

EMU reform and the 'new normal' for monetary policy

Monetary Dialogue November 2018



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Abstract

The European Central Bank may already be facing the next crisis in the euro area but is still deploying the tools of unconventional monetary policy from the last crisis. This brief looks at the ECB as an institution amongst institutions and shows how even more unconventional approaches will not help the euro area economy. Additionally, given the complexity of money and the effects of expectations, expanding the ECB's unconventional arsenal is likely to have deleterious consequences across Europe.

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LIST OF ABBREVIATIONS

ABSPP	Asset-Backed Securities Purchase Programme
CBPP	Covered Bond Purchase Programme
CSPP	Corporate Sector Purchase Programme
EA-19	Euro area 19
EAPP	Expanded Asset Purchase Programme
ECB	European Central Bank
EMU	European Monetary Union
EU	European Union
LTRO	Longer-term Refinancing Operation
OMT	Outright Monetary Transactions
PSPP	Public Sector Purchase Programme
SMP	Securities Markets Programme

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EXECUTIVE SUMMARY

Background

By many metrics, the euro area has stepped away from the brink of disaster it faced in 2011 and 2012 and is in the midst of an economic recovery. Across the euro area, unspectacular-if-steady growth has returned. However, for the most part economic policymakers in Europe – and first among them the European Central Bank (ECB) – remain on a crisis footing, mainly because the euro area crisis appears ready to flare up again. The purpose of this paper is to take an unorthodox (some might say heterodox) look at the challenges for the European Monetary Union (EMU) in the post-global financial and post-EMU crisis world, with a focus on the complexity of monetary policy institutions and monetary policy itself. I argue that the question of the instruments that the ECB has, and if they are adequate to handle the next crisis, is meaningless without considering the effects that those instruments and the ECB itself may have had already. If they were inconsequential or even damaging, it is folly to recommend more.

Unconventional Monetary Policy: A Narrow Success and a Broad Failure

The massive intervention of the ECB into both financial and sovereign debt markets spanned several active measures, including asset purchases, zero interest rates, and currency swaps. By narrow economic metrics, these measures appeared to have worked in stabilizing the euro area: sovereign bond spreads have gone down, inflationary expectations have gone up, and liquidity in the interbank market was restored. But it can be argued that these positive effects shown in the literature were merely temporary; indeed, the current state of sluggish growth in the euro area, coupled with gathering clouds over sovereign debt burdens, suggests that the unconventional monetary policy of the ECB did not actually address the root causes of the EMU crisis. As such, the crisis just went on hold.

The ECB as One Institution Amongst Many

Lost in the awe over the ECB able to command billions of euros and reduce sovereign risk ratings via its programs is the reality that the ECB is an institution which is embedded in a web of economic and political institutions across the European Union. The ECB is often portrayed as the police, setting the rules for economic policy, when in reality it is closer to the fire department, cleaning up after messes that others have made. Nowhere is this more evident than in the two targets of unconventional monetary policy, sovereign bond markets and financial stability. The unresolved fiscal issues of the EMU mean that Member States will always have an incentive to indulge their fiscal urges in hope that the ECB will come to their rescue with monetary policy. At the same time, the financial sector pushes for socializing both risk and losses, with the ECB effectively giving their business a soft budget constraint. Merely granting the ECB more power will not address these fundamental misalignments in the euro area.

The Complexity of Monetary Policy

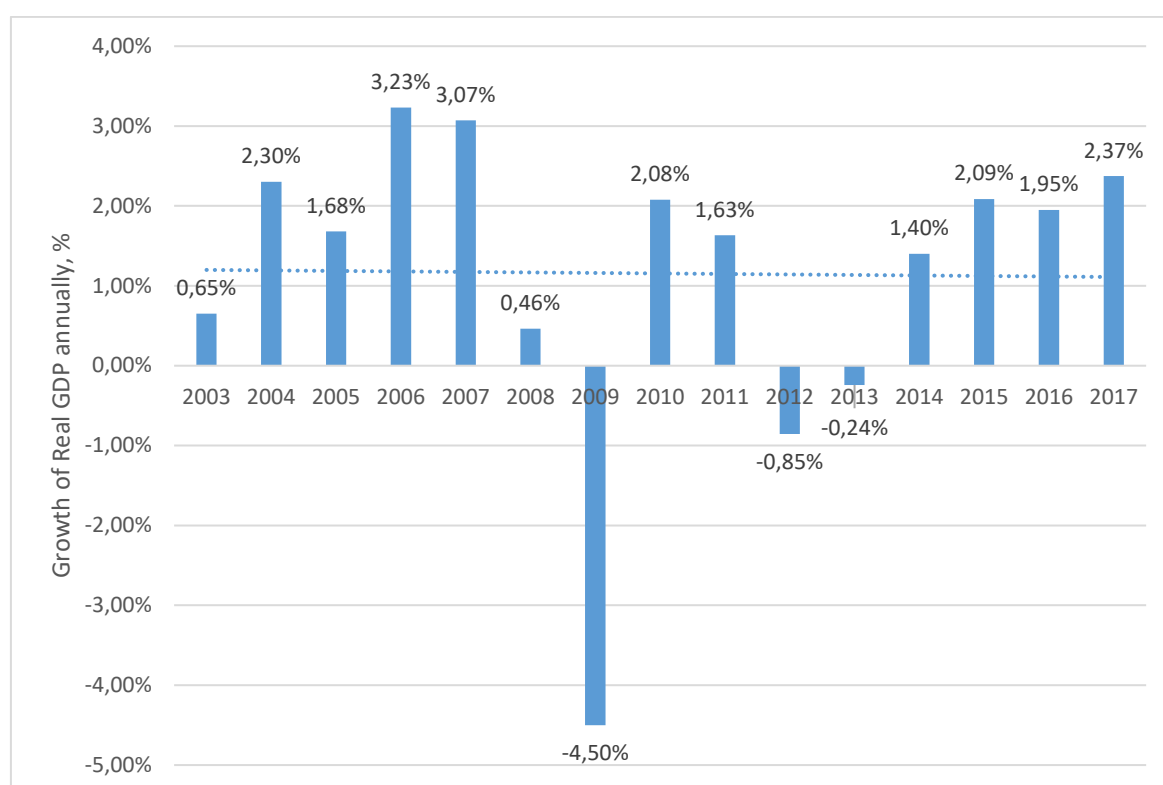
Additionally, too little attention has been paid to the negative effects that the previous rounds of unconventional monetary policy have had. In the first instance, the complexity of money and its non-linear behaviour means that policy targeting expectations is incredibly difficult, if not impossible. By pursuing policy in such a manner, the ECB actually injected more complexity and chaos into the long-term than it alleviated. Moreover, profligate monetary policy has a negative impact far beyond macroeconomic aggregates: recent studies have shown a link between easy money and erosion of the rule of law. It is possible that the instability that unconventional monetary policy engendered helped to pave the way for the populist surge across Europe since 2015.

Given these realities, this paper recommends that not only should the ECB not be given new and exotic powers to implement more unconventional monetary policy, but that policy should return to normal as soon as possible.

1. INTRODUCTION

By many metrics, the euro area has stepped away from the brink of disaster it faced in 2011 and 2012 and is in the midst of an economic recovery. Across the 19 euro area countries (EA-19), unspectacular-if-steady growth has returned (Figure 1), with smaller countries such as Ireland and Estonia leading the way (7.2% and 4.9% annual growth rates respectively for 2017) and the core large countries of Germany and France seeing relatively more modest growth (projected at 2.2% a piece in 2017). From a monetary policy standpoint as well, the omnipresent worries of the European Central Bank (ECB) of disinflation leading to deflation have also abated, with the EA-19 seeing rising prices since June 2016 and latest figures from September 2018 showing inflation of just about 2% (in line with ECB targets). With gross fixed capital formation surpassing its pre-crisis levels in Q2 of 2017 and rising steadily and consumer confidence at its highest levels since the early 2000s, it appears that the worst of the dual economic catastrophes to hit Europe over the past decade has passed.

Figure 1: Growth in the Euro area 19, 2003-2017



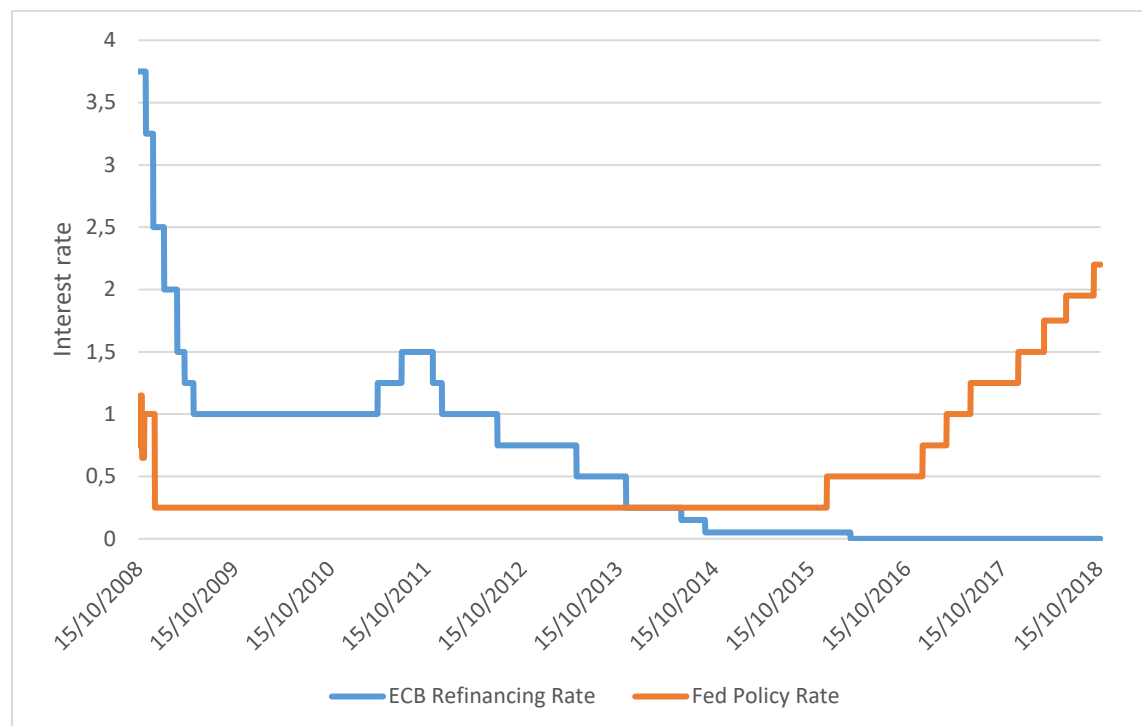
Source: Calculated from Eurostat data. Eurozone includes all 19 current members of the common currency.

Despite this apparent trend away from crisis conditions, however, for the most part economic policymakers in Europe (and first among them the aforementioned European Central Bank) remain on a crisis footing. In the first instance, this may be because the euro area crisis appears ready to flare up again. While the long-term viability of the euro seems much more assured than it did just five years ago, unresolved issues regarding the European Monetary Union's (EMU) architecture, and in particular the fiscal aspects of the union, continue to plague the currency union. As in 2010 and 2011, these concerns are once again centred on the euro area's southern countries, with Italy's skyrocketing sovereign debt and promises from its new government for additional fiscal profligacy the largest cloud on the horizon. Given the size of Italy and the impossibility of a successful bailout, the efficacy of the

ECB alone in confronting the possible destabilising effects of Italy's current path is called into serious question.

This issue is compounded by the reality that the ECB was (and is) a slower-moving creature than the US Federal Reserve. In response to the global financial crisis, the ECB acted much later than the Fed, while the euro area crisis seemed to catch the ECB unaware (Figure 2); as also shown in Figure 2, the US Federal Reserve has been more aggressive in its withdrawal from unconventional monetary policy. While the differential economic performance of the two currency zones can explain somewhat the differing policy responses (i.e. the US has had a much more robust recovery than the euro area), there also may be an institutional imperative, as the belated response of the ECB to these crises and the resulting economic damage may have made the ECB cling to unconventional monetary policy for a longer period of time. Thus, a long period of zero interest rates and a belated start to withdrawing from its main unconventional tools (such as the Asset Purchase Programme) have left the ECB with few instruments to tackle the next crisis. Indeed, the exigencies of the euro area and unresolved issues related to its governance (above all on the fiscal side) have meant that, for the euro area, the 'unconventional' has become 'the new normal', but it remains to be seen if it has been and can be 'effective'.

Figure 2: Policy rates for the ECB and the US Federal Reserve, October 2008-October 2018



Source: ECB and US Federal Reserve.

The purpose of this paper is to take an unorthodox (some might say heterodox) look at the challenges for EMU in the post-global financial and post-EMU crisis world, with a focus on the complexity of monetary policy institutions and monetary policy itself. I argue that the question of the instruments that the ECB has – and if they are adequate to handle the next crisis – is meaningless without considering the effects that those instruments and the ECB itself may have had already. In the first instance, I examine the ECB as the central institution in EU monetary policymaking, but an institution which is neither as independent as it claims nor as powerful as it wishes to be. In particular, the ECB is

constrained in its own independence by various other actors, including Member State governments and their fiscal policies, markets, and individual expectations, and these institutional constraints impact how the ECB's instruments and tools will affect the euro area as it looks ahead to its next crisis. My main argument is that, given that the same issues which threatened the euro in 2011 are reappearing in 2018, by focusing on the tools of the ECB we are missing the bigger picture of the institutional problems of EMU.

The second focus of this paper is to understand that even a change of monetary policy tools may not resolve the difficulties in setting an EMU-wide monetary policy, due mainly to the complexity of money. While the ECB may be *primus inter pares* as an institution for setting monetary policy in the EU, it is both reactive to the business cycle for setting monetary policy and a precipitant of future business cycles. The complexity of monetary dynamics, and especially the reality that current policy decisions alter future expectations and behaviours, may stymie even the best laid plans from Frankfurt. Without taking into account the complexity of money and the endogeneity of expectations, even a massive expansion of the ECB's money creation abilities will have little positive (and likely huge deleterious) effects on the real economy of the euro area.

The rest of this paper is laid out as follows: the next section briefly examines the actions taken by the ECB in the wake of the global financial/EMU crisis, while Section III places the ECB within a web of monetary policy institutions in the EU. Section IV explores the evidence for complex causes and effects of monetary policy, while Section V concludes with some recommendations for EMU going forward.

2. A BRIEF RECAP OF UNCONVENTIONAL MONETARY POLICY

2.1. Desperate Times, Desperate Measures

In order to understand if the ECB is ready to handle the next crisis, it is crucial to understand both exactly what was done that was 'extraordinary' in the wake of the global financial/euro area crisis and also what effects this approach had on the economy of the euro area. Unfortunately, there is still dispute amongst economists and policymakers over what actually triggered the EMU crisis, making an analysis of its effects problematic. Baldwin and Giavazzi (2015) among others have noted that the crisis of 2010 onward has been more of the start-stop dynamics of capital flow crises than a sovereign debt crisis *per se* (although they fail to acknowledge that capital may have stopped flowing precisely because it was being handled inefficiently by high-spending governments). Mody and Sandri (2012) somewhat agree but point out that financial stress led directly (with a lag) to sovereign debt stress, mainly because the markets were anticipating large bailouts. Murlon-Druol (2014) attempts to deflect blame from the euro itself by noting that the issues inherent in the EMU crisis were long-festering within the EU, with the lack of economic convergence a major culprit. Finally, Martin and Philippon (2017), creating a model of several different types of crises (domestic credit, fiscal policy, and current account) note that the culprit for the crisis differed across each country in the euro area, with only lack of fiscal prudence in the boom times and a need for better macroprudential regulation standing out as a common flaw.

With these differing views on what precipitated the crisis, designing a one-size-fits-all response to the crisis faced difficulties, especially given the probability that the EMU crisis was caused by some combination of all of these factors and also given that knowledge of how to stop the crisis was difficult to come by in real-time. Without knowing which factor predominated, the ECB was reduced (as most central banks are) to targeting broader economic aggregates rather than root causes, focusing on broad strokes for the overall economy rather than surgical interventions in specific sectors. As this paper is not meant to rehash the extensive literature on the ECB's actions over the past ten years, we will keep the overview of the ECB's unconventional measures limited, but, suffice it to say, it is the scale and breadth of the interventions which the ECB has undertaken over the past decade which allow for application of the moniker 'extraordinary':

- *Interest Rates:* As shown in Figure 2, the ECB reduced its interest rates to 1 percent in May 2009 and (after a brief rise) below 1 percent in 2012; since July 2012, it has maintained rates at or near zero, an unprecedented occurrence in the history of the Bank but one in line with other developed nations central banks. Indeed, the ECB went one step further in reducing its deposit facility rates into negative territory in June 2014 and further into negative territory throughout 2015 and 2016. While use of the interest rate channel is not exactly 'extraordinary', abnegating the time value of money as official policy was indeed a major step.
- *Qualitative easing:* Beyond reducing interest rates as far as they could go, the ECB undertook a series of interventionist measures aimed at changing the composition of its balance sheet. As Jäger and Grigoriadis (2017) note, qualitative easing was used mainly during the global financial crisis and was targeted at financial institutions (above all banks): the instruments used included *de facto* unlimited overnight liquidity, temporary currency swap lines with the US Federal Reserve, and supplementary longer-term refinancing operations (LTROs) with maturities far exceeding those normally in use (see Lenza *et al.* 2010 for a more in-depth explanation).
- *Quantitative easing:* More concentrated in the actual EMU crisis period, the ECB's quantitative easing policies focused on expanding its balance sheet rather than reallocating it (Jäger and Grigoriadis 2017), and targeted both financial distress and sovereign issuances. Foremost amongst

these policies was the Covered Bond Purchase Programme (CBPP), going forward originally in two phases from July 2009–June 2010 and November 2011 – October 2012, which spent EUR 100 billion on purchasing covered bonds in order to ensure bank liquidity (*Ibid.*). Concurrently with the CBPP was the Securities Markets Programme (SMP), where Member State sovereign bonds were purchased to provide liquidity in ‘dysfunctional’ market segments. (Haitsma *et al.* 2016). The SMP lasted in its first phase from May 2010 to March 2011, resuming again in August 2011 and lasting through February 2012, with a total of EUR 240 billion spent on distressed sovereign debt (Gibson *et al.* 2016). The SMP was then superseded by the Outright Monetary Transactions (OMT) program, the outcome of Draghi’s famous ‘whatever it takes’ speech, where the ECB would have no limits on its sovereign bond-buying program. The ECB recently noted without irony or humility that the OMT ‘served as a powerful circuit breaker of the ongoing downward spiral’ (Praet 2018).

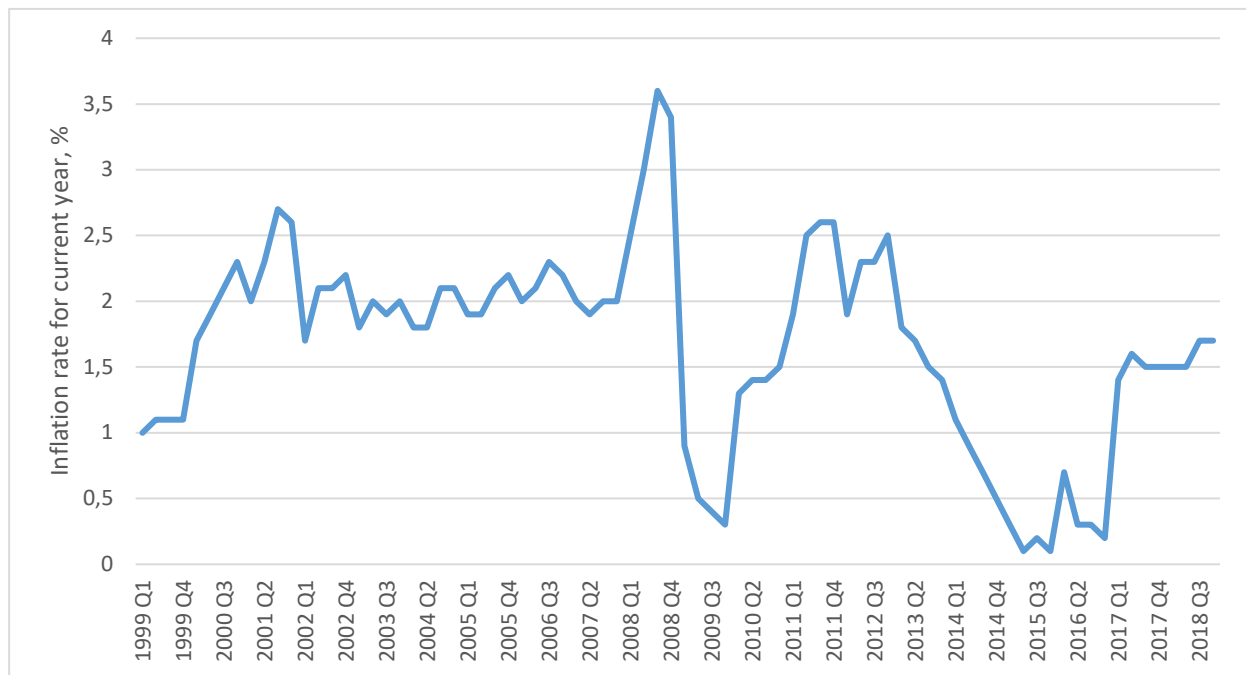
- *Expanded Asset Purchases:* Finally, the most expansive of the ECB’s interventions into the market was the Expanded Asset Purchase Programme (EAPP), a multi-faceted program which included the corporate sector purchase programme (CSPP), the public sector purchase programme (PSPP), the asset-backed securities purchase programme (ABSPP), and a third CBPP program (CBPP3) initiated in 2015. According to the ECB, across all of these programs, *monthly* purchases were conducted at an average pace of EUR60 billion from March 2015 until March 2016, EUR80 billion from April 2016 until March 2017, EUR60 billion from April 2017 to December 2017, EUR30 billion from January 2018 to September 2018, and EUR15 billion from September 2018 to an anticipated wind-down in December 2018. The vast majority of holdings under the EAPP were once again sovereign debt instruments, as the PSPP had holdings over EUR 2.5 billion by August 2018.

2.2. The (Not Quite-) Aftermath

Given this huge influx of liquidity into the markets, coupled with the massive intervention of the ECB into both financial and sovereign debt markets, the largest question which must confront economists is whether or not the actions of the ECB actually helped to overcome the crisis. Did this unconventional policy package, occurring over such a long period of time, mitigate the effects of the crisis or did it prolong its effects while merely treating the symptoms?

As of this writing, there is a growing body of evidence that the ECB’s measures were effective according to a narrow set of metrics. Perhaps not surprisingly, research conducted by researchers at the ECB have found positive effects across all unconventional programs. For example, an early paper by Giannone *et al.* (2012) showed how crisis measures by the ECB had a positive influence on the interbank market. Altavilla *et al.* (2016), concentrating solely on the OMT program, show that it had a positive effect on the hardest-hit countries of the euro area, and thus was a successfully targeted measure. Fratzscher *et al.* (2016), examining the panoply of measures introduced from 2007 to 2012, discovered that the ECB’s responses not only were good for the euro area, but helped reduced risk across the whole G-20. Turning to the EAPP, Georgiadis and Gräb (2016) found that it boosted investor confidence in the euro area and actually caused a ‘re-balancing’ of capital flows from emerging markets back into developed ones. Similarly, Eser and Schwaab (2016) show that asset purchases improved liquidity conditions in the euro area while decreasing default risk (interestingly, a goal that low interest rates did not fulfil).

Figure 3: Inflation Expectations for the Current Year in the Euro Area, 1999-2018



Source: ECB Survey of Professional Forecasters

Outside of the ECB headquarters, researchers have found similar effects: both Falagiarda and Reitz (2015) and Krishnamurthy *et al.* (2017) show that the ECB's interventions lowered risk premia on distressed sovereigns in the euro area, while boosting equity prices as a beneficial macro-spillover. Szczerbowicz (2015) argues that asset purchases lowered the refinancing costs of banks and governments while also showing positive spillover effects across the euro area economy. And several other papers (Ghysels *et al.* 2016 and Saka *et al.* 2015, to take two examples) reinforce the ECB's own research in showing that the unconventional policies of the Bank had salutary effects. In sum, it appears that there is a consensus that the ECB's policies were effective in the specific areas which were targeted.

Perhaps more of concern to ECB policymakers, especially from 2014 onward, was the threat of disinflation turning into deflation, a point stressed in speech after speech. After ten years of unconventional monetary policy, it appears that this too was a success, as inflation expectations are finally rising in the euro area again (Figure 3). Although expectations are still below where they were at the outset of the EMU crisis – and, crucially, are still below the ECB target rate of 2 percent – they have apparently stabilised since the beginning of 2017 and appear to be on an upward trend. This is in line with the actual inflation data from the ECB, which shows that the 2 percent target was reached in June 2018 and has remained at or above 2 percent since (latest data had it at 2.1 percent for September 2018). However, the rise in prices appeared to be mainly attributable to energy prices and, to a lesser extent, food, alcohol and tobacco, meaning that services and industrial goods were relatively flatter (1.3 percent and 0.3 percent respectively).

These results should hearten ECB policymakers and indeed leaders and governments in each of the euro area countries. However, given the state of Italy's finances and the fact that we are once again talking about the possibility of a massive euro area crisis, it can be argued that these positive effects shown in the literature were merely temporary. Indeed, the current state of sluggish growth in the euro area, coupled with gathering clouds over sovereign debt burdens, suggests that the unconventional monetary policy of the ECB did not actually address the root causes of the EMU crisis; as such, the crisis

never really ended, it just went on hold. In fact, it is more accurate to note that the ECB's policies could *never* have addressed the root causes of the crisis, as monetary policy is a poor instrument to tackle structural issues (which appear to have not been addressed during the time of unconventional monetary policy). This reality is examined in the next two sections, as we explore a) how the ECB is institutionally constrained in what it can do, even with an increase in its powers, and b) how increasing the ECB's powers may make things in the euro area demonstrably worse, in terms of distortions and complex (unforeseen) follow-on effects.

3. THE INSTITUTION OF THE ECB

Literally thousands of pages have been devoted to the structural issues plaguing the euro area, mainly in relation to its status as a (non-) optimal currency area, the difficulties in managing a single policy across so many diverse countries, and the need for additional integration initiatives to make the job of monetary management easier for the ECB (Talani [2016] is an excellent overview of these issues). However, comparatively less work has been done on the ECB as an institution, with research that has been produced preferring to focus on either the ECB's 'independence' (Lombardi and Moschella 2016), on its modalities of communication (Amaya and Filbien 2015; Picault and Renault 2017), or on clashes between its mandates of overseeing the EMU and in guaranteeing financial stability (Issing 2017), with additional papers coming at the ECB from a non-economic standpoint but also focusing on independence and the EU system as a whole (Schmidt and Thatcher 2014; Giannone 2015). Without an understanding of the institutional imperatives of the ECB, it is impossible to understand the possible effects of any further aggrandization of power going forward. That is the purpose of this section.

3.1. One Institution Amongst Many

Lost in the shuffle of research around the ECB as a powerful institution, able to command billions of euros and reduce sovereign risk ratings via its programs, is the reality that the ECB is an institution which is embedded in a web of economic and political institutions across the European Union. While it stands as *primus inter pares* for monetary policy, overseeing the 19 Member State central banks, having competency for establishing euro area interest rates, and directing purchase programs, the ECB is in reality just one institution in the implementation of monetary policy. Indeed, it can be argued (as I will in Section 4) that the ECB may be the institution which sets monetary policy, but implementation of it is left to others. More important for this section is understanding that even the setting of monetary policy is determined by the political environment in which the ECB works, making its policy independence much smaller than the ECB (or other commentators) believes it to be. Indeed, the ECB is often portrayed as the police, setting the rules for economic policy, when in reality it is closer to the fire department, cleaning up after messes that others have made.

In the first instance, the ECB, as an interest group comprised of various Member State governors and public figures, is undeniably a player in the *politics* of EMU as well as in the implementation of its *policy* (Torres 2013), a realm where the ECB may be seen as more of a soldier than a leader. Realistically, this is not a trait unique to the ECB; as Hartwell (2018a) shows, all central banks remain highly dependent upon the institutional environment in which they are birthed and where they operate. Indeed, the whole idea animating 'central bank independence' is that the time inconsistency problem of Kydland and Prescott (1977) can be mitigated by removing political pressures from the central bank, but as Hartwell (2018a) describes, these pressures can actually never be removed. Politicians may continually have opinions on what monetary policy should be (and express this publicly), and central bank governors are chosen via a political process (and, in the case of the euro area, via an inter-state negotiation as well). And central bankers are never entirely secure in their jobs, for, as Hayo and Voigt (2008:752) note, 'if government has the capacity to create a formally independent central bank, it might also be strong enough to overrule its decisions, simply ignore them, or abolish the independent central bank again'.

Most importantly, politicians, via their fiscal policies, create conditions in which the central bank must act and react. To return to the overwhelming literature on the misalignment between fiscal policy and monetary policies amongst the nineteen euro area countries (Alessandrini and Fratianni 2016), it is clear that the ECB's policy independence is severely undercut by the independent fiscal policies pursued by Member States. This is not an argument for fiscal union or even more closely aligned

policies amongst members, but merely an observation that, as currently constructed, the euro area forces the ECB to accommodate nineteen separate fiscal policies that it has no control over. A severe misalignment of incentives resulted, manifested in either domestic policies that had no consideration of broader, euro area effects, or from domestic policies that were predicated precisely on the ECB providing a bailout for profligate or inefficient policy. And while the exact cause of the EMU crisis is in dispute, there is no doubt that sovereign debt played a major role, and the research cited above perhaps proves that it was the biggest factor (that is, if addressing sovereign debt woes created the largest amount of macroeconomic spillovers, perhaps sovereign debt was the key issue all along).

With nineteen different fiscal policies and misaligned incentives, the policy independence of the ECB – especially a mandate to focus on price stability – was severely undercut, forcing the ECB to come to the rescue of government after government. Indeed, looking at the ECB's response to the EMU crisis, and as noted in the previous section, the largest portion of unconventional monetary policy was dedicated solely to purchasing sovereign bonds, i.e. providing funding for governments and reducing sovereign risks. Thus, not only did sovereign debt possibly cause the crisis, but it necessitated a massive response from the ECB to attempt to clean up the results of these policies.

A final point about the ECB's lack of policy independence is also directly related to the second half of the ECB's unconventional monetary policies, which was directed at keeping financial markets afloat. Beyond the political pressures that central banks face, and returning to the idea in Issing (2017), that the ECB's dual mandate for EMU and financial sector stability can be undercutting its independence, is the fact that all central banks tend to be influenced by one particular domestic interest group, namely the financial sector (Wray 2007). Going as far back as Roberts (1911), we can see that central banks are perceived by the financial sector as a subsidy for these institutions, helping them to recoup losses incurred as a result of competition and the market. Indeed, the misalignment of incentives between the financial sector and the ECB is simply the flip side of the misalignment between sovereign Member States and the ECB, as banks have little incentive to worry about systemic stability (especially at the expense of its own bottom line). With the twin crises of 2007-08 and 2009 and still ongoing, the ECB was forced into generating unconventional ways of salvaging the financial sector in addition to keeping the sovereign debt market afloat.

3.2. More Instruments, Less Power?

In neither instance, either purchasing sovereign bonds or injecting liquidity into the bond and interbank markets, did the ECB have the operational independence that it is claimed to have. Seen from this perspective, even the creation of more instruments and further unconventional monetary policy may thus not be effective in ensuring the efficacy of the euro or helping to preserve monetary stability.

The simple reason for this reality is that the underlying issues behind the EMU crisis persist: in the short-run, as research noted above from the ECB and others has shown, programs such as EAPP did indeed ease government funding pressures and helped to reduce sovereign risk, but the long-term misalignments still remain (as witnessed by the latest hand-wringing over Italy). Even expanding the ECB's arsenal of weaponry and including new and even more exotic ways of injecting liquidity will be for naught if all these instruments do are enable governments to pursue inadequate fiscal policies. Put another way, the story of the past decade has been one of fiscal policy shenanigans attempting to create a policy space separate from, and in many ways in opposition to, the ECB's policies. As noted in the central bank independence literature, the preferences of a society for particular economic policies are endogenous, and institutional arrangements often lag these preferences rather than transform them (Mas 1995). With no fiscal union in place (and little hope of creating one) and a Maastricht treaty hollowed from neglect out from the top, it is highly likely that additional instruments (such as the

completely unbelievable helicopter money or deep negative rates) will just focus Member State energies towards a greater acceptance of monetary solutions for fiscal problems.

From the financial sector side as well, allowing the ECB to engineer new and unconventional instruments even larger in size than those deployed during the most recent crisis can only create a larger moral hazard. In this sense, and going back to Roberts (1911), bankers will be attempting to recoup via government what they would lose to the market, privatising profit while socialising risk. More succinctly, expanding the ECB's arsenal to provide for the financial sector creates a soft budget constraint: while the concept was originally used by Kornai (1986) in reference to state-owned enterprises under communism, it applies in this case as well, as banks can run risks and incur losses with little fear of market discipline or reprisals. Of course, specific banks may close down or be taken over, but the risk of any one bank being the one which is made the example is small (and staff may find another position in the financial sector anyway). By promising to do 'whatever it takes' to save the financial sector, the fundamental issues of risk pricing and legislative fiat (i.e. directed lending) are glossed over.

Given these structural issues, the issue may be less about a set of new tools available for the next crisis and more about how to dismantle the tools invented for this current one. The reason for this should become clear in the next section.

4. THE COMPLEXITY OF MONETARY POLICY

Given these institutional constraints surrounding the ECB, it is highly unlikely that additional ‘unconventional’ tools will be able to bring the euro area economy to a period of stability – this, after all, is supposed to be the goal of the ECB, fostering an environment of price stability in which economic growth can occur. Indeed, it is too easy to forget that the ECB’s mandate, first and foremost, is price stability, with secondary goals such as employment or financial stability desirable insofar as they do not contradict the first. But with the move towards unconventional monetary policy, a choice has been forced upon the ECB by its Member States to also consider fiscal health as a crucial and equal goal. And with fiscal issues continually reining in the ECB’s independence to pursue price stability, it is doubtful that bigger and more bizarre monetary instruments can introduce this stability to the euro area when politics and domestic government will not.

One may argue (as others have) that the ECB *should* be less about a single-minded pursuit of price stability and be allowed to focus on financial stability and/or growth or fiscal health as a complement (Fratzscher 2016). Seen in this light, the creation of tools such as the EAPP, and especially the accommodation of looser fiscal policy, is one of the rightful objectives of the ECB and thus any impact it has on independence is less important in the longer-term (Weber and Förschner 2014). Additionally, others have argued that, by circumscribing the ECB more and by making it a tool of economic policy under the service of the Member States, expanding the ECB’s mandate to officially encompass many of the areas it already targeted during the crisis, this would help to bring more democracy to EU economic policy-making (Smith and Weeks 2018).

However, this *ex post* justification for unconventional monetary policy and, more worrying, the emphasis on expanding instruments via helicopter money, deep negative interest rates, and the like is that the deleterious consequences of such policies have not been fully explored. In pursuit of broader economic ‘stability’ via monetary means, additional unforeseen and negative consequences for the economy and for institutional development may be unleashed. This is a separate question from if unconventional monetary policy actually ‘worked’: as I noted above, the research on the effects of the ECB’s monetary policy during the crisis are concentrated on a narrow set of economic metrics, but after a decade of unconventional monetary policy, including massive injections of liquidity, zero interest rates, and other instruments growth has only tentatively returned to the euro area. No, the question is, what are the longer-term negative effects of unconventional monetary policy?

In order to explore this question, this section draws on the growing literature in economics which attempts to apply insights from the natural sciences to economic phenomena, with the most promising avenue related to ‘complexity economics’. Put simply, complexity theory posits that dynamical systems have several traits, including sensitivity to initial conditions, non-linearity, susceptibility to external forces, differences between local and global information, and multiple equilibria depending upon the ongoing adaptation of actors in the system. These tenets have been applied to monetary policy more broadly, with complexity able to show the difficulties in running such an interventionist policy. The areas where complexity come most into play are monetary behaviour, and the institutional effects of money.

4.1. Complex Money...

Money itself behaves in a complex and non-ergodic manner, a trait which makes targeting economic aggregates involving money very difficult to do successfully. For example, Barnett and Chen (1988) studied monetary aggregates in the United States and found that they contained clear evidence of mathematical chaos. Follow-on research such as DeCoster and Mitchell (1991) and Serletis (1995) confirmed the presence of chaotic behaviour in both monetary aggregates and the velocity of money,

while DeCoster and Mitchell (1992) showed that this behaviour in money led directly to an increase in chaotic behaviour in most nominal macroeconomic aggregates.

Given the chaotic nature of money, further research has shown the difficulty facing monetary authorities, as papers such as Soliman (1996:148) make the point that 'small disturbances [in monetary policy] may result in a qualitative change in the response of the [monetary] system', with 'the long-term behaviour of the system... dependent upon the initial conditions'. Perhaps the main reason why monetary policy inherently displays chaotic attributes was noted by Friedman (1953, 1961): given incomplete information on the part of the monetary policymaker, coupled with a variable lag before monetary policy comes to fruition and its effects are seen, an economy can move substantially from the circumstances at time t , when the policy was enacted, to time $t+n$, when the policy takes effect. This can be seen in Solomon and Solomon (1991), who show in a nonlinear model of money in the United States that this lag introduces instability and chaos into money supply aggregates. When considering that monetary policy itself makes money more chaotic, it is thus no surprise that an extension of this reality is that monetary policy at time $t+n+1$ is even more difficult to control. As Ramsey (1990:81) brilliantly phrased it, 'we have now come to the realization that models of money demand... provide reasonable forecasts only in those cases where the models are not really needed'.

A key source of non-linearity in the execution of monetary policy is expectations, a point enshrined in the Lucas (1976) Critique: namely, that monetary policy itself shifts the expectations of participants in the economy, meaning that a policy undertaken at time t and based on the conditions prevailing at that point would be acted upon and probably expected by participants, meaning that its effects at time $t+n$ would be different than anticipated. Indeed, Lucas noted that predicting the effect of a policy change would not be valid if the policy change alters expectations in a way that changes the fundamental relationships between variables.

While Lucas was speaking narrowly of econometric policy evaluation and modelling, his point holds true in terms of monetary policy itself, which bases its current instruments based on projections of how agents will act in the future. Indeed, even incorporating expectations in a monetary model may not lead to optimal outcomes if expectations follow a chaotic course, meaning that policymakers would have to try more and more esoteric models and more and more erratic instruments. As Taylor and Williams (2010:845) note, the problem with 'optimal policies is that they tend to be very complicated and potentially difficult to communicate to the public, relative to simple rules. In an environment where the public lacks a perfect understanding of the policy strategy, this complexity may make it harder for private agents to learn, creating confusion and expectational errors'. This reality was confirmed in recent work by Kawai *et al.* (2018), who show that complex policies tend to beget complex policies.

The issue at play here is that monetary policymakers are not actually making the economy more stable but are creating chaos via their effects on expectations. In fact, the complexity of monetary policy means that not only are expectations changed throughout an economy due to monetary policy at time t , the responses within the system are not consistent even if the same action is repeated and announced well in advance (i.e. using preannounced rules)! As Mohseni *et al.* (2015) show, even the use of various standard monetary policy rules can induce complex and non-linear behaviour into an economy, with the forward-looking Taylor rule incorporating rational expectations the biggest culprit in creating non-linear behaviour. By unnecessarily increasing the complexity of monetary policy and attempting to anticipate shifting expectations, policymakers continue to alter the fundamental variables in the economy but without improving the relationship amongst these variables.

The parallels to the ECB's policies over the past decade should be apparent, and more and more exotic instruments were used in an attempt to shift expectations. And yet, expectations have become less forward-looking and based on a shorter time-span, as economic policy uncertainty has spiked, and ECB

meetings have become more important for what their decisions will be. Introducing ‘innovations’ such as helicopter money would only increase the complexity of monetary policies, making expectations even more difficult to manage... if such a thing is even possible.

4.2. ...Complex Effects

Finally, assuming that the ECB is able to overcome the hurdles of institutional constraints, endogeneity of expectations, and the inherent complexity of money by utilising ever more unconventional instruments, there are additional effects to consider. The experience of the past ten years has shown that unconventional monetary policy has taken a circuitous route towards economic recovery while not addressing the underlying causes of the euro area crisis. Unexamined has been the effect that unconventional monetary policy has had on the other institutional players in the European economy. Explained another way, if the ECB is but one institution amongst many and is influenced by these other institutions (as shown in Section 3), how does the ECB’s actions then influence its own institutional environment?

New advances in the study of the effects of monetary policy have isolated the effect that monetary policy and monetary policy institutions have on the political and economic institutions with which they interact. Complexity economics can also help to understand these effects, for institutions are also complex creatures who exist in an institutional ecosystem and bump up against, overlap with, and are influenced by other institutions. Given their path dependence and sensitivity to external conditions, institutional development can be changed substantially by a nudge from external macroeconomic policies. Paramount amongst these policies would be monetary policy, which has the ability to not only change monetary aggregates but to influence politics in a country. The consequences of monetary profligacy would thus be as unforeseen in the medium-term as they are predictable in the short-term (Durlauf 2012), with the ability to threaten fragile governance systems (Duit and Galaz 2008), reshape political institutional structures, and reorder existing economic relationships.

Koyama and Johnson (2015) lay out the mechanisms how lack of monetary stability can impact a specific institutional arrangement, that of political development, noting that monetary profligacy can lead directly to a negative impact on the rule of law; they posit that unstable monetary policy, by disrupting the price system, creates incentives to engage in non-market (i.e. political) transactions rather than building market-friendly institutions. In their examination, they provide evidence that high inflation is associated with bad economic policies more generally (an artificially-generated crisis begetting even worse solutions), and that high inflation and diminished rule of law go hand-in-hand. Moreover, out-of-control monetary policy tends to increase state intervention more generally, as the forces unleashed by inflation lead polities to favour ‘strong’ parties which can deliver ‘stability’.

Further evidence for this hypothesis has been shown by Hartwell (2018), who examines interwar Poland and shows how profligate monetary policy led directly to (i.e. had a causal link with) erosion of the rule of law and degradation of political institutions. By abandoning monetary rectitude in pursuit of fiscal goals, the new Republic negatively impacted the country’s fledgling political institutions, paving the way for a coup and the ascendance of a proto-fascist regime. Similar work in this vein has been done on the interwar period for Germany, with work such as Hill *et al.* (1977) and van Riel and Schram (1993) pointing out how hyperinflation weakened the Weimar Republic and paved the way for the rise of national socialism. In each of these cases, after controlling for several other possible variables, the negative link between unstable monetary policy and the rule of law was conclusively established.

Given the theoretical linkages between monetary policy and degradation of the rule of law, it is perhaps interesting to note that there may be a connection between the loose monetary policies of the past decade and the ascendance of populism throughout Europe over that same time frame. While the

ECB's actions cannot necessarily explain electoral gains in countries who are not actually on the euro (such as the Czech Republic and Poland predominantly) – although it might play somewhat of a factor – unconventional monetary policy may be linked to the rise of populist parties more generally within the euro area. To continue with the mechanisms elucidated in Koyama and Johnson (2015), if even a massive injection of liquidity does not bring stability and the euro area remains on the brink, the instability of the euro area will entice the median voter to vote for parties which promise a radical change.

From 2015 to 2018, populist parties across the euro area main sizeable gains precisely on such a platform, not explicitly linked to monetary policy but more based on a general anti-EU sentiment and a desire to radically change course from the instability of the previous decade. The ascendance of the Italian Five-Star Movement, the Freedom Party in Austria, Syriza in Greece, and other populist movements has led to entry into or control of government; even where populists have not been in charge, they have had a surge in popularity, holding firm at between nearly 13% of the vote (Germany, France, and the Netherlands) up to 18% in Finland. And although it is too soon to prove causality, one can make the case that these years of an upsurge in populism coincided exactly with massive injections of liquidity by the ECB via the EAPP, done precisely to preserve fiscal policies which were unsustainable. In short, while there may be massive issues of endogeneity and reverse causality (did the ECB act in order to stave off populism?), the Koyama and Johnson thesis appears to be proven here: monetary profligacy correlates with lower rule of law and begets additional bad (fiscal) policies.

More importantly from a complexity economics standpoint, the medium-term effects of the ECB's actions cannot be foreseen. In examples from history, such as Poland and Germany, the weakening of internal institutions effected by monetary policy led to external conflict and destruction; in other cases, such as Hungary's hyperinflation of 1946, monetary instability led not only to takeover by an external aggressor, but also development of political institutions based on a more populist worldview. The worry is that additional monetary interventions by the ECB would change the path of the euro area's institutional development in negative ways which cannot be predicted.

5. CONCLUSIONS

This brief has taken an unorthodox look at the ECB's use of unconventional monetary policy over the past decade and assessed whether or not new and exotic instruments should be utilised to overcome the next crisis.

The conclusive answer, based on tenets of complexity theory, is that they should not, and indeed an ending of all unconventional monetary policies should happen as soon as possible. Unconventional monetary policy has not delivered stability to the euro area, as the ECB is institutionally constrained to deliver the stability that is necessary. Moreover, the ECB has actually increased the complexity and chaos in the monetary system via its unconventional policies, leaving agents in the economy unmoored with regard to their expectations. Finally, the deleterious consequences of unconventional monetary policy have been little-explored, but the author's opinion is that the chaos of European monetary policymaking has in no small way contributed to the rise of populism on the continent.

Given these realities, the question should not be 'is the ECB equipped to deal with the next crisis?' but 'how can the ECB unwind its damage from the last one?' By resorting to the tenets of complexity economics, and examining the EMU crisis with an institutional lens, it is clear that the answer is to return to conventional monetary policy as soon as possible. Refocusing on the ECB's mandate of price stability will keep monetary policy anchored on monetary issues, which is crucial: monetary policy is no solution for structural issues, and so long as the misalignments within the euro area are enabled by monetary policy, the structural changes needed will never be enacted.

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Questions:

- Given the problems in the euro area occasioned by Italy's fiscal stance, would the ECB say that quantitative easing has been a success?
- What are the threats to the euro area economy if quantitative easing is put in place again during the next crisis?
- How does the ECB respond to criticism that low interest rates caused the previous crisis? Why would they prevent the next one?

The European Central Bank may already be facing the next crisis in the euro area but is still deploying the tools of unconventional monetary policy from the last crisis. This brief looks at the ECB as an institution amongst institutions and shows how even more unconventional approaches will not help the euro area economy. Additionally, given the complexity of money and the effects of expectations, expanding the ECB's unconventional arsenal is likely to have deleterious consequences across Europe.

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