisis, a sovereign debt crisis, a decade of unconventional monetary policy, the rise of populism, and continued anaemic growth.
- A review of the ECB's monetary policy is thus long overdue.
- However, this briefing paper proposes a slightly different review than was undertaken in 2003, namely an *institutional review*.
- The purpose of an institutional review would be to combine a process management approach with a political economy analysis, starting from first principles to examine what the ECB wants to do, how it relates to other EU organs, how it should do it, and how it has performed in undertaking these interventions in the past.
- The review would be structured into two main components. The first is a backward-looking (ex post) assessment of the ECB's mandate, its tools, its placement within the European economic system, and a rigorous analysis of how the ECB performed as measured against economic metrics of success.
- The institutional review should not shy away from hard questions about the desirability of the ECB's independence, alternate mechanisms for achieving the goals elucidated in the Treaty on European Union, or on the reality of the ECB as a political (as well as monetary) institution. But the review should remain focused on the question of mandate.
- The second portion of the review will be forward-looking (*ex-ante*), attempting to grapple with the future challenges that the euro area economy will face. These challenges are legion, and include continued demographic decline, over-regulation, the possible (spatially differentiated) effects of climate change, and continued innovation in the financial sector.
- However, the possible future issues that the ECB will face are uniformly structural and not monetary, and thus the ECB should retain flexibility to deal with them while remaining focused on its core mandates (as decided in the earlier part of the review).
- The modalities of the review are less pressing than asking the right questions, which is the reason
  why this paper focuses more on these questions and their sequencing. I recommend that the
  review is institutionalized, but on a not-too-frequent basis. More important is to make recourse to
  first principles so that the review can be a useful exercise for the entirety of the euro area going
  forward.

## 1. INTRODUCTION

Over sixteen years has passed since the last official review of the European Central Bank's (ECB) monetary policy strategy, and by any stretch of the imagination, the world that the ECB now faces is 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 has 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 advent of blockchain and crypto-currencies, and continuing and persistent anaemic growth in much of the euro area. Just the massive response to the global financial crisis alone, comprising all manner of unconventional monetary policies and asset buying programs (Hartwell 2019), represented an enormous expansion of the ECB's mandate and its powers unlike anything contemplated at the turn of the century.

Given the long time, both temporally and spatially, since this last review, it is urgent that the ECB performs a stock-taking exercise of its policies, in order to inform policymaking going forward in the post-global financial crisis 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. Put another way, the ECB should welcome not just a *policy* review, but an *institutional* one. In this sense, the review will 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.

Before describing the constituent parts of the review, it is also important to lay out the sequence of the assessment, for it will have a definite flow and preceding aspects of the review will flow into subsequent evaluations. As shown in Figure 1, there should be two separate yet interlocking facets which feed into each other (Figure 1). In the first instance, a backward-looking assessment is absolutely crucial to quantify the (in)effectiveness of past policies. 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, has been matched by ad hoc assessments of various ECB programs (see inter alia Altavilla et al. [2016] or Fratzscher et al. [2016]), considering programs or success metrics in isolation. This piecemeal approach has not been integrated in any way with the governance of the ECB, meaning that a comprehensive assessment must be undertaken to create a holistic picture of where the ECB is fulfilling its mandate and where it has gone off script. Such an assessment would have to ask hard questions, including looking at the ECB's own internal structure, tools, 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), there should be a rigorous and quantitative assessment of the ECB's performance vis a vis key economic metrics. Has the ECB achieved what it set out to do? What tools worked best and which were not effective?

In addition to a review of the past 20 years of ECB operations, any 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)? Should the ECB's mandate be expanded to include additional issues (e.g. climate change)? What are the new challenges for monetary policy? 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, given that it is a central bank like no other? 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 briefing paper is designed to help policymakers going forward with their design and, hopefully, implementation of a review of the ECB's monetary policy. The rest of the paper goes into deeper details on the two facets of the review just mentioned, fleshing out how an ex post and an *ex-ante* assessment should be conducted and what their scope should be. Additionally, we also touch upon the modalities of such a review, albeit this is a far lesser question than ensuring that the right questions are being asked – and in the right sequence – during the review itself. Finally, we conclude with some policy recommendations which follow from the design of the review, touching on the institutional imperatives for the European Parliament and the institutional arrangement of the ECB and how these may play into the review itself.

Figure 1: The Path of the Review

# **Overall Review**

# Backward-looking review

## Mandate

What is the ECB

in place to do?

What is the balance between

rules and

discretion?

How are the

and where?

mandate

over time?

rules delineated

Are the goals of

immutable or

allowed to shift

the ECB and is its

Is the internal structure of the ECB suitable for its mandate?

Institutional

Review

- What external challenges can prevent realizing the ECB's mandate?
- What reforms are therefore necessary both internally and externally?

# Economic Evaluation

- What have been the goals of the ECB in the past?
- What have micro- and macroeconomic outcomes been during that time?
- Has the ECB achieved its goals?
- What is the counterfactual, if the ECB did not exist?

# Forward-looking planning

- Assessment of new challenges v. mandate
- Institutional role of the ECB in responding to possible challenges (situation within euro system)
- Scenario analysis and economic forecasts

## 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 area and global economies, over the past sixteen years, a review of ECB monetary policies is long overdue. As mentioned in Section 1, such a review needs to be comprised of two parts, with the most important 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. In line with the flow shown in Figure 1, the ascending order of the review should be from mandate to institutional placement to policy, with the capping portion of the review an economic evaluation of how well the ECB has performed its existing mandate thus far. We deal with each sub-component in turn below.

# 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. 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 this question, 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") shall be to maintain price stability." However, there is massive latitude within the Treaty for other objectives as well, as the same Article 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 interpares. Breezily 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 the 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 (ECJ) after being found in contravention by the German Federal Constitutional Court (Murswiek 2014). 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." As a consequence, disruptions which may necessarily cause

Wording quoted from the ECB website, <a href="https://www.ecb.europa.eu/mopo/intro/objective/html/index.en.html">https://www.ecb.europa.eu/mopo/intro/objective/html/index.en.html</a>, accessed November 6, 2019.

fluctuations in the short term (e.g. unwinding of malinvestments 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:

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 area, or the European Union? There is some ambiguity on this last question, given that the ECB is simultaneously promoting price stability within the 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?

 What is the balance between rules and discretion, to return to the debate initiated 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. 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?

• 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?

• 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 more important than the deleterious consequences of unconventional monetary policy? And how strict will this ordering of priorities be?

• Are the goals of the ECB and is its mandate immutable or are they allowed to shift 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 reemerge 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 and, especially, the European Parliament should not shy away from thinking big (and possibly even outside the box) to challenge the current orthodoxy on 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. 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)?

## 2.1.2. Institutional placement

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 relation with external stakeholders is crucial to translate the mandate to reality.

In the first instance, the ECB (and/or external auditors such as 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? Questions which should form part of the Terms of Reference for this portion of the review could then include:

- Have resources been deployed effectively according to the priorities elucidated in the previous portion of the review?
- Has the staffing budget been realistically apportioned and has its evolution following an appropriate trend?
- Are there under/over-staffed departments?
- Is the organisational chart appropriate for both monitoring and policy implementation?
- What is the role of research within the ECB and is it necessary?
- Are internal decision-making procedures appropriate?
- Is the tension between financial stability and monetary policy artificial and the units should be joined, or is there a need for the two units to be kept even more separate?
- Along these lines, is the "two-pillar" approach appropriately funded and staffed?
- What proportion of the ECB's budget is taken up with administration, and is there any rationalisation that can be carried out there?
- Are there other efficiencies that can be garnered via organisational change?

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). Seen as a business 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 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 crisis, see especially Beukers [2013]). 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 (a point made repeatedly by former Chair of the Federal Reserve Janet Yellen). However, there are two specific points that need to be mentioned which directly refute this obsession with independence: 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 that is an assault on independence, even if independence is the problem. Rather than elevating independence to a holy position above all else, independence must be seen as a point on a continuum of governance, with different central banks positioned differently based on their agreed-upon mandates and objectives.

The second point is a 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, renders this question necessary; as Giovanni (1993:191) said over a quarter of a century 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." As Hartwell (2018) noted, the ECB is not really independent as no governance institution birthed from politics can ever be independent; it will always be subjected to political whims even if not under direct oversight of other political institutions. 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 19 separate fiscal policies, meaning that its tools are necessarily limited (Hartwell 2019). 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," meaning that the institutional environment which could help to facilitate monetary rectitude (or other goals under the ECB mandate) should be part of the review. 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 (2019), 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 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 market (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). Finally, a case has been made (Hartwell 2019) 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.

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 - 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 and Gros 2013) or are they a symptom of a bank already being used politically (Masciandaro and 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.

# 2.2. How is the ECB Supposed to Do It?

Moving from the novelty of the institutional review, the starting point for any review of the ECB, the next component of the overall review is more in line with what was probably envisioned by incoming President Lagarde (and will be similar to the review undertaken in 2003): a pure policy review. In order to undertake such a review, I believe it should be further broken up into two separate sub-components, one where the tools of ECB policy are reviewed and one where the actual effectiveness of the ECB in the past is examined. This Section will review the tools, while Section 2.3 will go further in-depth on the effectiveness review.

## 2.2.1. Tools

As a much more conventional part of the review, the ECB should already have a set of questions formulated about what a monetary policy assessment should look like. In keeping in the spirit of the rest of the review, however, all questions and alternatives should be on the table regarding the tools and levers through which the ECB operates. In particular, the following areas should be explored:

- Is inflation targeting still the desired and/or most effective tool for the ECB to utilise?
- Should there be more of an emphasis on fighting upside inflation (i.e. above the 2% target) then worrying about deflation or "low" inflation (i.e. under the 2% target)?
- How effective has the interest rate mechanism been, especially in the era of zero/negative interest rates?
- Is monetary stock targeting a more effective way in which to conduct policy?
- What should be retained from the ECB's unconventional monetary policies of the past decade and what should be discarded (in large part, this question will be answered by the next part of the review)?
- What is the latest academic consensus on central bank communication, and have any of these tenets been absorbed/institutionalised at the ECB?
- Are there additional/unconventional transmission mechanisms which may be effective in the future (I am not advocating for something such as "helicopter money," but it should be on the table to be explored)?
- Can the tools for financial stability be expanded into the monetary policy realm?
- Is macroprudential regulation an effective tool? In what way, and what needs to be incorporated?
- What space is there for decentralised or targeted tools throughout the euro area?
- Finally, is a lighter touch much more appropriate for the disparate countries of the euro area than a heavy-handed approach? That is, can a minimalist approach (either via automatic adjustments or a monetary rule) be more helpful for achieving stability goals?

Again, these questions run the gamut of philosophical approaches to monetary policy, and many are contradictory (one cannot run a post-Keynesian central bank focused on nominal growth and employment by following Austrian or monetarist tenets). However, by asking these difficult questions across the spectrum, the organization will have a better sense of marrying its tools with its actual economic objectives and outcomes.

## 2.3. 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. Have the tools that it was already granted been effective against a host of success metrics? And what is "success" for the ECB?

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.

As hinted at above, the first part of this examination is defining what "success" is for the ECB: is it exclusively price stability as in the inflation target? Is it a stable value of the euro? Is it financial stability? If one were to ask, "has the ECB been a success?" what metric could be argued to give definitively a "yes" or a "no" answer? Of course, the answer to the metric which should be used can be traced again back to the current mandate of the ECB: a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area as a whole of below 2%. But as Section 2.1 showed, the ambiguity surrounding this mandate means that there is also leeway to set the success metric. In any event, there needs to be rigorous and quantitative analysis of the ECB's performance and how it affected both first order and second- and third-order metrics. These could include:

- Various measures of inflation, including:
  - HICP, as currently defined;
  - Growth in asset prices, as defined by benchmark euro area stock markets or composite indices such as the Euro Stoxx 50;
  - Growth in real estate prices, measured at the euro area level and at the individual country level;
  - Growth of the money stock;
  - Volatility of the above metrics; and/or
  - Depreciation/fluctuations of the euro
- Growth of nominal GDP
- Growth of investment (nominal)
- Financial stability, as measured by
  - Incidence of crises
  - Non-performing loans as % of all loans
  - Value at Risk (VaR) calculations for financial institutions
  - Results of euro area-wide stress testing
  - Compliance with Basel II/III capital adequacy requirements
  - Short-term lending as proportion of all lending (as noted in Moe [2013])

- Other metrics as deemed appropriate
- Employment, as defined by a harmonised definition across Member States
- Interest rates and their short-term deviations from long-term trends
- Cost/benefit analysis of ECB expenditures versus gains in each of these metrics

As noted, this list is by no means exhaustive, and defining which success metrics are used is likely to be a political and contentious exercise in and of itself. But as with the rest of the review, the net should be cast as wide as possible in order to understand all of the areas in which the ECB has had an impact.

Using these success metrics, the ECB and/or independent auditors should match what the various policy moves made by the ECB with subsequent movements in these aggregates. This will entail a series of econometric analyses including but not limited to event studies, volatility modelling (i.e. GARCH, GARCH-MIDAS, and realized volatility), panel regressions, and other (and sometimes state-of-the-art) econometric tools designed to isolate causation with some modicum of precision. Also included in this portion of the review should be an extensive meta-analysis of the existing fragmented literature regarding the effects of the ECB on these various metrics over various timeframes; as the academic literature is voluminous on these points, such a review could take some time but will be useful to see where the consensus is on the effects of the ECB. And given that much of the most recent work that the ECB has undertaken is still being researched, the analyses produced within the ECB will add to an important literature.

The point of both this meta-analysis and the research undertaken as part of the review is not merely to add to the sum of scientific knowledge on the ECB's effects, nor is it to generate a series of publishable papers. Rather, by isolating where the ECB had an effect, using a particular instrument, and the magnitude of that effect on a particular metric, will inform ECB operations going forward. For example, if the interest rate mechanism was found to be persistently ineffective for controlling volatility in financial systems, other channels or tools could be contemplated. Only by matching up how the ECB has actually performed in the past can a proper accounting for desired mandates, tools, and placement of the institution be performed.

Finally, 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; in particular, the synthetic control method (SCM) of Abadie *et al.* (2010) allows for the modelling of counterfactuals based on a synthetic stitching together of actually-existing countries with similar characteristics.

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 array its resources in the future.

## 3. PLANNING FOR THE FUTURE

The results of the backward-looking (ex post) assessment, as described in the previous section, are crucial for understanding what the ECB should be doing, where it should be doing it, how it should be doing it, and, based on past experience, what it should avoid. This first portion of the review should directly inform the next portion of the review, which should be forward-looking and based on not only what was, but what will be. Indeed, while the ECB and other European organs already attempt to forecast economic conditions well into the future, the purpose of an institutional review such as this one would be to analyse potential issues and scenarios that the ECB will potentially tackle in the future and see if the institutional and policy tools at hand, and discussed in the first portion of the review, are appropriate.

# 3.1. Sixteen Years is a Long Time

Since the last review in 2003, the global landscape is almost unrecognisable. In the first instance, 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 eleven members, will no doubt provide a challenge for the ECB going forward, especially if laggard (and Eurosceptic) countries such as Czechia, Poland, or Hungary ever join the common currency.

In addition to the internal makeup of the euro area, the economic and financial world that the ECB operates in is vastly different. 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 9/11 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 forwarding to 2019, and the world has been through an earth-shattering financial crisis, the euro area went through a follow-on sovereign debt crisis shortly thereafter, and the financial sector in Europe appears brittle (especially compared to its US counterparts) but simultaneously dominated by too-big-to-fail firms. The EU itself has been rocked by internal disagreements on migration policy and rule of law, while populism has made nationalism *en vogue* once again. The innovation economy has proven to be more disruptive than forecasted, creating a backlash from policymakers and "old economy" stalwarts who want to have their quasi-monopolistic positions (see: taxicabs versus Uber) preserved. And, despite a decade of unconventional monetary policy (or likely because of it), growth in the euro area remains anaemic. In short, the world *is* very different.

# 3.2. The Complexity of the Future

This recap of reality is not detailed to cast aspersions on the ECB or the economic governance of the EU, but rather to note how difficult it would have been to forecast the challenges facing the ECB in 2019 from the vantage point of 2003. Even capturing the main economic event of the past two decades, the global financial crisis, was difficult for the vast majority of economists even on the cusp of the crisis, so longer-term trends and technological innovation is even more difficult to predict.

This does not mean that the 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 narrowing down and codifying the ECB's mandate is paramount, to ensure that the Bank does not undergo "mission creep" in response to every additional challenge. As a monetary policy institution, it should help to create the conditions necessary for successful outcomes, but not necessarily be interventionist in every opportunity. This reality should be an underlying tenet of the examination of the future challenges for the ECB.

Having set out the philosophy which should underpin the forward-looking examination, it perhaps is instructive to briefly summarise three of the challenges which the European economy (and, by extension, the ECB) is likely to face over the next sixteen years:

## 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 as part of the various degrees of the welfare state in Europe. As Figure 2 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 will be hard pressed to maintain high levels of public expenditure while simultaneously seeing a reduction in revenue (and increased outlays on both health and pensions). 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 interest rates). However, despite attempts by Member States to avoid demographic disaster using fiscal policy (see Poland's "500+" program), 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.

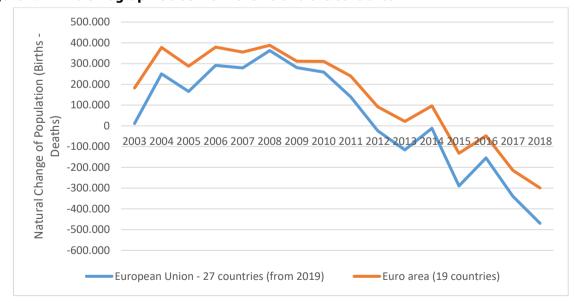


Figure 2: Demographic Decline in the EU and the euro area

Source: Based on data from Eurostat.

## 2. Climate Change

The uncertainty surrounding a) the exact causes of climate change at a global level, 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 risky 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, the proper place to mitigate them are 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 does not necessitate ECB intervention but will shape the landscape that the ECB will face in the future.

## 3. Technological Innovation

Perhaps the most important issue that the ECB will face is that of technological innovation; arguably, this has the most disruptive effect on national economies, 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).<sup>2</sup> 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 growth modelling. 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. But, as with the previous two trends, this is a structural change and not something that can be handled pre-emptively with monetary policy.

Given these potential challenges to the ECB, the forward-looking portion of the review should concentrate on how the ECB can measure up to the potential consequences using its mandate and its role in the euro system. A much more scenario-based analysis (but backed up with quantitative work), this portion of the review would help the ECB to be more prepared for different eventualities in the future.

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

## 4. CONCLUSIONS AND POLICY RECOMMENDATIONS

This briefing paper has taken an expansive look at a possible 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. The key takeaway from this examination is that it needs to be decided what the ECB is actually supposed to do within the euro area. 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. Only by placing the results of the past twenty 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 noted in Section 2 – 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 review, especially one which takes place sixteen years after the last one and where the world has changed demonstrably. 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 undertake a Nietzschean approach by "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 sixteen years. As Shown in Section 3, these problems are legion but, for the most part, are structural and not monetary in nature. 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 they should definitely not attempt to interject themselves directly into solutions. Incentives are best left to the market and not to policymakers.

A final note for this briefing paper should touch on the modalities of the review, which I have deliberately avoided until this point. That is because the modalities of the review are far less important than the actual content of the review, the questions it should ask, and the sequencing of these phases (as shown in Figure 1). However, if one would ask specifically if the review should be regularised, the answer is emphatically "yes," as another sixteen years should not pass before the ECB undergoes its own audit. An important caveat to this qualification is that it should not be undertaken on too frequent a basis, mainly because monetary policy also should take the long view regarding drivers of inflation, technological changes, and the structure of an economy; monetary policy should precisely be about fostering conditions for the long-term rather than lurching from crisis to crisis. But more frequent reviews will help to also fine-tune the forward-looking portions and provide more real-time information on the backward-looking assessments. This alone will be of great use in improving the operations of the ECB, whatever the goals are deemed to be and whatever operations are decided on as necessary.

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It has been sixteen years since the European Central Bank has undertaken a review of its monetary policy. In the intervening time, the world – and the economic challenges facing the ECB – have changed immensely. This paper argues that a review is overdue but that it should not be limited to policies; instead, an *institutional* review is needed. This would consist of a backward-looking assessment of outcomes versus mandates, coupled with a forward-looking scenario planning exercise.

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