The Ethics of Delegating Monetary Policy

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The Global Financial Crisis of 2007 and 2008 transformed monetary policy, forcing central bankers to move far beyond their pre-crisis instruments, goals, and expertise. In this article, I investigate these developments from a perspective of normative democratic theory. Against authors who reject central bank independence entirely, I argue that it should in principle be permissible for governments to delegate political choices to unelected experts. From a democratic perspective, what matters is whether the act of delegation serves the government's ultimate economic policy aims. Although central bank independence limits the government's control over monetary policy, it can also improve monetary policy and thereby help the government pursue its larger economic policies. I outline a moral framework for balancing these competing considerations; focusing on the case of the European Central Bank, I then argue for democratic reform of existing institutions.

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By creating an independent central bank, the government delegates authority over monetary policy to unelected experts. Within the confines of their price stability mandate, these experts routinely weigh the benefits of economic output against the long-term cost of inflation. Sometimes, their decisions can be momentous. After the Brexit vote, for example, the value of the Pound fell and the Bank of England expected inflation to exceed the target assigned to it by the government. Governor Mark Carney and his Monetary

Policy Committee faced a choice. They could either intervene by raising interest rates, or accept inflation and protect the real economy from a major economic shock. In the end, the Bank decided not to intervene, arguing that to do otherwise would raise unemployment by 250,000 (Carney 2016). History is filled with such dramatic decisions (Greider 1989; Marsh 1993; H. James 2013).

In this article, I argue that today's independent central banks are insufficiently democratic and need to be reformed. This claim has a long tradition, but the argument I advance is novel. In contrast to those who reject central bank independence entirely, I argue that it should in principle be permissible for governments to delegate political choices to unelected experts. From a democratic perspective, what matters is whether the government has an adequate justification for its decision to delegate. Although central bank independence limits the government's control over monetary policy, it can also improve the quality of monetary policy and thereby help the government to pursue its larger economic policies. In what follows, I will first outline a moral framework for balancing these competing considerations and then make a detailed case for democratic reform of existing institutions.

In arguing for this claim, I pay specific attention to the historical changes catalysed by the 2007/2008 Global Financial Crisis. Before the crisis, central bankers referred to their era as that of a 'Great Moderation' (Stock and Watson 2002).They assumed that recent economic policies had created a new period of weaker economic recessions and stable prices. Within the confines of their mandate, central bankers would do little more than control interest rates on short-term credit. This was considered sufficient for steering the domestic economy to its natural equilibrium. In the words of one central banker 'everything was simple, tidy and cozy', but, as he ominously continues, today 'many certainties have gone' (Borio 2014, 191).

The crisis has transformed monetary policy, forcing central bankers to move far beyond their narrow areas of expertise. Central banks now experiment with a wide range of new instruments commonly referred to as *unconventional* monetary policy. They have given out trillions in cheap loans and extended their trading to a broad range of financial assets. The European Central Bank lends to oil and gas companies, car manufacturers and low cost airlines. The Bank of Japan is a big player in Japanese stock markets. Central bankers currently debate even more experimental policies, such as giving out money to citizens directly. The crisis has also raised heated debates about the goals of monetary policy, with stable prices pitted against financial stability and economic equality. Despite facing different, and much more complex, political choices, central banks have retained their pre-crisis independence, and their monetary policy mandates remain virtually unchanged. This situation is untenable and reform is overdue.

Despite the political importance of their decisions, central banks have received much less attention from political theorists than more familiar forms of executive, legislative and judiciary power.[1] Central bankers make their own kinds of distributive choices. Moreover, their status as unelected experts raises deep questions about the relationship between political authority and democratic legitimacy. The powers of central bankers deserve sustained treatment, and my aim here is to address this gap in the philosophical literature. The contribution of the article to existing work on central bank independence outside philosophy consists in its focus on mandates and the normative ideas that underpin democratic government. Economists have focused on the economic

[1] Philosophers have discussed financial stability (A. James 2012; Linarelli 2017), the domestic and global distributive effects of unconventional monetary policy (Reddy 2003; Fontan, Claveau, and Dietsch 2016), the central bank's role in public finance (A. Douglas 2016), and democratic accountability (Best 2016; van 't Klooster 2018)

effects of independence (de Haan and Eijffinger 2016). Political scientists have focused on documenting the autonomy of central bankers in relation to elected governments (Fernández-Albertos 2015). I draw on these accounts, but put forward an entirely new framework that clarifies the moral issues at stake.

I have three aims. The first is to describe the discretion of central bankers over both the goals and the instruments of monetary policy. Against the claim that central bankers merely follow a legal mandate, I argue that these mandates are often vague and leave crucial questions unanswered. Long before 2008, central bankers had surprising discretion in putting forward their own interpretation of their mandate, and acting on it. This descriptive account leads me to my second aim, which is to develop a normative framework for evaluating the delegation of monetary policy to an independent central bank. It should not be assumed that the powers of central banks are illegitimate simply because central bankers are unelected. Delegating monetary policy can hinder governments from achieving their economic policy goals. I describe this worry as one concerning domestic economic sovereignty. But, if central banks make good use of their powerful tools, delegation is itself an effective means for achieving economic policy goals. I describe these benefits in terms of the quality of monetary policy. I argue that it should be left to elected governments to balance loss of economic sovereignty against improvements to the quality of monetary policy.

Finally, I draw on this framework to argue that central bank independence in its present form is no longer justifiable and needs to be reformed. I do this by outlining the arguments for central bank independence that were prevalent before the crisis and I show how these fit the framework that I put forward. Focusing on the case of the European Central Bank, I demonstrate that new instruments used by central banks, and the new goals that they pursue, create considerable loss of economic sovereignty. With regard to the quality of monetary policy, I argue that central bankers lack special competencies for carrying out their new tasks well. Delegation stands in need of justification, which can only be successful if the governance of central banking is reformed.

THE POWERS OF THE CENTRAL BANK

By creating an independent central bank, governments delegate authority over one of the state's most powerful policy tools to unelected experts.[2] In this section, I describe monetary policy and argue that within the confines of their mandate, independent central banks have considerable scope to make political choices.

Monetary policy is the use of the central bank credit and deposit facilities to pursue macroeconomic policy aims. In earlier days, the most important asset traded by central banks was gold, but today monetary policy is implemented through trading in low-risk financial assets, such as sovereign bonds. Conventional monetary policy uses such trading to control short-term interest rates in financial markets. By introducing money into the financial system, the central bank lowers interest rates. By selling assets it has previously purchased, the central bank removes money from the market, thereby increasing rates.

These trades do not involve legal sanctions or coercive force. Still, monetary policy can have far-reaching consequences for citizens. When interest rates go down, more credit will be available, and will be offered on more favourable terms. Conversely, higher interest rates incentivize saving at the expense of debtors. Interest rates directly influence the options for saving and borrowing available to citizens and firms. For

[2] My interest here is in a legal notion of authority. Following the literature on central bank independence, the term 'government' is throughout taken to refer to elected government and to exclude the central bank.

ordinary citizens, most of the impact of monetary policy is indirect and mediated by macroeconomic conditions. When interest rates go down, consumption and investment pick up and employment increases. As this process plays out, prices eventually rise. Conversely, an increase in interest rates causes economic output to contract and the rate of inflation to decline. To give an idea of the size of its effects: a decision to increase the Federal Reserve's target interest rates by one percentage-point is estimated to reduce industrial production by 4.3% over a two-year period (Romer and Romer 2004; but cf. Coibion 2012). In this scenario, prices remain unchanged for the first two years, after which they gradually fall to 6% below where they would have been otherwise. In the years after the central bank raises rates, companies will go bankrupt, workers will lose jobs and wages will be lower. Monetary policy also affects public finances through its effect on tax revenues and sovereign bond markets. High interest rates can thus easily preclude the expansion of government spending.

It is notoriously difficult to use monetary policy to target specific macroeconomic outcomes. Economists refer to the causal pathways that connect operations of the central bank to macroeconomic outcomes as the *transmission mechanism*. This mechanism consists of different routes via which interest rates influence consumption, investment, and, ultimately, prices. The complexities of this mechanism, however, are profound. For one, the different effects of a single change in monetary policy can pull in different directions. For another, some of these effects will materialize only after a few years. Because of the wide range of direct and indirect effects, monetary policy lacks any clear distributional pattern (Coibion et al. 2017). The effects of a change in one nation's monetary policy also extend far beyond its national borders (Reddy 2003). Because of the time lags and the wide range of possible causal pathways, debates about monetary policy take place against a background of empirical disagreement and uncertainty (Dow

2004; Greenspan 2004). For these reasons, setting monetary policy is one of the most difficult economic policy decisions that a capitalist state faces.

The complexity of decisions concerning monetary policy makes some form of political representation unavoidable. Most citizens are not very aware of monetary policy, let alone sufficiently familiar with the transmission mechanism. Understanding and reflecting on monetary policy requires both expertise and time, rarely available to those outside a narrow circle of economic policymakers and finance professionals. In the absence of such knowledge, it is not possible to make an informed choice on how to set monetary policy. Nevertheless, although this complexity makes decision-making reliant on experts, governments can draw on this expertise in many ways. The need for some form of technocratic judgment does not preclude democratic accountability.

When the central bank is independent, final authority over monetary policy is delegated to a committee of officials within the central bank (Cukierman 1992; Conti-Brown 2016) These officials are appointed rather than elected, and they are often appointed on the recommendation of the bank itself. Furthermore, positions on central bank boards and committees come with long, fixed terms, and once a committee member is appointed, only serious acts of misconduct are cause for dismissal. Parliamentary control of central bank expenditures is limited or non-existent (Binder and Spindel 2017). An independent central bank is simply created once and for all by a legal mandate, which the bank's officials are largely free to interpret themselves. In this system, accountability takes the form of providing a legal justification for policies, with limited or no opportunity for elected officials to object. Indeed, central bankers are even expected to obstruct government policies where their mandate requires this. The guiding question in this article is whether this status quo should be retained.

A crucial assumption underlying that question is that central bankers make important decisions on political issues, but this assumption is itself controversial. By political choices, I mean moral choices on important and contested issues in public policy. Central bankers argue that where such choices arise, the correct policy is determined by their mandate (Issing 2002, 27; Fontan, Claveau, and Dietsch 2016, 14). In this sense, central bankers often describe themselves as merely *instrument* independent – they are free to decide how to set monetary policy –, but not *goal* independent – central banks are strictly bound by the goals set out in the mandate (Debelle and Fischer 1994). The goal of stable prices is given to them and central banks merely decide how to use the instruments of monetary policy to realise that goal.

In practice, however, their mandates leave central bankers with broad discretion not only over the instruments they use, but also over the goals they pursue. In nearly all cases, their legal mandates leave considerable room for interpretation. The Bank of England is an outlier, in that its mandate requires that the government communicate annually its (non-binding) understanding of what price stability means.[3] In New Zealand, the central bank negotiates the ultimate target with the government.[4] Most other central banks, however, interpret their mandate themselves. The most austere mandates simply state that the central banks should pursue a price-stability objective. For example, the Bank of Japan Act states that monetary policy should be 'aimed at achieving price stability, thereby contributing to the sound development of the national economy'.[5] Despite some differences in formulation, 'currency purchasing power'[6], 'stability of the

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[3] Bank of England Act 1997, section 12.

[4] The Reserve Bank of New Zealand Act, section 9(1).

[5] Bank of Japan Act No. 89 of 1997, Article 2.

[6] Colombian Constitution of 1991, article 31.

currency'[7], 'achieve and maintain price stability',[8] goals set out in the legal mandates of other nations' central banks are similarly vague and derive their meaning from interpretation alone. This vagueness is compounded by the fact that mandates often contain multiple goals. The European Treaty assigns to the European Central Bank a primary objective of maintaining price stability and a secondary objective of supporting 'the general economic policies in the Union with a view to contributing to the achievement of the objectives of the Union'. In theory, these objectives include 'cultural and linguistic diversity' and 'peace, security, the sustainable development of the Earth'.[9] Similarly, the United States Federal Reserve is mandated to 'promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates'[10], but the mandate itself provides no guidance on how to deal with conflicts between these various goals.

Today, major central banks such as the European Central Bank and the Federal Reserve interpret their widely different legal mandates as requiring what is known as 'flexible inflation targeting' (Bernanke et al. 2001). Central banks pursue the goal of *inflation targeting*, in the sense that they see it as their primary objective to keep prices stable. Specifically, prices of consumption goods are meant to increase by no more than one to three percentage points annually, where this increase is measured over a time horizon of a few years. Central bankers are very hesitant to pursue economic policy aims that are incompatible with the inflation target.

[7] Reserve Bank Act of 1959, section 10(2).

[8] Act on the Magyar Nemzeti Bank, article 3(1).

[9] Treaty of the European Union, article 3(3) and 3(5).

[10] Federal Reserve Act 13, as amended 1977.

The inflation target is *flexible*, however; the central bank does not respond to every potential deviation. Because raising or lowering interest rates is a blunt tool that has far-reaching and unpredictable consequences, central banks are reluctant to use it. Rather, the central bank weighs the benefits of policy interventions against their cost in terms of other aims such as employment and growth. By occasionally deviating from a strict priority of price stability, a central bank creates a better trade-off between inflation, employment and economic output than if it were to mechanically follow a rule.

In making these kinds of decisions, independent central banks are responsible for momentous decisions in economic policy. This paper's introduction included a dramatic example of this in the Bank of England's decision to allow inflation to rise above target after Brexit. In contrast, the German Bundesbank did not allow inflation to rise in response to reunification, thereby causing a deep recession (Marsh 1993, 196f; Marshall 1999, 140). In pursuing a policy of flexible inflation targeting, central bankers have always made political choices. Even so, I will argue that the Global Financial Crisis marks an important shift in how we should think about central bank independence. Central bankers now pursue their policy aims with a much broader range of instruments and juggle a broader set of goals than they did before the Crisis. Before discussing these new challenges, I develop a moral framework for reflecting on the permissibility of central bank independence.

THE PERMISSIBILITY OF INDEPENDENCE

Independent central banks are created by governments. If their operations are legitimate, they are so because governments have delegated their authority over monetary policy to them. In this section, I ask under what conditions it is permissible for democratic governments to delegate monetary policy to an independent central bank. I criticize the view that political choices should never be left to unelected officials. Instead, I argue it should be left to elected governments to decide where delegation is required. Governments should do this by weighing competing considerations of economic sovereignty and the quality of monetary policy. If the government can justify its decision to delegate, then the powers of central banks are legitimate.

As far back as 1964, economist Paul Samuelson testified to the US Congress that the independence of the Federal Reserve was incompatible with the ideals of democratic government:

> There can never be a place in American life for a central bank that is like a Supreme Court, or 1831 House of Lords—truly independent, dedicated to the public weal but answerable for its decisions and conduct only to its own discretion (US Congress 1964, 1105)

Because experts are unelected, Samuelson thinks, their decisions should in the final instance be accountable to, and reversible by, democratic governments. I call this claim 'Samuelson's principle'.

A long tradition of critics across the political spectrum have sided with Samuelson in criticizing central bank independence.[11] In the same congressional hearings, Milton Friedman argued that the Federal Reserve should be made subject to a strict rule that would commit it to a fixed annual rate of monetary expansion (US Congress 1964, 1133–78). More recently, US lawmakers Rand Paul and Bernie Sanders together proposed tight congressional oversight of monetary policy meant to 'Audit the Fed'.[12] Progressive critics in particular have often objected to central bank independence on the grounds that it limits

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[11] For a critical discussion of John Rawls' democratic objections to central bank independence in the context of these 1960s debates, see van 't Klooster (forthcoming).

[12] See, e.g., the Federal Reserve Transparency Act (H.R. 24 and S. 2232).

the power of democratically elected left-wing governments to pursue active economic policies (Way 2000; McNamara 2002; Pixley, Whimster, and Wilson 2013).

These critics combine substantive complaints about the goals and instruments of monetary policy with objections that invoke the ideal of democratic government. Whereas substantive complaints are generally technical and based on empirical data, democratic objections tend to be vague, and the exact nature of the democratic ideal at issue is often unclear. My framework seeks to clarify the moral issues at stake in such democratic objections.

Before turning to this framework, however, I want to explain why objections to central bank independence should not invoke Samuelson's principle. Specifically, Samuelson's principle is inadequate because the delegation of political choices to unelected officials is almost unavoidable, often desirable, and, in itself, not undemocratic.

Delegation of at least some political choices is unavoidable because there are simply not that many elected officials. It is true, of course, that the number of elected officials could (and probably should) be extended, but there are limits to how many officials can be elected. In particular, there are limits to how many of those elected will have the expertise required to set monetary policy. It is of course possible to elect central bankers, but this kind of solution does not work across the board. Rigorously applied, Samuelson's principle would not only prohibit central bank independence, but also a broad range of other independent regulatory agencies such as competition and antitrust authorities, financial market supervisors, and environmental commissions. It would also prohibit the delegation of war to the military.

For similar reasons, delegation of some political choices to unelected officials is often desirable. In cases where elected officials recognise that they lack the expertise and time to make good decisions, they rightly desire to delegate powers to officials with the relevant expertise and time.

Finally, Samuelson's principle makes the permissibility of delegation a matter of constitutional principles, and thereby limits, rather than strengthens, democratic politics. This is because a government that, in its capacity as the elected representatives of the people, deems it best to delegate its monetary policy to an independent central bank, would no longer be able to do so. Moreover, Samuelson's principle also obstructs citizens from having their voice heard in shaping the political process. Independent central banks have often held strong popular support for their particular constitutional role. Rather than contributing to democratic rule, adhering to Samuelson's principle unduly limits the political options open to democratic governments.

It is this last objection that I take to be decisive from a democratic perspective. Whether or not monetary policy should be left to an independent central bank is itself a contested political issue on which citizens should have a say. The institutions of central bank independence place particularly stringent limits on the ability of governments to influence monetary policy. But monetary policy is also unique in its complexity and its impact on the lives of individual citizens. Deciding whether to delegate monetary policy brings up a wide range of practical and moral issues, and it is precisely to make this kind of difficult decisions for which governments are elected in the first place. It should be up to elected governments, drawing on supporting democratic institutions, to weigh the competing benefits, costs and risk of central bank independence. It is up to its critics to object to that justification. The final judgment is to be made in the legislative arena. If voters are unhappy with the decisions of their elected representatives, they can vote them out in favour of politicians advocating a different position.

The ideal of democratic government should thus not be interpreted as entirely prohibiting delegation to unelected officials. Neither can it simply be assumed, however, that delegation is always permissible. At the very least, as a part of democratic politics, delegation is subject to the democratic demand that governments justify their decisions. A political justification must be adequate in that it is based on plausible empirical premises and reasonable moral beliefs.

The aim of the framework I develop below is to evaluate the adequacy of such a justification. A government could have all sorts of motives for delegating monetary policy, but at least some of these will not be suitable for justifying delegation. For example, critics have argued that central bank independence is meant to surreptitiously privilege the financial industry's interest in low inflation over wider societal interests in economic growth and low unemployment (Stiglitz 1998, 2016, 145f; McNamara 2002). Justifications of central bank independence tend not to invoke such considerations, for good reason. My framework clarifies what counts as a sound justification of central bank independence.

The framework has two important features. First, it assumes that economic policy should as a rule be left to the final authority of democratic governments. This assumption, which is widely-held in democratic societies, is important because it allows me to show that in the absence of a good argument to the contrary, monetary policy should remain in the hands of elected governments.

Democratic theorists have put forward at least three types of consideration in favour of this democratic default. First, legitimacy. Elections provide governments with a mandate to act in the face of conflicting moral beliefs (Christiano 1996; Habermas 1996). Without such a mandate, citizens would rightly feel that decisions were arbitrarily imposed on them. This sentiment would also hinder the effectiveness of the policies that governments seek to enact. The second concerns information-processing (Estlund 2008; Knight and Johnson 2011; Parkinson and Mansbridge 2012). Through political parties and other institutions, elected governments are embedded in larger systems of public deliberation. This means that they receive information on a broad range of policy topics from different perspectives. More specialized, bureaucratic forms of representation limit deliberation to a narrow circle of experts. Finally, democratic procedures contribute to the substantive quality of policy (Arneson 1993). Facing regular elections, governments need to ensure that a stable coalition of voters favour their policies. This forces governments to take the interests of citizens into consideration in a way that unelected elites are not required to do.

The assumption that elected governments are best placed to represent citizens is, admittedly, optimistic (for a more pessimistic perspective, see Brennan 2016; Achen and Bartels 2016). But, the assumption is weaker than Samuelson's Principle and does not imply that governments are always best placed to represent citizens. Moreover, even on this optimistic account of democratic institutions, it is still entirely possible to justify the creation of an independent central bank. For the narrow task of setting monetary policy, central banks may simply do better than elected governments in representing citizens. If central banks have a democratic mandate, more technical competencies, and the right motivation, it is certainly possible that central banks do better all things considered. This, according to my framework, is the sort of case that governments need to make.

The question of how to design a central bank and its mandate cannot be decided in isolation from the broader economic policy goals of a government. The second important feature of my framework is that it leaves it up to governments to decide what monetary policy is to be used for and to explain how an independent central bank allows the government to achieve its goals. The framework explains when the delegation of monetary policy is an adequate means towards achieving those aims. Again, the approach delineated here reflects the status quo in which economic policy is in the hands of elected governments. It also receives support from the considerations in favour of elected governments already outlined.

According to my framework, a successful justification must balance two competing considerations. The first is one of (domestic) economic sovereignty (Krasner 1997; Dietsch 2011). Economic sovereignty is the power of elected governments to realise their economic policy aims. When a legislative body creates an independent central bank, it limits the powers of the government in two ways. First, the government gives up one of its most powerful economic policy tools. Through monetary policy, governments can potentially influence conditions in financial markets and thereby realise its economic policy aims directly. Second, monetary policy can support expenditures by increasing tax revenues and lowering borrowing costs in financial markets. Still, it is not clear that delegating monetary policy must result in a dramatic loss of economic sovereignty. A central bank that follows a mandate may pursue policies that are not very different from the preferred policies of the government. The questions to ask concerning economic sovereignty are: (i) What policies are made unavailable to the government by granting a central bank independence? And (ii) which of these policies would the government have preferred to pursue had the central bank not been independent?

The second consideration concerns the quality of monetary policy. Where delegation does lead to loss of economic sovereignty, this should be compensated by improvements to the quality of the policymaking that results from delegation. A discussion of the quality of monetary policy must explain both what a good use of monetary policy consists of and why central bankers can be expected to pursue such a policy more effectively than the government itself. Historically, government control of the money supply has had disastrous consequences on the daily lives of citizens, but so has bad policy by independent central banks. Margaret Thatcher's monetary policy, pursued in opposition to the Bank of England, wiped out 15% of British industry and led to largely avoidable job loss for 1.5 million workers (Needham 2014). The Weimar Republic's Reichsbank is infamous for its contribution to German hyperinflation between the wars. It is an issue of considerable debate whether Helmut Kohl was right to leave monetary policy to the independent Bundesbank during reunification (Marsh 1993; Marshall 1999).

Importantly, the quality of monetary policy should not only be measured in terms of its outcomes. As I will show, central bank independence can be taken to contribute to transparency and accountability, which are both valuable in their own right, as well as to support inclusive democratic deliberation. Again, it should be up to elected governments to decide how such procedural virtues should be weighed against competing outcome-based criteria. In attempting to draw lessons from historical experience, the key questions concerning quality of monetary policy are: (i) What does good policy-making consist in? And (ii) what features of an independent central bank contribute to good policy-making? In sum, a satisfactory justification of central bank independence should show that any loss of economic sovereignty is justified by an independent central bank's contribution to the quality of monetary policy. There is no simple rule for weighing these competing considerations. My claim here is that this type of decision should, in the end, be made and justified to citizens by elected governments. It is up to them to justify the decision to citizens.

CENTRAL BANKING BEFORE AND AFTER THE CRISIS

Delegating monetary policy to an independent central bank is permissible if the government can meet the demands of justification outlined in the previous section. By contrast, when existing practices can no longer be justified, they need to be reformed. In this section, I argue that traditional arguments no longer justify existing practices and that justifications along the same lines will not be successful. From this I conclude that existing practices are in need of fundamental democratic reform. Drawing on my framework, I first outline the arguments for central bank independence that are prominent in the literature. These arguments aim to establish that central bank independence does not lead to loss of economic sovereignty and improves the quality of monetary policy. The rest of the section will show how these arguments have been undermined by changes in central bank practices and the broader context of economic policy since the financial crisis. To illustrate the ways in which central banking has been transformed by the crisis, I focus on the European Central Bank, which is exceptional for not being the central bank of one country. But, the ECB is not exceptional in using new instruments and pursuing an increasingly broad range of goals. These new developments in Europe and elsewhere, I will now show, create not only considerable loss of economic sovereignty for national governments but also undermine the reasons for thinking that delegation improves the quality of monetary policy.

Central banking before the crisis

An extensive literature that justifies central bank independence is to this day part of textbooks, policy debates and academic research. My aim here is to show that the main arguments of this literature fit my framework.

Regarding economic sovereignty, arguments justifying central bank independence begin with the monetarist premise that monetary policy should aim for price stability (Friedman 1968; Bernanke et al. 2001). It is then argued that, because there can be little debate over what monetary policy should ultimately aim for, loss of economic sovereignty will be minimal. A first argument for the monetarist premise is that, as I showed in the previous section, conventional monetary policy is difficult to predict and lacks a clear distributional pattern. This makes it an ineffective tool for the purposes of allocation and distribution. If monetary policy has any use, it is for stabilizing the level of economic activity, such as, for example, maintaining price stability. Second, there are reasons to aim specifically for price stability. Stable nominal prices facilitate long-term economic planning and make the outcome of contracts, understood in real terms, fairer. Price stability also contributes to economic efficiency. Third, targeting stable prices does not preclude stabilizing other aspects of the business cycle. Deflation results from high unemployment and underutilization of economic capacity. High inflation, conversely, follows periods of low unemployment and overutilization of economic capacity. A central bank that follows a strategy of flexible inflation targeting will also pursue the general economic policy aim of macroeconomic stabilization. Finally, invoking Friedman's expectation-augmented Phillips-curve, it is argued that ignoring inflation is unsustainable. If the central bank does not take price levels into account, it may achieve short-term gains in employment and output, but changing inflation expectations will ultimately undermine the efficacy of monetary policy. In sum, according to the traditional arguments, pursuing price stability is simply a sensible part of economic policy, and an inflation-targeting independent central bank does not, therefore, reduce economic sovereignty.

Defenders of central bank independence also argue that it improves the quality of monetary policy. They draw on three important lines of argument to support this claim. One set of arguments focuses on *accountability* and *transparency* (Cukierman 1992; Bernanke et al. 2001). Accountability means being held to a clear standard in setting monetary policy. Transparency means providing a clear justification for policies. A government that controls the central bank can use monetary policy for a broad range of purposes. Because of its technical complexity, accountability and transparency of government monetary policy will be limited. An independent central bank operating on a legal mandate has a clear policy priority and needs to justify its operations in light of that priority. In this way, keeping central banks independent makes monetary policy more accountable and transparent than if left to governments.

Second, there is an argument from *moral competency*. In the context of flexible inflation targeting, to have moral competency is to be motivated in the right way to achieve price stability and other goals of monetary policy. Governments, so the argument goes, lack patience and the ability to consider long time horizons. Central bankers, in contrast, will be more adequately motivated to set monetary policy for the long-term (Blinder 1999; Issing 2002, 27). Perceived lack of moral competency also gives rise to a problem of *time-inconsistency* (Kydland and Prescott 1977). Governments will prefer low inflation in the long run, but find it difficult to make a credible commitment to price stability. In response, private economic agents anticipate, and thereby create, high inflation. By contrast, delegation to a central bank with a clear price stability mandate allows the government to commit credibly to price stability.

The third set of arguments focuses on *technical competency*. To have technical competency is to know how to achieve price stability and other goals. Deciding on monetary policy requires an understanding of the transmission mechanism. In point of fact, most elected officials lack these technical competencies, which limits their ability to judge the political issues. Although elected officials could in theory rely on empirical advice from central bankers, the more recent literature on inductive risk shows that it is often difficult to communicate inconclusive empirical evidence in a value-neutral way (H. Douglas 2009; John 2015). In these circumstances, central bank independence secures that technical competencies are effectively used in deliberation.

Central bank independence has always had its critics (Stiglitz 1998; Forder 2000; McNamara 2002), but taken together these arguments have historically been widely-accepted. I will not take a position on whether or not they should ever have been deemed adequate. Rather, I will now argue that times have changed: economic policy and the practices of monetary policy have evolved to undermine the force of the traditional arguments.

The instruments of central banking

To begin, consider the instruments of monetary policy. Before the crisis, monetary policy was largely implemented by setting short-term interest rates. The European Central Bank (or 'ECB'), on which I will focus here, fulfilled its mandate by providing a relatively fixed amount of credit, which was secured by low-risk collateral, to a small group of banks. Now, however, the ECB chooses from a far wider range of tools.

First, in the crisis, the ECB sought to save European banks from default and boost their profitability. After the bankruptcy of Lehman Brothers, the short-term credit markets in which the ECB normally set interest rates were severely disrupted. In response, the ECB started providing short-term credit in any amount requested by banks (Giannone et al. 2012). The ECB also loosened its requirements on the collateral that banks pledge for these loans. This provided more funding to troubled banks, but also involved accepting greater risk of financial losses. Through so-called 'currency swaplines', the ECB borrowed from the Federal Reserve to provide European banks with emergency loans in dollars (Allen 2013). With hundreds of billions in cheap credit, the ECB sought to improve the profitability of the banking sector and thereby boost credit provision.

Second, the ECB became an important creditor for Eurozone governments. In response to dramatic spikes in the borrowing costs of member states, the ECB reluctantly took up a role as lender of last resort in stabilizing sovereign bond markets. The ECB bought €185 billion in Greek, Irish, Italian, Portuguese, and Spanish bonds. The ECB also sent letters to individual heads of state to 'advise' them on labour market reforms and other contentious matters of economic policy. These measures were contested because article 123 of the European Treaty explicitly prohibits lending to individual Eurozone governments. In a high-profile court case, the ECB defended its operations as falling under its price stability mandate.[13]

Third, the ECB has expanded its monetary policy with so-called quantitative easing, or "QE" (Williams 2014; Lombardi and Moschella 2016; Haldane et al. 2016). In QE operations, the central bank buys financial assets to lower long-term interest rates. When the current QE programme ends in December 2018, the ECB will have spent a projected €2.6 trillion on mostly public but also private sector bonds. Quantitative easing is contested because raises the value of financial assets, ownership of which is concentrated in the top 5% of households (Bank of England 2012; Montecino and Epstein 2015). It is also feared to lead to asset price bubbles. More recently, attention has turned to the Corporate Securities Purchase Programme as a part of which national central banks purchased bonds in non-financial firms. These purchases are contested because they have the potential to increase the profitability of individual firms. National branches of the ECB have focused purchases on gas and oil companies (in Spain and Italy), and car manufacturers (in Germany). Bond purchases also feature the controversial Austrian gambling company Novomatic, the French luxury firm LVMH and the Irish low-cost

[13] German constitutional court in Karlsruhe (BvR 2728/13) and European Court of Justice (C-62/14).

airline Ryanair. Sustainable energy sources are entirely absent from the Corporate Securities Purchase Programme (CEO 2016).

The ECB is not the only central bank to have dramatically extended its range of monetary policy tools (Fernández-Albertos 2015). At the height of the crisis, the emergency credit that the Federal Reserve committed to provide totalled $7.7 trillion. All major central banks take part in swap lines and many have built up large investment portfolios as part of their policies. The size of the ECB's quantitative easing is comparable to similar programmes in the US and UK. Its operations are much smaller than those of the Bank of Japan, which currently buys 90% of newly issued government bonds and is a top-10 shareholder in 40% of companies listed on the Japanese stock market (Tomita 2018).

Debate is now picking up on the use of even more powerful unconventional tools. In theory, the central bank can increase private spending by printing money and transferring it directly to individual citizens (Turner 2015). Others argue that central banks should buy bonds from the domestic development banks to fund public infrastructure and thereby encourage economic activity.[14]

To what extent do these changes undermine economic sovereignty? While the immediate crisis measures were consequential, it is not clear that governments would have made different choices. This is not the case for the instruments that central bankers have turned to more recently. Most of these tools are far less blunt and can be used to target individual states, firms and even citizens. By leaving these powerful instruments in the hands of central banks, governments lose crucial dimension of economic sovereignty.

[14] This was, for example, proposed by the British Labour Party under the label 'People's QE'.

A government with more control over these new instruments of monetary policy will be better placed to achieve its economic policy aims.

The goals of central banking

The same is true when we consider the goals of monetary policy. In interpreting its mandate, the central bank operationalises the aims of monetary policy and determines how to deal with trade-offs between different goals. The traditional arguments assume that monetary policy is used to pursue a strategy of inflation-targeting while at most occasionally considering economic output and employment. The mandate of the European Central Bank is, as I already mentioned, general and vague where it concerns the goals of monetary policy. Before the crisis, price stability provided monetary policy with a relatively uncontested ultimate target. In 1998, the Governing Council of the ECB issued a press release specifying the ultimate target as a medium-term inflation rate below 2%. A 2003 press release modified this aim to an inflation rate below, but close to, 2%. This decision, which the Treaty does not explicitly assign to the ECB, raised few eyebrows.

The crisis has cast doubt on the importance of price stability, however, and led the ECB to juggle a much wider range of goals.

First, the ECB currently operates at the very limits of what can still be described as flexible inflation-targeting. Despite its unconventional monetary policies, the ECB has had great difficulties maintaining its target. From mid-2013 till November 2016, Eurozone inflation has been below 1% and, despite months of negative rates and asset purchases, was still at 1.2% in April 2018. Inflation finally reached 1.9% a month later, but it remains difficult to describe ECB policy over the past years as achieving the avowed 2% target.

Second, there is now much more disagreement on the social cost of inflation and the measures that are justified to maintain price stability. Economists disagree over whether current low inflation is acceptable, or whether the ECB should in fact do more, or, as the German government believes, even less. They also debate whether 2% is indeed the right target after all, or whether a higher or perhaps a lower target might be preferable (Williams 2014).

Third, the distributive consequences of monetary policy now feature much more prominently in economic policy debates (Fernández-Albertos 2015). The mandate of the ECB was developed at a time when economic inequalities were considered transient or even desirable aspects of economic growth. This is no longer the case, and, as a result, the question of the distributive effects of monetary policy is currently at the centre of economic policy debates. As already noted, quantitative easing operations increase the value of financial assets, and it is far from clear that these effects are transient (Montecino and Epstein 2015; Haldane et al. 2016). Given the nature of the monetary policy instruments currently in use, a central bank that does not take economic inequalities into account hinders Eurozone governments from pursuing progressive distributional goals.

Fourth, in the wake of the crisis, central banks have acquired a broad range of new roles that can conflict with the goal of price stability (Zsolt and Merler 2013). In the case of the ECB, I have already discussed: (1) lending to banks that lose access to market funding; (2) lending to Eurozone governments that lose access to market funding; (3) adjusting collateral policy to support banks; and (4) implementing quantitative easing operations. Other roles that I have not yet discussed include: (5) designing, approving, and monitoring financial assistance to member states; (6) supervising individual banks; (7) stress-testing the Eurozone banking sector; (8) reporting on new potential risks to financial stability; (9) surveillance of member states in line with new EU fiscal rules; and

(10) acting as an agent for EU crisis prevention funds ESFS and ESM. The ECB's stated monetary policy goals would require it to privilege price stability over other roles at all times, but it is not clear that this is now happening, nor whether this is in line with the economic policy of Eurozone governments.

Finally, there is a close interaction between decisions on instruments and goals. It can make sense to pursue the goal of price stability with one instrument, but not with another. For example, a government may prefer lending targeted at green investments to loans that merely increase the provision of mortgages. If only the latter option is available, that government may oppose pursuing price stability.

In sum, even if the monetary policy goals agreed before the crisis were relatively uncontroversial then, this is no longer the case now. As a consequence, the existing narrow mandate and its interpretation by the ECB has been, and will often be, at odds with the economic policies of Eurozone governments. Other central banks, which face similar circumstances and balance a wide range of new competencies, have been forced to confront similar questions. In the new era heralded by the financial crisis, existing institutions of central bank independence thus entail a considerable loss of economic sovereignty.

Central banking practices are unlikely to return to the pre-2008 status quo. The past decade has seen a turn away from deregulation and market-based policies towards more active economic management and government intervention. Economic inequality and financial stability are now firmly rooted in the political agenda, and for good reasons. Moreover, even for the narrow goal of price stability, it has become clear that setting short-term interest rates is not necessarily a sufficient means to achieve this. As interest rates approach 0, policymakers need to make difficult decisions on what instrument to use and what goals to pursue.

A government that can influence the goals of monetary policy will be in a much better position to achieve its economic policy aims.

The poverty of central bank deliberation

In the future, central banks will often use the instruments available to them to pursue goals that conflict with the preferred economic policies of governments. In these new circumstances, central bank independence threatens to be a considerable impediment to economic sovereignty. Following my framework, we must now ask whether this can be justified by considering the benefits of central bank independence for the quality of monetary policy. If it turns out that central banks are simply much better at dealing with their new challenges, then it would be permissible, maybe even mandatory, for governments to delegate monetary policy and refrain from interfering.

The plausibility of that possibility depends on both how one defines good monetary policy and what reasons one has to think that central bankers are best placed to make it. Evaluating this claim raises many tricky issues, for example, whether closed-group, depoliticized deliberation is to be preferred over public debate where complex issues such as monetary policy are concerned. To develop a decisive case for democratic legislation over expert rule will require a much more in-depth investigation than is possible here.[15] Instead, I will argue in this section that none of the three main lines of argument for thinking that central bank independence improves the quality of monetary policy continue to hold true.

Before 2008, central banks had clearly defined goals, which they could pursue by means of one instrument. As we have seen, central banks now have many more

[15] Chambers (2004) and Pettit (2004) argue in different ways for removing deliberation from wide public participation. Dahl (1989, 65f) and Urbinati (2010) argue against.

instruments to use in pursuit of a much less clearly defined set of goals. In addition to undermining economic sovereignty, these developments also cast doubt on the three lines of argument in favour of delegating authority to central banks.

For one, central bankers lack clear moral and technical competency to meet their new challenges. In pursuing a narrow mandate of price stability, central bankers needed a narrow set of moral and technical competencies. The crucial moral competency was to value low inflation, while the crucial technical competency was to understand the transmission mechanism. To pursue a broader range of goals, central bankers need more diverse moral and technical competencies and it is far from clear that they currently possess them. Positions on central bank boards are mainly taken up by civil servants and finance professionals. Data on twenty central banks of developed countries shows that between 1950 and 2000, 95% of board members were men and 47% had never had a job outside finance or bureaucracy (Adolph 2013, 70). Central bank positions often explicitly require such a professional background. For example, the European Treaty prescribes that 'members of the Executive Board shall be appointed […] from among persons of recognised standing and professional experience in monetary or banking matters'.[16] Central bankers will therefore have career incentives closely tied to bureaucratic and finance positions. Because inflation reduces the real value of financial assets, price stability is of particular importance to the financial industry. It is then not surprising that central bankers with a finance background prefer higher interest rates than those with a government background (Adolph 2013, 116). Finance-related career incentives may perhaps be compatible with realising a narrow price stability mandate, but they raise conflicts where wider public interests are at stake. Moreover, contemporary career

[16] Treaty on the Functioning of the European Union, article 283(2).

trajectories mean that central bankers are generally trained in a narrow set of economic policy competencies. Their technical expertise will be drawn predominantly from the discipline of economics, and, more specifically, from the fields of monetary and financial economics. Such competencies are still needed, but adequate deliberation on monetary policy in the 21st century will require a wider range of professional backgrounds.

The current situation also raises important questions of accountability and transparency (Braun and Hoffmann-Axtheim 2017; Binder and Spindel 2017). Under the status quo, central banks have extensive freedom to deliberate on the goal, strategy, and instruments of monetary policy. Such deliberation, which occurs through creative interpretations of their mandates, takes place in a closed committee and with limited democratic accountability. In the absence of a clear mandate for new policies, justifications provided for policy choices often aim at legal permissibility rather than explaining the rationale behind the choice itself.

In the absence of a clear mandate and procedure that facilitates deliberation, reasoning about monetary policy is impoverished. Consider again its distributive effects. From the perspective of existing mandates, any consideration of these effects is subordinate to the pursuit of price stability. Central bankers rarely discuss the topic of economic equality, downplay its significance, and tend to focus on its role in the transmission mechanism (Fontan, Claveau, and Dietsch 2016). Adequate deliberation on distributive effects would require weighing the costs of increased inequality against the importance of things like price stability and low unemployment. Today, however, if central bankers want to consider the distributive effects of their policies, they are forced to cloak their arguments in terms of their price stability mandate; conversely, if central bankers ignore distributive effects entirely, they unduly impoverish their moral deliberation. The interpretation of a price stability mandate is not the appropriate medium for settling these types of complex distributive issues, but ignoring them is not appropriate either.

CONCLUSION

Central banking today no longer fits the pre-crisis justifications, which were formulated in entirely different historical circumstances. These justifications no longer establish that central bank independence improves the quality of monetary policy, and does so without undermining economic sovereignty. While nothing I have said precludes central banks retaining some degree of independence, the onus is now on elected governments to rethink central bank mandates. The status quo can be reformed to introduce more democratic decision making in at least three ways. First, mandates can be amended to extend the goals of monetary policy and explain how they should be weighed against each other. Second, governments can have more say in deciding on the use of instruments and weighing conflicting goals. Third, central banks can extend their expertise and modify existing career incentives. Most likely, a combination of all three is needed. Rather than suggesting a distinct way forward, my claim here is that this decision should be left to elected governments, who represent citizens in weighing competing considerations and justifying their decision to the electorate.

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REFERENCES

Achen, Christopher H., and Larry M. Bartels. 2016. *Democracy for Realists: Why Elections Do Not Produce Responsive Government*. Princeton University Press.

Adolph, Christopher. 2013. *Bankers, Bureaucrats, and Central Bank Politics: The Myth of Neutrality*. Cambridge Studies in Comparative Politics. New York: Cambridge University Press.

Allen, William A. 2013. *International Liquidity and the Financial Crisis*. Cambridge University Press.

Arneson, Richard. 1993. 'Democratic Rights at National and Workplace Levels'. In *The Idea of Democracy*, edited by David Copp, Jean Hampton, and John E. Roemer, 118–48. Cambridge: Cambridge University Press.

Bank of England. 2012. 'The Distributional Effects of Asset Purchases'. *Quarterly Bulletin* 52 (3): 254–66.

Bernanke, Ben, Thomas Laubach, Frederic Mishkin, and Adam Posen. 2001. *Inflation Targeting: Lessons from the International Experience*. Princeton, NJ: Princeton Univ. Press.

Best, Jacqueline. 2016. 'Rethinking Central Bank Accountability in Uncertain Times'. *Ethics & International Affairs* 30 (2): 215–32.

Binder, Sarah A., and Mark Spindel. 2017. *The Myth of Independence: How Congress Governs the Federal Reserve*. Princeton University Press.

Blinder, Alan. 1999. *Central Banking in Theory and Practice*. The Lionel Robbins Lectures. Cambridge, Mass.: MIT Press.

Borio, Claudio. 2014. 'Central Banking Post-Crisis: What Compass for Uncharted Waters?' In *Central Banking at a Crossroads: Europe and Beyond*, edited by Charles Goodhart, Daniela Gabor, Jakob Vestergaard, and Ismail Ertürk, 191–216. Anthem Press.

Braun, Benjamin, and Leo Hoffmann-Axtheim. 2017. 'Two Sides of the Same Coin? Independence and Accountability of the European Central Bank'. Brussels: Transparency International EU.

Brennan, Jason. 2016. *Against Democracy*. Princeton: Princeton University Press.

Carney, Mark. 2016. 'The Spectre of Monetarism'. Speech given at the Roscoe Lecture Liverpool John Moores University. London: Bank of England. www.bankofengland.co.uk/publications/Pages/speeches/default.aspx.

CEO (Corporate Europe Observatory). 2016. 'The ECB's "Quantitative Easing" Funds Multinationals and Climate Change'. Corporate Europe Observatory. 2016. https://corporateeurope.org/economy-finance/2016/12/ecb-quantitative-easing-funds-multinationals-and-climate-change.

Chambers, Simone. 2004. 'Behind Closed Doors: Publicity, Secrecy, and the Quality of Deliberation'. *Journal of Political Philosophy* 12 (4): 389–410.

Christiano, Thomas. 1996. *The Rule of the Many: Fundamental Issues in Democratic Theory*. Westview Press.

Coibion, Olivier. 2012. 'Are the Effects of Monetary Policy Shocks Big or Small?' *American Economic Journal: Macroeconomics* 4 (2): 1–32.

Coibion, Olivier, Yuriy Gorodnichenko, Lorenz Kueng, and John Silvia. 2017. 'Innocent Bystanders? Monetary Policy and Inequality'. *Journal of Monetary Economics* 88 (C): 70–89.

Conti-Brown, Peter. 2016. *The Power and Independence of the Federal Reserve*. Princeton University Press.

Cukierman, Alex. 1992. *Central Bank Strategy, Credibility, and Independence: Theory and Evidence*. MIT Press.

Dahl, Robert. 1989. *Democracy and Its Critics*. Yale University Press.

Debelle, Guy, and Stanley Fischer. 1994. 'How Independent Should a Central Bank Be?' *Working Papers in Applied Economic Theory*. http://ideas.repec.org/p/fip/fedfap/94-05.html.

Dietsch, Peter. 2011. 'Rethinking Sovereignty in International Fiscal Policy'. *Review of International Studies* 37 (5): 2107–20.

Douglas, Alexander. 2016. *The Philosophy of Debt*. London: Routledge, Taylor & Francis Group.

Douglas, Heather. 2009. *Science, Policy, and the Value-Free Ideal*. Pittsburgh, Pa: University of Pittsburgh Press.

Dow, Sheila C. 2004. 'Uncertainty and Monetary Policy'. *Oxford Economic Papers* 56 (3): 539–61.

Estlund, David M. 2008. *Democratic Authority: A Philosophical Framework*. Princeton University Press.

Fernández-Albertos, José. 2015. 'The Politics of Central Bank Independence'. *Annual Review of Political Science* 18 (1): 217–37.

Fontan, Clement, Francois Claveau, and Peter Dietsch. 2016. 'Central Banking and Inequalities: Taking off the Blinders'. *Politics, Philosophy & Economics* 15 (4): 319–57.

Forder, James. 2000. 'Central Bank Independence and Credibility: Is There a Shred of Evidence?' *International Finance* 3 (1): 167–85.

Friedman, Milton. 1968. 'The Role of Monetary Policy'. *American Economic Review* 58 (1): 1.

Giannone, Domenico, Michele Lenza, Huw Pill, and Lucrezia Reichlin. 2012. 'The ECB and the Interbank Market'. Working Paper Series 1496. Frankfurt: European Central Bank.

Greenspan, Alan. 2004. 'Risk and Uncertainty in Monetary Policy'. *American Economic Review* 94 (2): 33–40. https://doi.org/10.1257/0002828041301551.

Greider, William. 1989. *Secrets of the Temple: How the Federal Reserve Runs the Country*. New York: Simon & Schuster.

Haan, Jakob de, and Sylvester C. W. Eijffinger. 2016. 'The Politics of Central Bank Independence'. DNB Working Paper 539. Amsterdam: De Nederlandsche Bank. https://www.dnb.nl/en/binaries/Working%20paper%20539_tcm47-350814.pdf.

Habermas, Jürgen. 1996. *Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy*. MIT Press.

Haldane, Andrew, Matt Roberts-Sklar, Tomasz Wieladek, and Chris Young. 2016. 'QE: The Story so Far'. 624. Bank of England Working Papers. Bank of England. https://ideas.repec.org/p/boe/boeewp/0624.html.

Issing, Otmar. 2002. 'Should We Have Faith in Central Banks?' London: Institute of Economic Affairs.

James, Aaron. 2012. *Fairness in Practice: A Social Contract for a Global Economy*. New York: Oxford University Press.

James, Harold. 2013. *Making the European Monetary Union*. Harvard University Press.

John, Stephen. 2015. 'Inductive Risk and the Contexts of Communication'. *Synthese* 192 (1): 79–96.

Klooster, Jens van 't. forthcoming. 'Central Banking in Rawls Property-Owning Democracy'. *Political Theory*.

———. 2018. 'Democracy and the European Central Bank's Emergency Powers'. *Midwest Studies In Philosophy* 42 (1): 270–93. https://doi.org/10.1111/misp.12094.

Knight, Jack, and James Johnson. 2011. *The Priority of Democracy: Political Consequences of Pragmatism*. Princeton University Press.

Krasner, Stephen. 1997. 'Pervasive Not Perverse: Semi-Sovereigns as the Global Norm'. *Cornell International Law Journal* 30 (3): 651–80.

Kydland, Finn, and Edward Prescott. 1977. 'Rules Rather than Discretion: The Inconsistency of Optimal Plans'. *Journal of Political Economy* 85 (3): 473–91.

Linarelli, John. 2017. 'Luck, Justice and Systemic Financial Risk'. *Journal of Applied Philosophy* 34 (3): 331–52.

Lombardi, Domenico, and Manuela Moschella. 2016. 'The Government Bond Buying Programmes of the European Central Bank: An Analysis of Their Policy Settings'. *Journal of European Public Policy* 23 (6): 851–70. https://doi.org/10.1080/13501763.2015.1069374.

Marsh, David. 1993. *The Bundesbank: The Bank That Rules Europe*. Reprinted. A Mandarin Paperback. London: Mandarin.

Marshall, Matt. 1999. *The Bank: The Birth of Europe's Central Bank and the Rebirth of Europe's Power*. London: Random House Business Books.

McNamara, Kathleen. 2002. 'Rational Fictions: Central Bank Independence and the Social Logic of Delegation'. *West European Politics* 25 (1): 47–76.

Montecino, Juan, and Gerald Epstein. 2015. 'Did Quantitative Easing Increase Income Inequality?' Institute for New Economic Thinking Working Paper Series 28. New York: Institute for New Economic Thinking. https://papers.ssrn.com/abstract=2692637.

Needham, Duncan. 2014. *UK Monetary Policy from Devaluation to Thatcher, 1967-82*. Springer.

Parkinson, John, and Jane Mansbridge. 2012. *Deliberative Systems: Deliberative Democracy at the Large Scale*. Cambridge University Press.

Pettit, Philip. 2004. 'Depoliticizing Democracy'. *Ratio Juris* 17 (1): 52–65.

Pixley, Jocelyn, Sam Whimster, and Shaun Wilson. 2013. 'Central Bank Independence: A Social Economic and Democratic Critique'. *The Economic and Labour Relations Review* 24 (1): 32–50.

Reddy, Sanjay G. 2003. 'Developing Just Monetary Arrangements'. *Ethics & International Affairs* 17 (1): 81–93.

Romer, Christina D., and David H. Romer. 2004. 'A New Measure of Monetary Shocks: Derivation and Implications'. *American Economic Review* 94 (4): 1055–84.

Stiglitz, Joseph. 1998. 'Central Banking in a Democratic Society'. *De Economist* 146 (2): 199–226. https://doi.org/10.1023/A:1003272907007.

———. 2016. *The Euro: And Its Threat to the Future of Europe*. Penguin UK.

Stock, James, and Mark Watson. 2002. 'Has the Business Cycle Changed and Why?' Working Paper 9127. National Bureau of Economic Research. http://www.nber.org/papers/w9127.

Tomita, Mio. 2018. 'BOJ Is Top-10 Shareholder in 40% of Japan's Listed Companies'. *Nikkei Asian Review*, 2018. https://asia.nikkei.com/Economy/BOJ-is-top-10-shareholder-in-40-of-Japan-s-listed-companies.

Turner, Adair. 2015. 'The Case for Monetary Finance – An Essentially Political Issue'. The 16th Jacques Polak Annual Research Conference. Washington, D.C.: International Monetary Fund.

Urbinati, Nadia. 2010. 'Unpolitical Democracy'. *Political Theory* 38 (1): 65–92.

US Congress. 1964. *The Federal Reserve System after Fifty Years: Hearings before the Subcommittee on Domestic Finance of the Committee on Banking and Currency, House of Representatives, Eighty-Eighth Congress, Second Session, on H.R. 3783*. https://fraser.stlouisfed.org/title/?id=729.

Way, Christopher. 2000. 'Central Banks, Partisan Politics, and Macroeconomic Outcomes'. *Comparative Political Studies* 33 (2): 196–224. https://doi.org/10.1177/0010414000033002002.

Williams, John. 2014. 'Monetary Policy at the Lower Zero Bound: Putting Theory into Practice'. Washington, D.C.: Hutchins Centre on Fiscal & Monetary Policy Brookings Institute.

Zsolt, Darvas, and Silvia Merler. 2013. 'The European Central Bank in the Age of Banking Union'. Breugel Policy Contribution 2013/13. Brussels: Breugel. http://bruegel.org/2013/10/the-european-central-bank-in-the-age-of-banking-union/.