

Central Bank-Led Capitalism?

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Mario Draghi rebuffed German criticism of his attempts to stem the Eurozone debt crisis on Wednesday The ECB president said it was justified for the bank to use “exceptional measures” as part of its mandate to keep prices stable in the Eurozone Angela Merkel, Germany’s chancellor, has, however, signalled support for the ECB’s intended plans [for bond purchases to reduce Spanish and Italian government borrowing costs] Jens Weidmann, Bundesbank president, said at the weekend that a policy of bond purchases would be “too close to state financing via the money press” and risked creating new problems.¹

I. INTRODUCTION

Here, in one day’s news story, is most of what concerns us in this Article: central bank policies are now routinely front page news; exceptional new measures like European Central Bank (ECB) bond purchase are justified by reference to an earlier objective of price stability; there are sharp disagreements amongst policy elites even within one country, as here between Chancellor Merkel and the Bundesbank president; much fundamental uncertainty exists about what the ECB will (dare or be allowed to) do in a changing world; and finally, there are fears that non-standard monetary policies will have ruinous consequences.

All this sits uneasily with the assumptions made in much of our political economy of the past few decades in two ways. First, political economy knew which institutions mattered and then assumed that their fixed role and stable complementarity would produce economic performance. Thus, in the varieties of capitalism literature on finance, from Hall and Soskice onward, it is (commercial) banks or stock markets that condition corporate performance and act as one of the two or three persistent institutional differentiators that define the identity of coordinated

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1. James Wilson & Claire Jones, *Draghi Rebuffs Germans Over Euro Plans*, FIN. TIMES (Aug. 29, 2012), <http://www.ft.com/cms/s/0/403e0a74-f1ec-11e1-8973-00144feabdc0.html>.

or liberal market economies.² A whole series of other financial institutions from central banks to private equity were barely discussed. Second, political economy was concerned with thirty-year spans of time, where consistent outcomes could be related to steady conditions. This can be traced back to the work of regulationists like Boyer and Aglietta on “les trentes glorieuses” and their question arising about whether and when coherence would be restored in a post-Fordist world.³ But it is reprised in the current accounts of the crisis by British authors like Crouch⁴ who are focused on the end of Anglo-Saxon “privatized Keynesianism,” inflating asset prices after the 1980s, and the corollary concern of Hay with the search for a new growth regime.⁵

There always were internal problems with this position, which was in any case questioned from the outside. The internal problems were that Amable’s⁶ empirics suggested that there were many different forms of capitalism (not just two), while Coates’s⁷ work on performance outcomes highlighted the problem that one form was not consistently associated with superior outcomes. From the outside, there were questions about how national forms fit into a globalizing world, especially when capitalism was, as Peck and Theodore argued, “variegated.”⁸ However, some of the literature on financialization⁹ was concerned with much shorter five-to-seven-year conjunctural periods and emphasized the role of noncoherence.

Since the first acute episode of financial crisis in autumn 2008, the world has manifestly changed in dramatic ways that reinforce skepticism and challenge the old assumptions of political economy. Hence this Article about central banks, whose pivotal role in post-crisis capitalism has not been adequately politically or theoretically addressed in any existing literature and can now be opened up by a conjunctural analysis that recognises uncertainty and mutability. There are several reasons why this is an intellectually and politically interesting task.

2. PETER A. HALL & DAVID SOSKICE, *VARIETIES OF CAPITALISM – THE INSTITUTIONAL FOUNDATIONS OF COMPARATIVE ADVANTAGE* (2001).

3. See MICHEL AGLIETTA, *A THEORY OF CAPITALIST REGULATION: THE US EXPERIENCE* (1987); ROBERT BOYER, *THE REGULATION SCHOOL: A CRITICAL INTRODUCTION* (1990).

4. See COLIN CROUCH, *THE STRANGE NON-DEATH OF NEO-LIBERALISM* (2011).

5. See COLIN HAY, *The 2010 Leonard Schapiro Lecture: Pathology Without Crisis? The Strange Demise of the Anglo-Liberal Growth Model*, 46 *GOV'T & OPPOSITION* 1 (2011).

6. See BRUNO AMABLE, *THE DIVERSITY OF MODERN CAPITALISM* (2003).

7. See DAVID COATES, *VARIETIES OF CAPITALISM, VARIETIES OF APPROACHES* (2005).

8. Jamie Peck & Nik Theodore, *Variegated Capitalism*, 31 *PROGRESS HUM. GEOGRAPHY* 731 (2007).

9. ISMAIL ERTÜRK, JULIE FROUD, SUKHDEV JOHAL, ADAM LEAVER & KAREL WILLIAMS, *FINANCIALIZATION AT WORK* (2008).

Central banks have become an object of controversy and public attention after being pivotally involved in crisis management, which has since 2010 increasingly involved nonstandard monetary-policy crisis measures applied on a heroic scale. For example, in December 2011 and February 2012, Mario Draghi offered one trillion euros of cheap credit to European banks.¹⁰ This is a kind of role reversal for the bankers and a bouleversement of an institution that had been recently reinvented in a technocratic paradigm. After the 1980s, central bankers became respected econocrats whose technical practice was inflation targeting via short-term interest-rate variation with freedom from political interference (or democratic accountability) justified by claims of technical mastery and neutrality.¹¹

Paradoxically, the major central banks have consolidated their power since the beginning of the crisis. The unexpected crisis should have undermined their credibility and claims to expertise. But political constraints on fiscal policy and regulatory reform have heightened the importance of monetary policy and propelled central banks into leading roles in crisis management.

Post-crisis interventions are empirically and conceptually interesting. If the interventions are nonstandard interventions, how do we understand the actions and their consequences? Central banks have gone well beyond their Bagehotian role as lender of last resort, which keeps (temporarily) illiquid banks in business, and also beyond their neo-Keynesian or Minskyian role as “mopper up” of manageable debris arising from speculative excesses before the next cycle begins.¹² Central banks after the crisis have operated in a “post-normal” world, in which “facts are uncertain, values in dispute, stakes high and decisions urgent.”¹³ Nonstandard monetary policies have relied upon improvisation, bricolage and tacit knowledge with central bankers taking on a more overt political role with, we will argue, major distributive and allocative consequences.¹⁴ Their actions need to be subjected to social criticism and brought under political control.

10. For details on the ECB's nonstandard measures, see *Monetary Policy Decisions*, EUROPEAN CENT. BANK, <http://www.ecb.europa.eu/mopo/decisions/html/index.en.html> (last visited Dec. 17, 2012).

11. Frédéric Lebaron, *Central Bankers in the Contemporary Global Field of Power: A 'Social Space' Approach*, 56 *SOCIOLOGICAL REV.* 121 (2008).

12. Gary A. Dimsky, *Why the Subprime Crisis is Different: A Minskyian Approach*, 34 *CAMB. J. ECON.* 239 (2010).

13. Jerome R. Ravetz, *What Is Post-Normal Science?* 31 *FUTURES* 647, 649 (1999).

14. EWALD ENGELEN, ISMAIL ERTÜRK, JULIE FROUD, SUKHDEV JOHAL, ADAM LEAVER, MICK MORAN, ADRIANA NILSSON & KAREL WILLIAMS, *AFTER THE GREAT COMPLACENCE: FINANCIAL CRISIS AND THE POLITICS OF REFORM* (2011).

This Article that explores these issues is organized in a relatively straightforward way. Part II provides a brief overview of the scientization of central banking and the recent return to improvization. Then, Part III focuses on the peculiarity of a new conjuncture where the central banks have gone long on no growth capitalism. Part IV provides an overview of mainstream verdicts for and against quantitative easing, while Part V presents our analysis of the distributive issues.

II. FROM SCIENTIZATION TO IMPROVIZATION

Since the first central banks were established (arguably with the Bank of England's foundation in 1694) there has always been a problematic relationship between central banking and the political system.¹⁵ The duties assigned to central banks, the methods by which they are supposed to dispatch them, and most importantly of all, the level of independence from sovereign authority that they enjoy in dispatching them, have all been subject to frequent renegotiation.¹⁶ The 1980s and 1990s were one such period of renegotiation, which brought central bankers to a pinnacle of political credibility and technocratic independence.¹⁷ This rested on the assumption that the bankers knew what they were doing as they took the credit for the conquest of inflation in the 1980s and the "great moderation" from the early 1990s.¹⁸ The narrow technical practice of this "scientized" central banking was then undermined by the unexpected financial crisis beginning in August 2007, which was met with an improvised response.¹⁹ Section A discusses central banking credibility from 1980 through 2007. Then, section B describes the reinvention and scientization of central banking. Finally, section C explains the post-

15. See Stefano Ugolini, *What Do We Really Know About the Long Term Evolution of Central Banking? Evidence from the Past, Insights for the Present* (Norges Bank Bicentenary Project, Working Paper No. 15, 2011), available at http://www.norges-bank.no/Upload/English/Publications/Working%20Papers/2011/WP_2011_15.pdf; Martin Marcussen, *The Fifth Age of Central Banking in the Global Economy* (Aug. 2006) (paper presented at the Frontiers of Regulation Conference at the University of Bath), available at http://regulation.upf.edu/bath-06/21_Marcussen.pdf.

16. Ugolini, *supra* note 15.

17. C.A.E. Goodhart, *The Changing Role of Central Banks* (London Sch. of Econ. Fin. Mkts. Grp. Paper Series, Paper No. 197, 2010), available at <http://www2.lse.ac.uk/fmg/workingPapers/specialPapers/SP197.pdf>.

18. Richard Barwell & Oliver Burrows, *Growing Fragilities? Balance Sheets in the Great Moderation* (Bank of Eng., Fin. Stability Paper No. 10, 2011), available at http://www.bankofengland.co.uk/publications/Documents/fsr/fs_paper10.pdf.

19. The "scientization" of central banking is discussed in more depth in Martin Marcussen, *Scientization of Central Banking: The Politics of A-Politicization*, in *CENTRAL BANKS IN THE AGE OF THE EURO: EUROPEANIZATION, CONVERGENCE AND POWER* 373–90 (Kenneth Dyson & Martin Marcussen eds., 2009). For improvised responses to the financial crisis from central bankers, see Claudio Borio & Piti Disyatat, *Unconventional Monetary Policies: An Appraisal* (Bank for Int'l Settlements, Working Paper No. 292, 2009), available at <http://bis.org/publ/work292.pdf>.

financial crisis and how central banks improvized their responses. The essence of the argument is that scientization provided a mechanism for recreating a central banking world insulated from democratic politics, but that the aftermath of the great crisis called much of the language of scientized central banking into question and forced leading central banks into a more overt and central policy management role.

A. Central Banking Credibility from 1980 Through 2007

Paul Volcker's 1990 lecture, titled "The Triumph of Central Banking?," included a question mark but delivered a clear message:

I am convinced that there is objective reality in my impression that central banks are in exceptionally good repute these days. I don't mean that they have become modern folk heroes. That would be too much to expect. But somehow they and their institutions command more attention and respect as key performers in the stage of economic policymaking.²⁰

This reputation rested on the claim that the central bankers now knew what to do (as they did not in the 1930s).²¹ On Milton Friedman's ninetieth Birthday, Ben Bernanke reflected on the policy mistakes of the Federal Reserve, which, as described by Friedman and Anna Schwartz in *Monetary History of the United States*, prolonged the financial crisis of 1929:

What I take from their work is the idea that monetary forces, particularly if unleashed in a destabilizing direction, can be extremely powerful. The best thing that central bankers can do for the world is to avoid such crises by providing the economy with, in Milton Friedman's words, a "stable monetary background"—for example as reflected in low and stable inflation ... I would like to say to Milton and Anna: Regarding the Great Depression. You're right, we did it. We're very sorry. But thanks to you, we won't do it again.²²

Having weathered the difficulties of currency depreciation and political wrangling around the Stability and Growth Pact immediately after the introduction of the Euro, a kind of halo effect then enveloped the newly founded ECB as the Eurozone shared in the great moderation of

20. Paul A. Volcker, *The Triumph of Central Banking?*, in THE 1990 PER JACOBSSON LECTURE 3 (1990), available at <http://www.perjacobsson.org/lectures/1990.pdf>.

21. Goodhart, *supra* note 17, at 6–18.

22. Ben S. Bernanke, Governor, Remarks at the Conference to Honor Milton Friedman: On Milton Friedman's 90th Birthday (Nov. 8, 2002) (transcript available at <http://www.federalreserve.gov/BOARDDOCS/SPEECHES/2002/20021108/default.htm>).

economic growth and price stability.²³ In May 2007, Jean Claude Trichet associated ECB policies with greater stability of the financial system arising from Economic and Monetary Union (EMU):

[H]ighly integrated and developed financial markets allow economic agents to share risks more effectively, thus improving the ability of firms and households to offset the consequences of idiosyncratic shocks that could affect the national economies of the euro area. With more integrated financial markets, the dynamic adjustments to such shocks are likely to be more similar across the euro area countries More and more research studies have recently argued in favour of a positive relationship between financial integration and financial stability.²⁴

As late as December 2008, two senior European Union (EU) officials felt comfortable writing of a “decade of success,” saying:

After 10 years, it is clear that the conduct of monetary policy [at the ECB] has been successful [A]ll nominal variables have displayed remarkable stability compared with previous decades At the same time, volatility of real variables, like output, has also moderated.²⁵

In retrospect, most of this involved a *post hoc ergo propter hoc* fallacy because the key driver of (unsustainable) prosperity was unregulated credit creation through financial innovation under a regime of light touch regulation.²⁶ And, as was argued in *After the Great Complacency*,²⁷ the central bankers were cheerleaders for financial innovation and thus major contributors to the debacle when it all inevitably went wrong.²⁸ But, their pre-2007 credibility rested on the idea that they had a new technical prac-

23. On the difficulties of the early years of the Euro, see DAVID J. HOWARTH & PETER LOEDEL, *THE EUROPEAN CENTRAL BANK: THE NEW EUROPEAN LEVIATHAN?* 156–74 (2003). On the ECB’s role in the Eurozone’s great moderation, see EUROPEAN CENTRAL BANK, *MONETARY POLICY: A JOURNEY FROM THEORY TO PRACTICE* (2006), available at <http://www.ecb.europa.eu/pub/pdf/other/monetarypolicyjourneytheorypractice2007en.pdf>.

24. Jean-Claude Trichet, President of the ECB, Speech at the Invitation of the University of Stirling: The Current State of European Financial Integration (May 11, 2007) (transcript available at <http://www.ecb.int/press/key/date/2007/html/sp070511.en.html>).

25. Marco Buti & Vitor Gaspar, *The First 10 Years of the Euro*, VOX (Dec. 24, 2008), available at <http://www.voxeu.org/article/first-ten-years-euro>.

26. ENGELEN ET AL., *AFTER THE GREAT COMPLACENCE*, *supra* note 14.

27. *Id.* The evidence supporting the assertions in the remainder of this paragraph comes from *After the Great Compliance*.

28. *Id.* at 132–46.

tice of monetary policy that could deliver the policy objective of low inflation.²⁹

B. Reinvention of Central Banking and Scientization

The new world of scientized banking did not suddenly appear. It had its roots in earlier crises. The politico-social conflict and inflation of the 1970s in high income countries provided the context within which central banking was reinvented in the 1980s.³⁰ The experience of the 1970s undermined the post-war economic orthodoxy (present everywhere outside Germany) that central banks should assist governments with growth objectives, and accept a degree of inflation as inevitable.³¹ By the end of the 1980s most major industrialized nations had begun converging toward price stability as the central goal of monetary policy conducted by independent central banks.³² The much mythologized “Volcker shock” suggested that central bank monetary policy might be the best instrument to achieve price stability.³³ Volcker’s interest rate hikes in 1979 and 1981 lost Jimmy Carter the presidency, and ignited a third world debt crisis, but were celebrated as the medicine that cured inflation.³⁴ Equally important, the central banks offered to remove key economic policy issues from the contests of democratic politics. Given the “politically charged” relations surrounding fiscal policy, Volcker said, “the relative professionalism and flexibility of central banks has by contrast seemed more impressive.”³⁵

In the 1990s, central bank independence became the ideal, with the Bank of England (BoE) adopting the reform in 1997. The ECB modelled itself upon the fiercely independent Bundesbank. And, at a stroke, central banking moved across the Eurozone, beyond democratic control. And the International Monetary Fund (IMF) promoted the model aggressively in the 1980s and 1990s as part of structural adjustment programs in the de-

29. Marvin Goodfriend, *How the World Achieved Consensus on Monetary Policy* (Nat’l Bureau of Econ. Res., Working Paper No. 13580, 2007), available at <http://cid.bcrp.gob.pe/biblio/Papers/NBER/2007/noviembre/w13580.pdf>.

30. MICHAEL MORAN, *THE POLITICS OF BANKING: THE STRANGE CASE OF COMPETITION AND CREDIT CONTROL* (1984).

31. Kenneth Dyson, *German Bundesbank: Europeanization and the Paradoxes of Power*, in *CENTRAL BANKS IN THE AGE OF THE EURO*, *supra* note 19, at 131–60.

32. Sylvester C.W. Eijffinger & Jakob de Haan, *The Political Economy of Central Bank Independence* (Princeton Special Papers in Int’l Econ., Paper No. 19, 1996), available at http://www.princeton.edu/~ies/IES_Special_Papers/SP19.pdf.

33. The combination of raised interest rates and fiscal austerity is associated with the Federal Reserve Chairman Paul Volcker between 1979 and 1983. For further information, see Iwan Morgan, *Monetary Metamorphosis: The Volcker Fed and Inflation*, 24 J. POL’Y HIST. 545–71 (2012).

34. *Id.*

35. Volcker, *supra* note 20, at 6.

veloping world.³⁶ During these transitions, independence was justified by the new technocratic credentials of central bankers.³⁷ Central bank independence in previous decades had been grounded upon the notion that the tacit knowledge of those with practical experience of markets “trumped” other knowledge in policy decisions.³⁸ The importance of tacit knowledge in financial market governance was undermined by many forces during the 1960s and 1970s: by rising professionalization of groups like economic analysts and the increasing sophistication and confidence of academic economics; by growing juridification of market regulation, which forced more formality and explicitness about rules and their enforcement; and by growing societal pressures for accountability.³⁹ The transformation of central banks into more formal regulatory agencies during the 1980s was the distilled response to all these forces,⁴⁰ and by the 1990s the typical central banker was a professionally qualified economist.

During the 1990s, central banking thus became increasingly *scientized*.⁴¹ This is not to say that monetary economics became a science in the formal sense. The increasing algebraic sophistication and use of modelling techniques within economics from the 1980s onward certainly bolstered claims to this end, and central bankers themselves frequently refer to monetary policy as a science.⁴² However, epistemologically, it nonetheless remains, as ever, a moral science rather than a relative of physics.⁴³ In speaking of scientized central banking, we follow in describing a process of Weberian rationalisation involving “an intellectualization of the world, an objectification of things via formal analysis and mathematical abstraction [and] a technical mastery via specialized practices and discourses.”⁴⁴ Absorbing norms of professional debate and evi-

36. Kenneth Dyson, *The Age of the Euro: A Structural Break? Europeanization, Convergence and Power in Central Banking*, in *CENTRAL BANKS IN THE AGE OF THE EURO*, *supra* note 19, at 1–50.

37. Marcussen, *supra* note 19, at 373–90.

38. MICHAEL MORAN, *THE POLITICS OF THE FINANCIAL SERVICES REVOLUTION: THE USA, UK AND JAPAN* (1991).

39. *Id.*

40. MORAN, *supra* note 30; *see also* MORAN, *supra* note 38.

41. Marcussen, *supra* note 15; *see also* Marcussen, *supra* note 19, at 373–90.

42. Frederic S. Mishkin, Member, Bd. of Governors of the Fed. Reserve, Speech at the Conference on Monetary Policy over Fifty Years: Will Monetary Policy Become More of a Science? (Sept. 21, 2007), *available at* <http://www.federalreserve.gov/pubs/feds/2007/200744/index.html>; Lucas Papademos, Vice President of the ECB, Speech at the Conference on Monetary Policy over Fifty Years: The Science of Monetary Policy: Past Advances and Future Challenges (Sept. 21, 2007) (transcript available at http://www.ecb.int/press/key/date/2007/html/sp070921_1.en.html).

43. PHILIP MIROWSKI, *MORE HEAT THAN LIGHT: ECONOMICS AS SOCIAL PHYSICS, PHYSICS AS NATURE'S ECONOMICS* (1991).

44. Marcussen, *supra* note 15, at 3.

dence, and endowed with professional prestige, central banks acquired some relative autonomy from interests in the markets through the process of scientization.⁴⁵ By contrast with the era of tacit knowledge, they came to have knowledge about markets that market actors did not have.⁴⁶ At the same time, the character of their professional networks, the increasingly specialized nature of the knowledge in which they dealt, and the increasingly arcane language in which they communicated with each other and with lesser beings gave them further autonomy from democratic political actors.⁴⁷

Scientitized central banks operated through the policy instrument of setting short-term interest rates as sole lender of base money via repos, with a primary objective of inflation targeting, and a lesser objective of financial stability.⁴⁸ This technical practice rested on a model of how the world worked and could be directed by interest rate changes that would influence the wider economy via the monetary “transmission mechanism”: rate changes would have a short-term impact in the money markets, including the market value of securities and the supply of credit, with a one year lag in terms of impacts on the “real economy” in terms of aggregate demand, and the confidence of individuals and firms to save and spend. Figure 1 represents this idealized world, as sketched in this case by the Bank of England.⁴⁹ On this basis, central banks could then acquire predictive capabilities via increasingly complex macroeconomic models, which would simulate the likely impact of rate changes upon key variables.

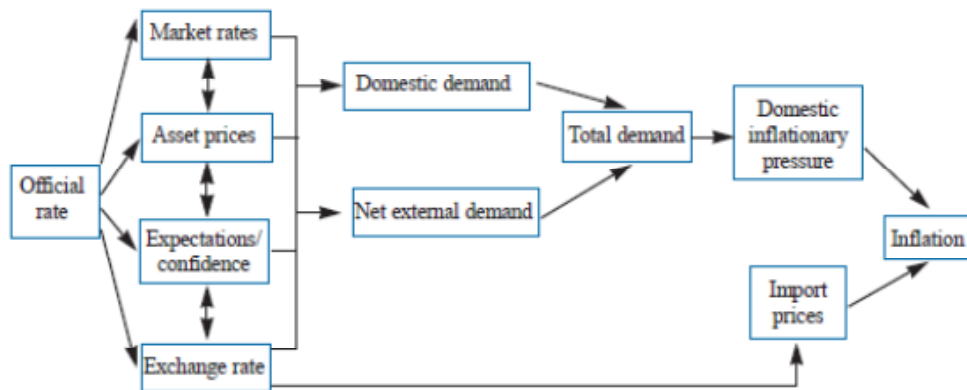
45. Marcussen, *supra* note 15; *see also* Marcussen, *supra* note 19 at 373–90.

46. *See* sources cited *supra* note 45.

47. *See* sources cited *supra* note 45.

48. Mishkin, *supra* note 42.

49. *The Transmission Mechanism of Monetary Policy*, BANK OF ENG., <http://www.bankofengland.co.uk/publications/Documents/other/monetary/montrans.pdf> (last visited Dec. 20, 2012).

Figure 1: The Transmission Mechanism of Monetary Policy⁵⁰

Additionally, central banks developed highly ritualized and regularized procedures around the formation and release of policy decisions, highlighting “transparency” and “good governance” through regular public statements and the (selective) release of meeting minutes.⁵¹ As compared to previous eras in which central bank decision making remained shrouded in secrecy, the assumption was that this signalling would instil confidence in the markets to plan for the long term, give the impression of control, and provide a level of accountability, which itself provided additional justification for insulation from political interference.⁵²

C. Post-Financial Crisis and Central Bank Improvization

This technical practice was rendered obsolete by the onset of financial crisis in 2007-2008. The problem was no longer inflation (though new interventions were often justified by invoking the old objective of price stability) and the instrument of interest rate changes was redundant because interest rates were everywhere cut toward zero without either restoring the financial system or generating an economic upturn.⁵³ With

50. *Id.* For simplicity, Figure 1 does not show all interactions between variables, but these can be important.

51. Otmar Issing, *Communication, Transparency, Accountability: Monetary Policy in the Twenty-First Century*, 87 FED. RES. BANK ST. LOUIS REV. 65 (2005).

52. Christopher Crowe & Ellen E. Meade, *Central Bank Independence and Transparency: Evolution and Effectiveness* (Am. Univ., Wash., Dep’t of Econ., Working Paper No. 2007-20, 2007), available at <http://aladinrc.wrlc.org/bitstream/handle/1961/5002/2007-20.pdf>.

53. Leonardo Gambacorta, Boris Hofmann & Gert Peersman, *The Effectiveness of Unconventional Monetary Policy at the Zero Lower Bound: A Cross-Country Analysis* (Bank for Int’l Settlements, Working Paper No. 384, 2012), available at <http://www.bis.org/publ/work384.pdf>.

interest rates at historic lows, and a hike in rates unthinkable given the shortage of retail credit and market liquidity, the normal lever of monetary policy was effectively jammed and new forms of central bank intervention were required.⁵⁴ In addition, the desire to impress bond markets and political controversy surrounding fiscal policies in the European Union, United States, and United Kingdom alike has meant their effective removal from the crisis-management option book. Central bank balance-sheet policies thereby became *the only practically available tool of intervention*, and central bankers became the leaders of crisis management.

The initial policy response from August 2007 was hesitant and the Bank of England's prevarication over the issue of moral hazard allowed a run on Northern Rock.⁵⁵ But after the failure of Lehman in autumn 2008 and the policy response of TARP,⁵⁶ U.S. and European central bankers acquired a new (and never explicit) superordinate policy objective of keeping the banks and markets going and avoiding collapse of business lending and the disruption of everyday life that would ensue from bank failure. This was not possible in Iceland, a tiny economy overwhelmed by the scale of debts of its financial sector and maybe (given the long run costs) it was not sensible elsewhere, as in the United Kingdom or Ireland. But avoiding bank failure and market default is a matter of pride, especially for central bankers like Bernanke whose careers are built on the claim that they know better. So U.S. and European central bankers rose to the challenge of proving they were not running 1930s America or a third-world country like Argentina; they attempted to prevent a crisis. They embarked on experimentation with unconventional monetary policies,⁵⁷ which ironically often overlapped with what had previously been done in dire straits by countries like Argentina.⁵⁸

From the onset of crisis, central banks did provide liquidity to the banking system under their traditional lender of last resort role. Such li-

54. *Id.*; see also Spencer Dale, Exec. Dir., Monetary Policy Comm., Bank of Eng., Speech at the Forty-Fourth Annual Money, Macro and Finance Conference at Trinity College: The Limits of Monetary Policy (Sept. 8, 2012), available at <http://www.bankofengland.co.uk/publications/Documents/speeches/2012/speech597.pdf>.

55. TREASURY COMM., THE RUN ON THE ROCK, 2007–8, H.C., (U.K.), available at <http://www.publications.parliament.uk/pa/cm200708/cmselect/cmtreasy/56/56i.pdf>

56. The Troubled Asset Relief Program (TARP) involved large-scale underpinning of failing institutions by the Federal Government. For more information on TARP, see *Troubled Asset Relief Program (TARP) Information*, FED. RES. (last updated Sept. 14, 2011), available at <http://www.federalreserve.gov/bankinfo/tarpinfo.htm>.

57. Borio & Disyatat, *supra* note 19; see also Lucia Dalla Pellegrina, Donato Masciandaro, & Rosaria Vega Pansini, *Governments, Central Banks and Banking Supervision Reforms: Does Independence Matter?* (Oct. 28, 2010), available at <http://www.suerf.org/download/collmay11/papers/1masciandaro.pdf>.

58. Roberto Frenkel & Martin Rapetti, *A Developing Country View of the Current Global Crisis: What Should Not Be Forgotten and What Should Be Done*, 33 *CAMB. J. ECON.* 685 (2009).

quidity support operations basically involved extending the scope of existing facilities by longer-term lending and by accepting poorer quality, difficult-to-value and nontradable bank assets as collateral against such lending.⁵⁹ But what Paul Fisher of the Bank of England called the “game changer” in central banking came in autumn 2008, after the collapse of Lehman Brothers.⁶⁰ The European Central Bank, too, acknowledged the “game changer” situation: “Since the intensification of the financial crisis in September 2008, the ECB has introduced a number of non-standard monetary policy measures that are unprecedented in nature, scope and magnitude.”⁶¹

The outcome was not a coherent new technical practice, but improvisation, bricolage, and a return to tacit knowledge. Central banks began adopting methods seeking to affect conditions in the monetary system by changing the balance sheets of market actors, rather than just manipulating short-term interest rates.⁶² The technical operations themselves were not novel—some are routine, for example, in foreign exchange operations, and some were already extensively used by central banks in emerging economies.⁶³ Rather, the unconventional character of the policies is their target. These new operations are commonly referred to as “balance sheet policies.” This term is used because these operations involve the use of the central banks’ balance sheet to alter private sector balance sheets through modifications of collateral, maturity and counterparty terms on monetary operations, by providing loans or buying securities and equities, funded by bank reserves.⁶⁴ But, as will be argued below, central banks manifestly lack control over what goes on with the assets they now seek to influence (as well as their signalling capabilities), as compared to their control over interest rates.

The pre-crisis paradigm of central banking involved (the appearance of) control through known instruments that would meet clear targets, with collective confidence underpinned by agreements over methods and

59. Borio & Disyatat, *supra* note 19.

60. Paul Fisher, Exec. Dir., Markets, Bank of Eng., Speech on Central Bank Policy on Collateral (Apr. 14, 2011), available at <http://www.bankofengland.co.uk/publications/Documents/speeches/2011/speech491.pdf>.

61. See *Monetary Policy Decisions*, *supra* note 10.

62. Claudio Borio, *Central Banking Post-Crisis: What Compass for Uncharted Waters?* (Bank for Int’l Settlements, Working Paper No. 353, 2011), available at <http://www.bis.org/publ/work353.pdf>.

63. Juan Pablo Paineira, *The Financial Crisis of 2007–09 and Emerging Countries: The Political Economy Analysis of Central Banks in the Brazilian and Korean Economies*, 14 *COMPETITION & CHANGE* 271 (2010); see also Kotaro Ishi, Mark Stone, & Etienne B. Yehoue, *Unconventional Central Bank Measures for Emerging Economies*, (Int’l Monetary Fund, Working Paper No. 226, 2009), available at <http://www.imf.org/external/pubs/ft/wp/2009/wp09226.pdf>.

64. *Id.* at 25.

principles. The post crisis situation is, we argue, one of *fundamental uncertainty*, in which central bank actions have diminished impact, with less experience to draw upon, less ability to predict impacts, less intellectual credibility, and less political legitimacy. Meanwhile, the effects of balance sheet operations, such as the ECB's Long Term Refinancing Operation and the U.S. Federal Reserve and Bank of England's quantitative easing, are hard to measure and their impacts are a matter of considerable political controversy.⁶⁵ Balance sheet policies opened up major disagreements within the epistemic community of financial expertise, inviting increasing incursions from nonexpert spheres of politics and civil society.⁶⁶ Replacing the past consensus is a new "consensus of dissatisfaction," with little general agreement emerging amongst academic economists, through plenty of proposals.⁶⁷ Central banks no longer control the technocrats' "problem of extension"—to whom can authority be extended as holders of reliable knowledge as a basis for decision making? Central banks have also been forced to recognise the limits of political neutrality as the allocative and distributive impacts of their actions become more explicit.⁶⁸

This means that a major problem for central banks now (particularly in the case of the ECB) is not simply creating monetary policy, but also creating the correct political alignments in which policies work "in a world of limited knowledge and ongoing mess."⁶⁹ The techno-political settlement of scientized central banking developed after the Volcker shocks is no more. But what has replaced it and with what effects? Jens Weidman of the Bundesbank has described the actions of central banks as "a convenient analgesic for prolonging an unsustainable status quo."⁷⁰ The next Part focuses on what is going on in technical terms.

III. LONG POSITIONS ON NO-GROWTH CAPITALISM

Central bankers and the mainstream commentators from the media and academia recognize that unconventional monetary policy goes beyond conventional lender of last resort bank rescue activities and open

65. In the United Kingdom, for example, debate surrounds the questions of which groups in society gain most from the policy. See *The Distributional Effects of Asset Purchases*, BANK OF ENG. (July 12, 2012), <http://www.bankofengland.co.uk/publications/Documents/news/2012/nr073.pdf>.

66. BARRY EICHENGREEN ET AL., BROOKINGS INST., *RETHINKING CENTRAL BANKING* (2011), available at <http://www.brookings.edu/~media/research/files/reports/2011/9/ciepr%20central%20banking/rethinking%20central%20banking.pdf>.

67. *Id.*

68. Harry M. Collins & Robert Evans, *The Third Wave of Science Studies: Studies of Expertise and Experience*, 32 SOC. STUD. SCI. 235 (2002).

69. ENGELEN ET AL., *AFTER THE GREAT COMPLACENCE*, *supra* note 14, at 130.

70. Jens Weidmann, *Monetary Policy is No Panacea for Europe*, FIN. TIMES (May 7, 2012), <http://www.ft.com/intl/cms/s/0/bc917f20-9607-11e1-9d9d-00144feab49a.html#axzz2FdP40f2L>.

market operations. The policies and their consequences can of course be understood in several different ways. In a first approximation we would define the unconventional policies in terms of their outcome at the central bank, which has effectively taken a long position on no-growth capitalism. This not only brackets the allocative and distributive issues that we will subsequently consider in Part V, but also highlights the technical issue that unconventional policies have produced bloated central bank balance sheets, which represent macroeconomic risks in an uncertain world. This is important in all the varieties of capitalism because it defines the economic noncoherence of the post-2007 conjuncture, which is very different from a growth regime where large scale resources would only be committed long under favorable conditions with prospects of income and capital appreciation.

The unconventional monetary policy known as quantitative easing involves purchasing assets directly from banks and financial institutions through creation of central bank reserves. This is done not just to provide liquidity to the banking system but also to inject growth into the economy.⁷¹ In the immediate aftermath of Lehman's collapse, banks stopped trusting each other and credit markets were not functioning. Consequently, the Federal Reserve started buying commercial paper and asset-backed commercial paper in the U.S. to restore financial stability; the Bank of England bought commercial paper and corporate bonds in the United Kingdom; and the European Central Bank covered bonds in the Eurozone.⁷² As the financial crisis deepened and unfolded in unexpected ways in different countries, central banks expanded their purchases of financial assets in kind and in size.⁷³ After cutting interest rates to close to zero, in early 2009 the Monetary Policy Committee (MPC) of the Bank of England voted to allow the Bank to use so-called "unconventional measures."⁷⁴ Although the central objective of monetary policy—the 2% consumer price index (CPI) target—was not changed, the instruments were now to be not resetting of interest rates but large scale purchases of assets, including corporate and government debt.⁷⁵

71. Borio, *supra* note 62.

72. *Annual Report 2011*, EUROPEAN CENT. BANK (2012), <http://www.ecb.int/pub/pdf/annrep/ar2011en.pdf>; *Asset Purchase Facility Quarterly Report*, BANK OF ENG. (Spring 2012), <http://www.bankofengland.co.uk/publications/Pages/other/markets/apf/quarterlyreport.aspx>; *Federal Reserve System Monthly Report on Credit and Liquidity Programs and the Balance Sheet*, FED. RES. (Apr. 2012), <http://www.federalreserve.gov/monetarypolicy/files/monthlyclbsreport201204.pdf> [hereinafter *Federal Reserve System Monthly Report*].

73. See sources cited *supra* note 72.

74. Bank of Eng., 52 Q. BULL., no. 4, 2012, available at <http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/qb1204.pdf>.

75. *Id.*

In the U.S., the Federal Open Market Committee (FOMC) started buying government-sponsored enterprises' debt (such as that of Freddie Mac and Fannie Mae), mortgage-backed securities, and longer-term Treasury securities.⁷⁶ In March 2010, the Bank of England started its own quantitative easing by purchasing government debt by issuing central bank money.⁷⁷ The ECB as an EU institution was not mandated to buy directly government debt in large quantities.⁷⁸ Therefore, in October 2008 it started providing unlimited liquidity to the Eurozone banks through its "enhanced credit support" programme.⁷⁹ Under this programme, the ECB provided fixed rate loans to banks for periods from one week to one year.⁸⁰ In May 2010, the ECB started buying in limited quantities of government bonds under its Securities Markets Programme.⁸¹ The euro-crisis worsened in the autumn of 2011 with downgrading of credit ratings of French banks and the French government after the yields on Italian and Spanish sovereign bonds reached 7% p.a. It was during this worsening situation that the ECB started its Long Term Refinancing Operations, providing collateralized loans of up to three years with a value of about €1 trillion to some 800 Eurozone banks, U.K. banks, and industrial companies.⁸²

Consequently, between 2008 and 2012 the balance sheets of the central banks of core capitalist countries have expanded significantly through purchases of public and private credit risk through (a) quantitative easing programmes—buying public debt through creation of central bank money; (b) collateral swaps—swapping lower quality securities of banks with higher quality government bonds; and (c) loans to banks against eligible collateral that can be anything from government bonds to residential mortgage-backed assets to loans to small and medium size enterprises (SMEs). According to the IMF calculations, the balance sheets of the Federal Reserve and the Bank of England have increased between July 2007 and January 2012 from about 5% of Gross Domestic Product (GDP), to about 20% of GDP as shown in Figure 2 below. Over the same period, the European Central Bank's balance sheet increased from about 12.5% of GDP to about 32% of GDP. The Bank of Japan's balance sheet was already big in 2007 because Japan's financial crisis

76. *Federal Reserve System Monthly Report*, *supra* note 72.

77. Bank of Eng., *supra* note 74.

78. *Annual Report 2011*, *supra* note 74.

79. *Id.*

80. *Id.*

81. *Id.*

82. For details, see *Monetary Policy Decisions*, *supra* note 10.

preceded others'.⁸³ But even in Japan, the size of the balance sheet increased from about 20% of GDP to about 32% of GDP.⁸⁴

Figure 2: Central Bank Total Assets as Percentage of Gross Domestic⁸⁵



In the United Kingdom, almost all of the central bank assets are government bonds (known as gilts). As of March 8, 2012, £291,270 million of the £291,670 million of total asset purchases under Asset Purchase Facility are gilts and £400 million are corporate bonds.⁸⁶ Since March 2009, under the Asset Purchase Programme, the Bank of England has become the major purchaser of new government bond issues in the United Kingdom, while the shares of pension funds, insurance compa-

83. INT'L MONETARY FUND, GLOBAL FINANCIAL STABILITY REPORT 4 (2012), available at <http://www.imf.org/External/Pubs/FT/GFSR/2012/01/pdf/text.pdf>.

84. *Id.*

85. The data in Figure 2 are drawn from the Federal Reserve, European Central Bank, and Bank of England for central bank total assets, and from the Bureau of Economic Analysis, Eurostat, and Office for National Statistics for GDP. Note that BoE stands for Bank of England, Euro system refers to the European Central Bank and National Central Banks of the Eurozone countries, and Fed refers to the U.S. Federal Reserve. For a PDF showing Figure 2 in color, see *Archive*, SEATTLE U. L. REV., <http://seattleuniversitylawreview.com/archive/> (last visited Feb. 22, 2013).

86. Bank of Eng., 52 Q. BULL., no. 1, 2012, at 8, available at <http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/qb1201.pdf>.

nies, and other financial institutions declined.⁸⁷ Long-term and low yielding gilts are not attractive investments for asset managers in the private sector but the Bank of England increases its long-position on a government with deteriorating budget and current account deficits. The Federal Reserve, too, has accumulated a long-position on the U.S. government by holding long-term low yielding government bonds. At the end of January 2012, about 40 per cent of the Bank of England's holdings of gilts and about 30% of the Federal Reserve's holdings of government bonds were long term.⁸⁸

The Bank of England also uses the government securities on its balance sheet to provide high quality collaterals to the financial institutions that face funding problems in interbank markets. The Special Liquidity Scheme of the Bank of England between April 2008 and January 30, 2012, when it ended, allowed the U.K. banks and building societies to swap their unmarketable mortgage-backed and other private sector securities for U.K. Treasury bills for up to three years.⁸⁹ The Special Liquidity Scheme has now become a permanent facility under the new names of Operational Standing Facility and Discount Window Facility.⁹⁰ Also, Indexed Long-Term Repo Operations were introduced in June 2010 to provide central bank reserves against collateral.⁹¹ Collaterals involved in such long positions with the risky financial institutions can be sovereign bonds and private sector securities.⁹²

As the Eurozone crisis worsened, the Bank of England signalled its willingness to increase its long position on the U.K. financial sector by introducing the Extended Collateral Term Repo Facility (ECTRF) in December 2011 and by launching £80 billion "funding for lending" programme that will provide cheap long-term funding of between £80 to £160 billion to the U.K. banks in July 2012.⁹³ Under ECTRF, the Bank of England can provide liquidity in extreme shock conditions, in the form of central bank reserves against a broader range of risky collateral.⁹⁴ With "funding for lending," Bank of England will provide cheap long-term funds to the U.K. banks if they use these funds to provide credit to the private sector and households.⁹⁵

87. INT'L MONETARY FUND, *supra* note 83, at 102.

88. *Id.* at 115.

89. Bank of Eng., *supra* note 74, at 59.

90. See *Markets*, BANK OF ENG., <http://www.bankofengland.co.uk/markets/> (last visited Dec. 20, 2012).

91. *Id.*

92. *Id.*

93. *Id.*

94. *Id.*

95. *Id.*

Since 2007, the long position of the Bank of England on the U.K. economy is not only becoming bigger, but it is also becoming riskier. The Bank of England has in place risk management practices for the collaterals it accepts. The tools the Bank of England uses are eligibility criteria for collaterals, valuations of collaterals, and the haircuts for collaterals.⁹⁶ Since market-produced information on these three variables does not exist in most cases, the Bank of England uses its own pricing models to value the collaterals.⁹⁷

The Federal Reserve and the European Central Bank, too, use their own models to value the collaterals they accept against loans they make to the risky and, in many cases, undercapitalized banks. Given that the whole Western financial system came to the brink of collapse because the markets did not know how to price risk, it is hard to believe that central banks are now precisely pricing risk even though they now hold securities worth about 25% of GDP.⁹⁸ The problem of valuation is clearly worse insofar as the securities are illiquid and poor quality. Figure 3 shows how illiquid and poor quality mortgage-backed securities had the highest share in the Federal Reserve's ballooning long position on the U.S. market until 2010, and was still just under \$1trillion at the end of 2011.⁹⁹ As the appetite of China for U.S. government debt has soured because of a deteriorating U.S. economy, the Federal Reserve has become the captive long position-holder of U.S. government debt, which was downgraded from AAA to AA+ with negative outlook by Standard & Poor's in August 2011.

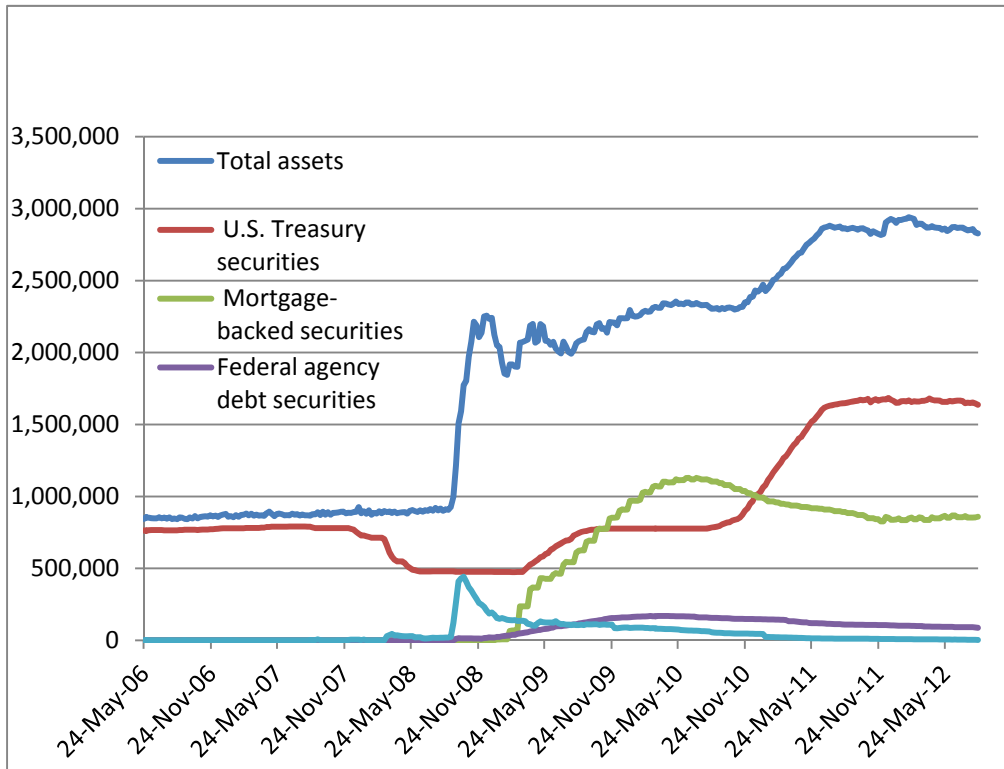
96. *Id.*

97. Bank of Eng., 51 Q. BULL., no. 1, 2011, at 59, available at <http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/qb1101.pdf>.

98. See *supra* Figure 2.

99. *Id.*

Figure 3: Major Assets on Federal Reserve Balance Sheet (in Millions of Dollars)¹⁰⁰



With the recent €1 trillion Long Term Refinancing Operations (LTRO), the ECB is providing funding for the Eurozone banks that would be unable to fund themselves in credit markets in 2012. As Figure 4 shows, the ECB's LTRO covered 63% of the 2012 maturing term debt of the Eurozone banks. In IMF's words: "The three-year ECB loans progressively came to be viewed as a crucial measure to curb the tail risk of disastrous bank failures."¹⁰¹

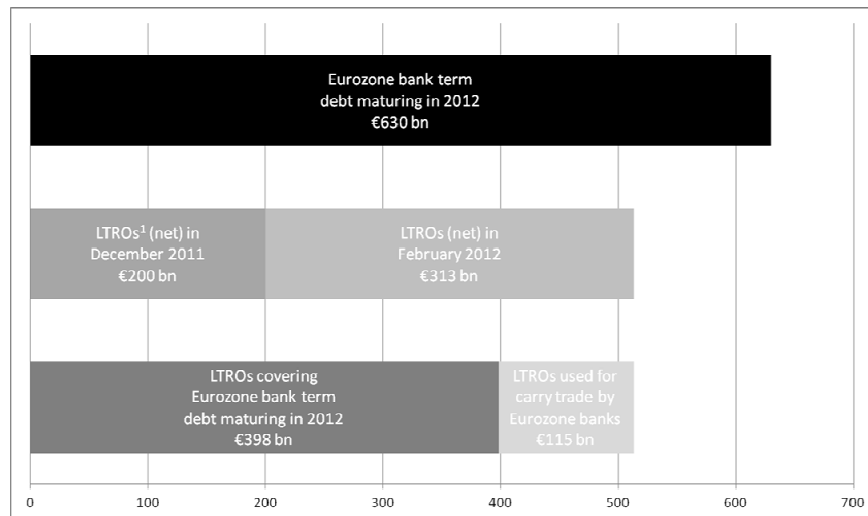
In an attempt to keep things going, the central banks now hold huge portfolios of bought-in assets (of very variable quality) that, if sold off, would disrupt everybody else's yields and capital values. This is the major investment that central bankers have made on our behalf since the

100. These data were obtained from "Factors Affecting Reserve Balances (H.4.1)" in a data download program by the Board of Governors of the Federal Reserve System. For a PDF showing Figure 3 in color, see *Archive*, SEATTLE U. L. REV., <http://seattleuniversitylawreview.com/archive/> (last visited Feb. 22, 2013).

101. INT'L MONETARY FUND, *supra* note 83, at 21.

crisis began. And it only takes us further away from the imagined world where growth and innovation are underpinned by stable institutions.

Figure 4: Long-term Financing Options (in Billions of Euro)¹⁰²



IV. QUANTITATIVE EASING: FOR AND AGAINST IN THE MAINSTREAM

The sizable presence of central banks in the long-term government securities markets may limit the room for further policy manoeuvre, and may constrain central bank flexibility in smoothly unwinding current monetary policies. This can lead to a loss of asset safety in real terms and to higher currency risks. Large-scale asset purchases can also have an adverse effect on the political incentives to improve fiscal discipline because the back stop of central bank purchases keeps interest rates and thus funding costs low.¹⁰³

Policy responses by fiscal and monetary authorities have managed to prevent substantial haircutting of the \$200tn or so of financial assets that comprise our global monetary system, yet in the process have increased the risk and lowered the yield of sovereign securities which represent its core.¹⁰⁴

102. *Id.* at 77.

103. *Id.* at 101–02.

104. Bill Gross, *A Whale in the Waters of Negative Yields*, FIN. TIMES (May 14, 2012), <http://www.ft.com/intl/cms/s/0/6686b916-9381-11e1-8c6f-00144feab49a.html#axzz2FLp6o2gy>. Bill Gross is Pimco's founder and co-chief investment officer. *Id.*

The two quotes above, from the IMF and a leading U.S. fund manager, indicate increasing mainstream concern about the consequences of unconventional policies either because the resulting central bank portfolios cannot easily be sold to allow exit without deranging the markets, or because continuing purchases will undermine fiscal discipline. As this Part shows, this skeptical verdict is challenged by some enthusiasts, confused by half-hearted attempts to measure policy effects, and endorsed by increasing numbers of mainstream pundits. This breakdown of consensus and measurability is interesting as a problem in the sociology of knowledge and also of practical importance to the rest of us.

Quantitative Easing (QE) has its supporters, especially in newspaper columns by radical centrists, such as Paul Krugman or Sebastian Mallaby of the *Washington Post* and *Financial Times*, respectively. Both agree that more quantitative easing from Bernanke will prevent prolonged recession and even a historical depression of 1930s magnitude.¹⁰⁵ Krugman proposes adding another \$2 trillion on the Federal Reserve's balance sheet by purchasing a wider range of assets including more private sector liabilities.¹⁰⁶ Mallaby does not put a number on a further and bigger quantitative easing by the Federal Reserve but he is equally bullish about increasing both the size and riskiness of its long position by urging a "quantitative easing of game-changing magnitude."¹⁰⁷ Mallaby was essentially supporting an earlier position by the president of the Federal Reserve Bank of San Francisco, John Williams, who goes a step further by advocating an open ended quantitative easing: "The main benefit from my point of view is it will get the markets to stop focusing on the terminal date [when a programme of purchases ends] and also focusing on, 'Oh, are they going to do QE3?' Instead, markets would adjust their expectation of Fed purchases as economic conditions changed."¹⁰⁸

This enthusiasm is remarkable, given that a failure of conceptualization and measurability means there is no agreement on how unconventional policies work and meagre evidence about outcomes. The Bank of England, the Federal Reserve, and others have argued that their own research supports the success of unconventional measures. In addition to controlling inflation, various authors (some independent) argue that quantitative easing and other policies have kept interest rates low, securi-

105. Sebastian Mallaby, *Show Some Real Audacity at the Fed*, FIN. TIMES (July 25, 2012), <http://www.ft.com/intl/cms/s/0/72845f10-d4d2-11e1-bb88-00144feabdc0.html#axzz2FSDL9Hfo>; Martin Wolf, *Lunch with the FT: Paul Krugman*, FIN. TIMES (May 26, 2012), <http://www.ft.com/intl/cms/s/2/022acf50-a4d1-11e1-9a94-00144feabdc0.html#axzz2FLp6o2gy>.

106. Wolf, *supra* note 105.

107. Mallaby, *supra* note 105.

108. Robin Harding, *Bleak Jobs Outlook Raises Heat on Fed*, FIN. TIMES (July 22, 2012), <http://www.ft.com/intl/cms/s/0/aa8216cc-d3ed-11e1-942c-00144feabdc0.html#axzz2FLp6o2gy>.

ty prices high and (maybe) boosted economic growth and employment.¹⁰⁹ Joyce provides a very useful summary of papers presented at a Bank of England conference whose objective was to discuss *inter alia* how unconventional monetary policy has worked and the effects on financial markets and the wider economy.¹¹⁰

Unconventional interventions by central banks have been used only infrequently: sample size is small and there is a great deal of background noise, making it hard to disentangle the effects of any particular action.¹¹¹ The argument is then prolonged because there is also no longer any expert consensus about appropriate models and techniques. A QE sceptic like the Bank for International Settlements economist Claudio Borio argues:

The mainstream analytical frameworks at policymakers' disposal are unable to incorporate the necessary elements systematically The models are, in effect, "real" models disguised as "monetary" ones. In addition, the critical influence of risk perceptions and attitudes towards risk in fuelling expansions and driving contractions is largely absent. Default, debt overhangs and the misallocation of physical capital are not meaningfully included. And the role of global factors is badly underestimated.¹¹²

There are certainly questions about the underlying theory of monetary policy and *how* exactly central bank asset purchases work (for example whether through market expectations, rather than direct adjustments to liquidity or other market features).

Against this background, the consensus of the economists is that these measures have lowered yields on treasuries and corporate bonds.¹¹³ In the U.S. case, we have articles arguing that quantitative easing did reduce yields on government bonds¹¹⁴ and may have lowered the unemployment rate in the U.S.¹¹⁵ The broader macroeconomic effects are

109. See, e.g., Michael Joyce, Bank of Eng., *Quantitative Easing and Other Unconventional Monetary Policies: Bank of England Conference Summary*, 52 Q. BULL., no. 1, 2012, at 8, available at <http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/qb120104.pdf>.

110. *Id.*

111. *Quantitative Easing: QE, or not QE?*, ECONOMIST (July 14, 2012), <http://www.economist.com/node/21558596>.

112. Borio, *supra* note 62, at 10 (internal citations omitted).

113. See sources cited *supra* note 42.

114. Canlin Li & Min Wei, *Term Structure Modelling with Supply Factors and the Federal Reserve's Large Scale Asset Purchase Programs* (Fed. Res. Bd. Fin. & Econ. Discussion Series, Working Paper No. 201237, 2012), available at <http://www.federalreserve.gov/pubs/feds/2012/201237/201237pap.pdf>.

115. Hess Chung et al., *Estimating the Macroeconomic Effects of the Fed's Asset Purchases*, FRBSF ECON. LETTER (Jan. 31, 2011), <http://www.frbsf.org/publications/economics/letter/2011/el2011-03.html>.

harder to assess, though a variety of claims have been made by central bank in-house economists at the Bank of England and the Federal Reserve that GDP was higher by some 1.5 to 2%, with concomitant benefits to employment.¹¹⁶ And, there is also some agreement amongst central banks and other economists about diminishing returns to policy with subsequent rounds of credit easing less effective than the earlier ones, possibly because markets are less frozen. A study by the Federal Reserve estimates that the second round of asset purchases by the Fed is likely to have increased GDP by no more than 0.5%.¹¹⁷

The debate about what key players need to demonstrate is clearly part technical and part political. Some of the Bank of England Monetary Policy Committee (MPC) member speeches are less circumspect than the research economists who qualify their findings. For example, both David Miles and Charlie Bean repeat the claim of a 1.5 to 2% boost to U.K. GDP from the first round of quantitative easing: “In the absence of the Bank’s asset purchases I am sure that investment and consumer spending would have been significantly weaker than they have been. Many more people would have been much worse off. Unemployment would have been even higher than it currently is.”¹¹⁸ Others argue that central bank sponsorship of research undermines most such claims, with or without qualifications. For example, Binyamin Applebaum in the *New York Times*, commenting on the U.S. evidence, writes that “It’s fair to note that the Fed itself has conducted much of this research, which is somewhat akin to pharmaceutical companies’ financing drug trials. They care enough to do the work because they have an interest in the outcome.”¹¹⁹

While some insiders can find increases in GDP, it is fairly certain that this does not come because unconventional policies have increased the supply of credit to nonfinancial businesses. In the U.K. case, most acknowledge the post-2008 failure of private sector banks to increase the availability of credit and thus support economic output. This was (belatedly) acknowledged in the design of the latest unconventional measure

116. See, e.g., Han Chen, Vasco Curdia & Andrea Ferrero, *The Macroeconomic Effects of Large-Scale Asset Purchase Programs* (Fed. Res. Bank of S.F., Working Paper No. 22, 2012), available at <http://www.frbsf.org/publications/economics/papers/2012/wp12-22bk.pdf>.

117. Li & Wei, *supra* note 114.

118. David Miles, External Member of the Monetary Policy Comm., Bank of Eng., Speech at the Manchester Business Conference: Asset Prices, Saving and the Wider Effects of Monetary Policy (Mar. 1, 2012) (transcript available at <http://www.bankofengland.co.uk/publications/Documents/speeches/2012/speech549.pdf>); see also Charles Bean, Deputy Governor for Monetary Policy of the Bank of Eng., Speech to the Scottish Council for Development and Industry: Quantitative Easing and the Economic Outlook (Feb. 21, 2012) (transcript available at <http://www.bis.org/review/r120227b.pdf>).

119. Binyamin Appelbaum, *Asset Purchases Work, at Least a Little*, N.Y. TIMES, (June 20, 2012), <http://economix.blogs.nytimes.com/2012/06/20/asset-purchases-work-at-least-a-little/>.

by the Bank of England.¹²⁰ Although in 2011 Mervyn King argued that “it was the job for the government to create incentives for lenders, not the central bank,”¹²¹ the so-called funding for lending scheme launched in July 2012 ties corporate bank participation to increases in the size of their loan books up to the end of 2013.¹²² In other words, banks can only take advantage of lower interest Bank of England funds if they increase their own lending.¹²³ The previous failure of banks either to pass on lower interest rates or to expand lending raises large questions about whether quantitative easing is above all a form of bank welfare.

There are then also the unintended consequences. Any measure that reduces interest rates has a redistributive effect from savers to (some) borrowers, whether sovereign, corporate, or private, as well as those needing to take out annuities. There is also explicit recognition that the outcomes of this central bank experiment are hugely uncertain but are likely to be inflationary in the medium term. The broad concern with unintended consequences is noted in the summary of the recent Bank of England conference:

The use of unconventional monetary policy may have a number of unintended consequences. These include, for example, financial market distortions, exit problems, and the potential loss of central bank independence and credibility Many participants discussed the links between asset purchases and fiscal policy, but there has been little theoretical work to date that looks at the interactions between the fiscal and monetary authorities in periods where the latter is making asset purchases.¹²⁴

Against this background, some policy insiders warn against expecting too much of central bank policies. The Central Bank of Japan has been employing quantitative easing now for almost two decades and the Japanese central bank governor Shirakawa recently warned against the expectations from central bank activism. Shirakawa took the position that “to raise potential economic growth isn’t the job of the central bank—it is the job of the government. But there isn’t much of an effort from either the government or the private sector to come up with a precise new tem-

120. See *supra* notes 96–98 and accompanying text (discussing the “Funding for Lending” program of the Bank of England).

121. Mervyn King, *QE Will Not Guarantee Rise in Bank Lending*, BBC NEWS (Oct. 25, 2011), <http://www.bbc.co.uk/news/business-15443610>.

122. Tanya Powley, *Funding for Lending Scheme: The Verdict*, FIN. TIMES (July 13, 2012), <http://www.ft.com/intl/cms/s/0/8432ae96-cd08-11e1-92c1-00144feabdc0.html#axzz2Fdp40f2L>.

123. *Id.*

124. Joyce, *supra* note 109, at 54–55.

plate for growth.”¹²⁵ In its 2012 Annual Report, the Bank for International Settlement (BIS) warned of the possibility of an expectations gap:

In the core advanced economies, if the economy remains weak and underlying solvency and structural problems remain unresolved, central banks may come under growing pressure to do more. A vicious circle can develop, with a widening gap between what central banks are expected to deliver and what they can actually deliver. This would make the eventual exit from monetary accommodation harder and may ultimately threaten central banks’ credibility.¹²⁶

The BIS chief economist¹²⁷ had previously raised this point about credibility and public support. And it is echoed by the IMF economist Singh, who has concerns about the collateral management at central banks holding long positions.¹²⁸ If swaps of “good” for “bad” collateral become part of the standard tool kit, this brings fiscal risks that in turn raise issues of institutional accountability and authority to engage in such operations, which are important to central bank independence in a democratic society.¹²⁹ As Claudio Borio warns, “the main challenges ahead are not analytical or technical; they are of a *political economy* nature.”¹³⁰ And the growth of such challenges is indexed by growing media unease about QE. In summer 2012, for example, a Bloomberg editorial argues that central bank credit easing comes on top of a raft of other state support for banks like JPMorgan Chase & Co to the extent that the resulting sovereign debts “now threaten the solvency of governments.”¹³¹

V. DISTRIBUTIVE EFFECTS AND DEBT MANAGEMENT FOR SOCIAL PURPOSES

The aim of this Part is to shift the focus of discussion away from what might be called technical questions about the consequences of the bloated portfolios held by the central banks and also to shift the focus toward explicitly political questions about the distributive consequences

125. Henny Sender, *BoJ's Tests to Hit Other Central Banks*, FIN. TIMES (Apr. 26, 2012), <http://www.ft.com/intl/cms/s/0/57d2998a-8f7b-11e1-98b1-00144feab49a.html#axzz2FSDL9Hfo>.

126. BANK FOR INT’L SETTLEMENT, 82ND ANNUAL REPORT: 1 APRIL 2011–31 MARCH 2012, at 48 (2012), available at <http://www.bis.org/publ/arpdf/ar2012e.pdf>.

127. Borio, *supra* note 62, at 11.

128. Manmohan Singh & Peter Stella, *Money and Collateral*, 16 (Int’l Monetary Fund, Working Paper No. WP/12/95, 2012), available at <http://www.imf.org/external/pubs/ft/wp/2012/wp1295.pdf>.

129. *Id.*

130. Borio, *supra* note 62, at 11.

131. *Dear Mr. Dimon, Is Your Bank Getting Corporate Welfare?*, BLOOMBERG (June 18, 2012), <http://www.bloomberg.com/news/2012-06-18/dear-mr-dimon-is-your-bank-getting-corporate-welfare-.html>.

of nonstandard central bank policies. At the same time, we wish to connect central bank policy with a much broader and more radical social debate about what to do with the huge overhang of public and private debt in all the high-income countries—here we wish to be less radical than those, like Hudson, who argue for debt cancellation.¹³² Instead, we argue that one key central bank objective should be managing down the public debt without assuming (as at present) that government has to repay the principal and whatever rate up to 7% or more that the markets require.

As we have already noted, there is some discussion of distribution in the mainstream debate about consequences of QE because most can see that a regime of permanently low interest rates (as promised in the United Kingdom and United States) involves transfers from savers to borrowers, which particularly affects the large group of the retired and would-be retired.¹³³ However, the debate is very muted, partly about all the confusions inherited from the 1980s, when the conquest of inflation was represented as the end of an economic distortion (not a social redistribution) and the independent central bank was represented as outside politics because it was not under the control of politicians. It is from this viewpoint that we should understand the bizarre desire of everybody from the Bank of England MPC to Bundesbank President to relate the argument for and against nonstandard policies to the objective of monetary stability (the one objective that in their cosmology is superordinate because it is beyond politics). Thus, the Bank of England presented large-scale asset purchases as part of the armory to hit the inflation target.¹³⁴ This was done in a context where concerns about deflation through asset price collapse were lively and where inflation of commodity prices moved beyond the 2% target so that the governor of the Bank of England had to write repeatedly to the Chancellor of the Exchequer (the United Kingdom's finance minister) to explain that exogenous disruptions had prevented the target being reached.¹³⁵

Against this, we argue that central banking is inherently political and cannot be taken out of politics if we understand politics as the conflict over resources inside and outside the formal political system. As

132. MICHAEL HUDSON, *THE BUBBLE AND BEYOND: FICTITIOUS CAPITAL, DEBT DEFLATION AND GLOBAL CRISIS* (2012).

133. Norma Cohen, *BoE finds QE Hurt Defined Benefit Pensions*, FIN. TIMES (Aug. 23, 2012), <http://www.ft.com/intl/cms/s/0/2262b926-ec8a-11e1-81f4-00144feab49a.html#axzz2FSDL9Hfo>.

134. Spencer Dale, Exec. Dir., Monetary Policy Comm., Bank of Eng., Remarks at the Chairman's Annual Breakfast: 2009: A Review of the Economic Year (Dec. 2, 2009) (transcript available at <http://www.bankofengland.co.uk/publications/Documents/speeches/2009/speech416.pdf>).

135. See generally *Monetary Policy*, BANK OF ENG., <http://www.bankofengland.co.uk/monetarypolicy> (last visited Dec. 19, 2012).

Epstein argues, central banks have historically been *distributive* in the sense that their policies have differential social effects, *political* in the sense that they have used their platform to promote particular interests and ideologies, and *allocative* in that their policies can affect access to credit among different types of industries.¹³⁶ After the large-scale use of nonstandard policies, these issues are not abstract and should be of concern to every citizen and household in the high-income countries. These issues are concerning because, if we take the United Kingdom as an example, the result is large, accumulating liabilities that citizens are responsible for because losses on the Bank of England portfolio would be charged to the U.K. Treasury and, in principle, recovered from the tax payer. This issue is not irrelevant because central bank action had resulted in accumulating liabilities equivalent to £12,500 per U.K. household by early 2012.¹³⁷

But, even if we assume that only a fraction of these liabilities will materialize, there are two major distributive issues that need to be widely discussed: first, the practice of bank welfare, which serves the private interest of bankers; and second, the possibility of debt cancelation or debt management, which serves the public interest. These two issues lead to a third important issue: reengineering or socializing debt management.

A. Banker Welfare Through Central Bank Policies

As we have already noted, nonstandard monetary policies have done very little to increase the flow of credit into the nonfinancial economy, but we now add they have sustained an on-going system of bank welfare month by month to the present day. The crisis of autumn 2008 was met with emergency one-off welfare as bail outs, guarantees, and injections were applied to prevent the collapse of banks and market: in the U.K. case, the IMF calculated the direct “up front financing costs” to the tax payer were £289 billion¹³⁸ and, on Centre for Research on Socio-Cultural Change (CRESC) calculations, this cost is substantially larger than taxes paid and collected in the five years before the crisis.¹³⁹ But

136. Gerald Epstein, *Central Banks as Agents of Economic Development* 6 (Pol. Econ. Research Inst., Working Paper No. 104, Sept. 2005), available at http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1083&context=peri_workingpapers.

137. GRAHAME ALLEN, ECON. POLICY & STATISTICS SECTION, SN/EP/4997, QUANTITATIVE EASING (2012), available at www.parliament.uk/briefing-papers/SN04997.pdf.

138. MARK HORTON ET. AL., INT’L MONETARY FUND, SPN/09/21, THE STATE OF PUBLIC FINANCES: A CROSS-COUNTRY FISCAL MONITOR (2009), available at <http://www.imf.org/external/pubs/ft/spn/2009/spn0921.pdf>.

139. CTR. FOR RESEARCH ON SOCIO-CULTURAL CHANGE, AN ALTERNATIVE REPORT ON UK BANKING REFORM (2009), available at <http://www.cresc.ac.uk/sites/default/files/Alternative%20report%20on%20banking%20V2.pdf>.

nonstandard policies then instituted a system of sustained support for investment banking because they made it easier (and more profitable) for investment bankers to trade and generate turnover that underwrote their continued employment at huge salaries.

The mechanics of this system of banker welfare through central bank policies can be briefly explained. As we have argued elsewhere,¹⁴⁰ investment banking after the early 1990s was about long complex chains of transactions where the individual banker at a node took a clip on the one transaction and booked a profit, which was a claim on the wages fund available to all investment bankers in his or her firm. Investment bankers collectively within each firm were paid on the comp ratio system so that a semi fixed proportion of net turnover (usually just under 45%) is made available as a wages fund (salaries plus bonuses).¹⁴¹ Nonstandard policies after 2009 created dealing opportunities and boosted turnover in a variety of ways: low interest rates provided cheap feedstock for dealing like the carry trades in the Brazilian and Australian currencies; asset purchases for cash or by swapping good for bad collateral injected liquidity and pledgable collateral into long chains that involved much rehypothecation.¹⁴² Hence the post-2009 paradox of huge on-going crisis in the financial markets, but business as usual for the investment bankers, who did not face either large scale redundancy or swinging cuts in their pay because nonstandard central bank policies maintained turnover in the financial markets as shown in Table 1 below. As for banking reform, that simply meant inconvenience because pay was increasingly deferred and could not be immediately taken out as cash. The profitability of the trading was lower but that hits shareholders not investment bankers. Thus, for example, in the last couple of years at Barclays, the profit as return in equity is no more than 6% or less than half the firm's pre-crisis levels, but investment bankers collectively within the firm are still getting 43 to 46% of net turnover in the Barclays Capital division.¹⁴³

As might be expected in an era of shareholder value, the post-2009 internal division between shareholder profits and investment banker wages has become a matter of media comment and criticism. The *Financial Times* recently produced a graphic showing how from 2006 to 2011 staff costs relative to profits (retained and distributed earnings) have in-

140. *Id.*

141. *Id.* at 7, 46–47.

142. See, e.g., Mary Watkins, *Banks Embark on Debt Buyback Spree*, FIN. TIMES (Oct. 10, 2012), <http://www.ft.com/intl/cms/s/0/e27aea00-12b7-11e2-aa9c-00144feabdc0.html>.

143. Ctr. for Research on Socio-Cultural Change, *The Madness of Barclays* (July 9, 2012) (background briefing), available at <http://www.cresc.ac.uk/publications/the-madness-of-barclays>.

creased at 12 of 13 major banks in the U.S. and Europe.¹⁴⁴ But the larger issue about the public interest figures is that no one makes the connection to nonstandard central bank policies, which have created a new and hugely expensive system of bank welfare even as social welfare is being cut back in many debt-burdened countries like the United Kingdom. Under present nonstandard policies, which put a floor under high levels of remuneration for investment bankers, the order of priorities is investment bankers first, shareholders a poor second, and the public nowhere, even though taxpayers are either paying for or are liable for everything that the central bankers do.

Table 1: Percentage Distribution of the Pool of Net Profits and Staff Cost¹⁴⁵

	Staff pay		Retained earnings		Dividends	
	2006	2011	2006	2011	2006	2011
Barclays	63%	79%	16%	16%	21%	5%
BNP Paribas	57	72	24	22	19	6
Citigroup	58	70	21	30	21	0
Credit Suisse	49	87	43	7	8	6
Deutsche Bank	67	73	22	23	12	4
Goldman Sachs	64	83	33	12	3	5
HSBC	54	54	26	27	20	19
JP Morgan Chase	59	62	26	30	15	8
Morgan Stanley	65	89	29	9	6	2
Société Générale	61	80	35	20	4	0
UBS	58	79	31	19	11	2

If current nonstandard policies do sustain the wrong distributive priorities, what is the radical alternative and what should the central bank be doing? This is an important question because, if the present conjuncture is—for better or worse—one of central bank-led capitalism, this opens up new economic and political possibilities of political direction and control where the distributive priorities and consequences of central

144. Patrick Jenkins & Patrick Mathurin, *Bank Staff Costs Take Bigger Share of Pot*, FIN. TIMES (June 5, 2012), <http://www.ft.com/intl/cms/s/0/d4fe3186-ac0d-11e1-a8a0-00144feabdc0.html> (the graphic is located in the left toolbar and says Click to enlarge).

145. Patrick Mathurin et. al., *Sharing Banks' Spoils*, FIN. TIMES (June 5, 2012), <http://www.ft.com/intl/cms/s/0/05a16196-ac13-11e1-a8a0-00144feabdc0.html>.

bank policy are made explicit. And in thinking about these possibilities, we need to review historical experience and think divergently.

B. Cancellation of Sovereign Debts

Any brief examination of history shows that large sovereign debts are not new; they have previously arisen from war, state follies, and other mismanagement. These positions have been unwound in several ways including: fiscal restraint to pay back the debt; explicit default where, by agreement or by decree, the state cancels the debt; or implicit default through inflation, which reduces the real size of the liabilities. By default, the latter policy of allowing inflation to erode the value of principal and interest is easiest and it was central to the recovery of high-income indebted countries like the United Kingdom and United States after 1945. In an era of nearly unquestioned public rhetorical commitment to sound money—and when politicians and central bankers fear the judgement of the credit markets—there has been little discussion of relaxing tactical inflation. Yet, even a minor increase in inflation targets from 2 to 3% would have a significant effect of the scale of the debt repayment problem over a decade. And, in a country like the United Kingdom, commodity inflation, which is actually running well ahead of 2%, has already made a modest contribution to diminishing our problems. But inflation remains the passive default solution and we must also consider whether more active policies of debt cancellation or management are practicable.

The supporters of radical debt cancellation include Michael Hudson, David Graeber and Robert Skidelsky who draws on the elegant macroeconomic arguments of John Geanakoplos who has made a strong case for debt cancellation to clean up bank and household balance sheets.¹⁴⁶ Of course, the idea of cancelling or even ‘forgiving’ debts comes with a moral aura that connects debt with sin and lending as usury and the historical precedents come partly from Biblical times. The anthropologist Graber¹⁴⁷ ends his book by recommending “some kind of Biblical-style Jubilee” for international and consumer debt that would wipe the slate clean for everyone and “mark a break with our accustomed morality.”¹⁴⁸ But debt cancellation is not simply the preserve of libertarian moralists. It appeals also to those working in the Keynesian tradition. Thus, Skidelsky argues that writing off public debt would benefit lenders and borrowers as well as the “citizens whose livelihoods are being destroyed by gov-

146. See HUDSON, *supra* note 132; see also *infra* notes 154–57 and accompanying text.

147. DAVID GRAEBER, *DEBT: THE FIRST 5,000 YEARS* 390 (2011).

148. *Id.* at 391.

ernments' desperate attempts to de-leverage."¹⁴⁹ In doing so, he deliberately echoes Keynes' call for cancellation of inter-Allied debts arising from WWI.¹⁵⁰ Some hard-headed practitioners within the financial sector are also raising the issue of cancellation in a world where the central bank has large holdings of Treasuries and one arm of government is straining to pay interest to another. Jim Leaviss of M&G Investments argues for the "cancellation" of the £300 billion or more of gilts held as intra-government debt because the gilts are unlikely to be sold and there is no point in the Treasury paying interest to itself.¹⁵¹ As Leaviss concludes, in a rather different moral register from Graeber, although this sounds "a bit banana republicy[,] everyone's a winner."¹⁵²

While debt cancellation seems attractive in many ways, there are formidable difficulties in its implementation and ironically the most formidable difficulties arise from the financial system that the banks have created in the past twenty years. There is a huge difference between debt cancellation in the 1940s for state debt (much of it owed to overseas creditors) and debt cancellation in the 2010s when long chains connect the balance sheets of central banks, commercial banks, and other institutions including pensions and other funds. In the 1940s case, the foreign rentier takes the hit. In the 2010s case, with complex financial instruments and long-chain transactions, cancelling debt held by the central bank would have all manner of unintended consequences and cause unplanned failures elsewhere. And private repudiation would most likely cause domino bank failure. It is certainly not easy to cancel securities of a particular class held by the central bank if securities of this class are also held by private institutions. In this case, debt write-offs would trigger default clauses on bonds and credit default swaps ultimately owned by insurance companies, pension funds, and others. Thus large scale public debt cancellation would have significant effects at corporate and household levels, leading to renewed financial and macroeconomic destabilization. Furthermore, the existence of long chains greatly complicates the mobilization around identity, which is the political precondition of debt forgiveness. We no longer have debtor peasants and rentier aris-

149. Robert Skidelsky, *Is Debt Forgiveness a Way Out of the Eurozone Crisis?*, SOC. EUROPE J. (Apr. 19, 2012), <http://www.social-europe.eu/2012/04/is-debt-forgiveness-a-way-out-of-the-euro-zone-crisis/>.

150. JOHN MAYNARD KEYNES, *THE ECONOMIC CONSEQUENCES OF THE PEACE*, at ch. VII (1919).

151. Jim Leaviss, *If the Government Simply Cancelled the £300bn+ of QE Gilts Held by the BoE, Who Would be Unhappy?*, BOND VIGILANTES (Apr. 11, 2012), <http://www.bondvigilantes.com/2012/04/11/if-the-government-simply-cancelled-the-300-bn-of-qe-gilts-held-by-the-boe-who-would-be-unhappy/>.

152. *Id.*

ocrats, but rather debt that has been recycled many times. And the simple option of cancellation at retail source would produce anomalies about winners and losers.

However, if debt cancellation is problematic, this implies a need to reframe the problem and possible solutions in more imaginative ways. Why not manage the debt for explicitly social objectives so as to obtain many of the advantages of debt cancellation while avoiding further systematic instability that would result or the kind of state authoritarianism that would be required to enforce cancellation. An alternative concept of socialised debt management has to start pragmatically from two basics. First, societies cannot easily repay interest and principal and the superordinate aim should be to reduce repayments so that the state can do things other than service debt from needlessly high taxes. Second, nonstandard policies have created a new space for social management because central banks have acquired a pile of low-grade debt and government assets and (if interest rates are low) the task of central bankers is to reengineer maturities and who holds the bonds so as to reduce the cost and risk of repayment.

C. Reengineering or Socialized Debt Management

The simplest reengineering is to reduce the burden by deferring repayment of principal, for which there is British precedent in World War II. Reissue government securities as perpetuities or with 50 year dates and simply accept that much of our sovereign debt will never be repaid, or will be repaid so slowly that its real value is diminished by inflation. In a more innovative way, it should be possible to offer inflation indexed or GDP growth indexed fifty-year coupons. We should remember that the Anglo Saxon cult of equity began in the 1950s when the attraction was lien on GDP growth in a world of inflation. Or more creatively, swap sovereign bonds for equity in private housing stock. It is equally important to reengineer who holds the government debt in a world where the U.K. and U.S. governments are currently over-exposed to the judgement of the bond markets, which demand 7% on new loans when confidence falters. These governments need to anticipate a future where overseas bondholders no longer want to hold government paper in sterling or dollars for safe haven motives and plan for more domestic financing through institutional innovation. For example, create a financial utility organization that accepts that it will hold long-term (fifty year) sovereign bonds. These bonds could be financed by domestic bank deposits, which are currently underused in the United Kingdom because they are not being lent on, so that in 2008 the deposits at U.K. banks were twice the

value of sovereign debt.¹⁵³ In Japan, 80% of sovereign debt is effectively financed in this way.¹⁵⁴ Such arrangements could be attractive for domestic savers looking for returns if the chains are short and do not involve the predatory deductions made on all pension and insurance funds.

All this reengineering has a political precondition, which is to make the central bank democratically accountable within a formal process of political governance. Now that central banks have assumed such an important role (and implicated the rest of us in it and in paying for it) we need to think again about democratic control. The model of the 1990s independent central bank is no more because the Federal Reserve and the Bank of England are not now (and never were) scientific laboratories staffed by technocrats modelling better decisions about interest rates. Central banks have been repoliticized through their introduction of non-standard measures with reactionary distributive consequences and the solution is not depoliticization but democratic control so that expertise can be developed and harnessed for the social objective of debt management. The central bank should have multiple policy objectives including objectives for debt management and growth set by negotiation with elected politicians. And the question of what is to be done with policy instruments should be a matter of recommendation by a nonexpert citizen committee advised by bank staffers (which in the United Kingdom would replace the MPC). The citizen committee would explicitly represent heterogeneous interests including nonfinancial business, trade unions, and nongovernmental organizations, whose remit would be to make the politics of central banking explicit.

153. INT'L MONETARY FUND, *supra* note 83, at 103.

154. *Id.*