

A Thesis Submitted for the Degree of PhD at the University of Warwick

Permanent WRAP URL:

<http://wrap.warwick.ac.uk/78999>

Copyright and reuse:

This thesis is made available online and is protected by original copyright.

Please scroll down to view the document itself.

Please refer to the repository record for this item for information to help you to cite it.

Our policy information is available from the repository home page.

For more information, please contact the WRAP Team at: wrap@warwick.ac.uk

FINANCIAL STABILITY AND CENTRAL BANK

POWER:

A COMPARATIVE PERSPECTIVE

SAMUEL MCPHILEMY

SUBMITTED TO FULFIL THE REQUIREMENTS OF

DOCTOR OF PHILOSOPHY

DEPARTMENT OF POLITICS AND INTERNATIONAL STUDIES

UNIVERSITY OF WARWICK

SEPTEMBER, 2015

TABLE OF CONTENTS

LISTS OF TABLES AND FIGURES	7
ACKNOWLEDGEMENTS	8
ABSTRACT.....	9
LIST OF ABBREVIATIONS	11
1 INTRODUCTION	14
1.1 THE END OF AN ERA IN CENTRAL BANKING	14
1.2 HOW HAS CENTRAL BANK POWER CHANGED?	19
1.3 MECHANISMS OF CHANGE IN CENTRAL BANKING	24
1.4 LIMITATIONS OF THE EXISTING LITERATURE: THE 'EMPIRICAL GAP'	29
1.5 ARGUMENT IN BRIEF	36
1.6 METHODOLOGY	41
1.6.1 <i>Research design</i>	41
1.6.2 <i>Selection of case studies</i>	43
1.6.3 <i>Research methods and data sources</i>	45
1.7 PLAN OF THE THESIS	46
2 CENTRAL BANK POWER: BETWEEN DEMOCRACY AND THE MARKET	49
2.1 INTRODUCTION	49
2.2 DELEGATING FINANCIAL STABILITY POLICY	54
2.2.1 <i>Economic rationales for delegation to central banks</i>	54
2.2.2 <i>The politics of delegation</i>	61
2.3 PERSPECTIVES ON FINANCIAL POWER	69
2.3.1 <i>The economic theory of regulation</i>	71
2.3.2 <i>Macro-level regulatory capture</i>	72

2.3.3	<i>The structural power of finance</i>	74
2.3.4	<i>Accounting for variation</i>	76
2.4	OPERATIONALISING CENTRAL BANK POWER	78
2.4.1	<i>Power in theory</i>	78
2.4.2	<i>Core elements of central bank power</i>	84
2.4.3	<i>Interaction between the core elements</i>	94
2.5	CONVERGENCE, DIVERGENCE AND INSTITUTIONAL CHANGE.....	96
2.6	CONCLUSION.....	101
3	FINANCIAL STABILITY AND CENTRAL BANK POWER BEFORE 2008	105
3.1	INTRODUCTION	105
3.2	THE MACRO-HISTORY OF CENTRAL BANKING.....	108
3.2.1	<i>Emergence, 1668 - 1873</i>	108
3.2.2	<i>The international gold standard, 1873 - 1914</i>	110
3.2.3	<i>Subordination to government control, 1933 - 1971</i>	114
3.2.4	<i>Orthodoxy restored, 1989 - 2007</i>	115
3.3	THE FEDERAL RESERVE	120
3.3.1	<i>Emergence and pre-history</i>	120
3.3.2	<i>Subordination to government control</i>	123
3.3.3	<i>Orthodoxy restored</i>	126
3.4	BANK OF ENGLAND	129
3.4.1	<i>Emergence and early history</i>	129
3.4.2	<i>Subordination to government control</i>	131
3.4.3	<i>Orthodoxy restored</i>	133
3.5	THE EUROPEAN CENTRAL BANK.....	138
3.5.1	<i>Emergence</i>	138
3.5.2	<i>Pre-crisis years</i>	140

3.6	CONCLUSION.....	143
4	HOW HAS CENTRAL BANK POWER CHANGED?.....	147
4.1	INTRODUCTION.....	147
4.2	DELEGATED AUTHORITY	151
4.2.1	<i>Microprudential policy</i>	151
4.2.2	<i>Macroprudential policy</i>	157
4.2.3	<i>Crisis management</i>	161
4.3	FORMAL AUTONOMY.....	167
4.3.1	<i>Ex ante constraints</i>	168
4.3.2	<i>Ex post control mechanisms</i>	171
4.4	DE FACTO AUTHORITY	174
4.4.1	<i>Relations with financial markets</i>	177
4.4.2	<i>Relations with legislatures</i>	184
4.4.3	<i>Relations with executives</i>	188
4.5	CONCLUSION.....	194
5	MECHANISMS OF CHANGE IN CENTRAL BANKING.....	199
5.1	INTRODUCTION.....	199
5.2	A TRANSGOVERNMENTAL EPISTEMIC COMMUNITY	204
5.3	CENTRAL BANKS AS DOMESTIC POLICY ENTREPRENEURS	210
5.3.1	<i>Reforming US financial regulation</i>	210
5.3.2	<i>Reforming UK financial regulation</i>	216
5.3.3	<i>Reforming EU financial regulation</i>	221
5.3.4	<i>Summary</i>	229
5.4	THE ROOTS OF CENTRAL BANKS' AUTHORITY: STRUCTURAL POWER	230
5.4.1	<i>Dependency of market participants on central banks</i>	232
5.4.2	<i>Dependency of incumbent politicians on central banks</i>	243

5.5	CONCLUSION.....	250
6	CONTEMPORARY DYNAMICS OF CENTRAL BANKING	257
6.1	INTRODUCTION.....	257
6.2	INTERMEDIATE OBJECTIVES AND POLICY CHOICES	261
6.2.1	<i>Resilience versus countercyclicality?</i>	261
6.2.2	<i>Observed approaches</i>	264
6.2.3	<i>Fit for purpose?</i>	269
6.3	STYLES OF POLICY IMPLEMENTATION	271
6.3.1	<i>Rules versus discretion</i>	271
6.3.2	<i>Observed approaches</i>	274
6.3.3	<i>Rules, discretion and transparency</i>	279
6.4	POLICY COORDINATION.....	281
6.4.1	<i>Domestic (and regional) regulatory environments</i>	282
6.4.2	<i>International regulatory environment</i>	287
6.4.3	<i>Macroeconomic environment</i>	295
6.5	CONCLUSION.....	302
7	CONCLUSION	307
7.1	SUMMARY OF FINDINGS.....	308
7.1.1	<i>The Federal Reserve</i>	310
7.1.2	<i>The Bank of England</i>	315
7.1.3	<i>The European Central Bank</i>	319
7.2	IMPLICATIONS OF THE STUDY	323
7.2.1	<i>Understanding change in central banking</i>	323
7.2.1.1	<i>Will the enhanced power of central banks endure?</i>	327
7.2.1.2	<i>Towards a central bank legitimacy crisis?</i>	330

ANNEX 1: LIST OF INTERVIEWS 334

BIBLIOGRAPHY 337

LISTS OF TABLES AND FIGURES

TABLES

TABLE 1: A TYPOLOGY OF CENTRAL BANK POWER.....	93
TABLE 2: ADVANCED ECONOMY CENTRAL BANKS - DATES OF ESTABLISHMENT	110
TABLE 3: DELEGATED AUTHORITY COMPARED	166
TABLE 4: FORMAL AUTONOMY COMPARED	174
TABLE 5: DE FACTO AUTHORITY COMPARED	194
TABLE 6: BASEL II AND BASEL III CAPITAL REQUIREMENTS (% OF RWAs)	290
TABLE 7: POLICY COORDINATION COMPARED	302

FIGURES

FIGURE 1: INTERACTION BETWEEN CORE ELEMENTS OF CENTRAL BANK POWER.....	95
FIGURE 2: RISK WEIGHTED CAPITAL REQUIREMENTS AND TRANSITIONAL PERIODS (% RWAs)	291

ACKNOWLEDGEMENTS

It's hard to know how to begin thanking all the people that have helped me along the way to completing this thesis. I owe an enormous debt of gratitude to my supervisors: André Broom, Lena Rethel and Colin Thain. André has been a fantastic academic mentor, *consigliere* and friend throughout the PhD process. I am especially grateful to him for inviting me to cross the West Midlands with him when he transferred from Birmingham to Warwick in 2013. I am also very grateful to Lena. Without Lena's insights and constructive criticism, the thesis would probably never have been written. Finally, I would like to thank Colin at the University of Birmingham. Colin introduced me to much of the literature that has shaped my thinking on finance and regulation. He also gave me great support in publishing my first journal article, for which I am extremely grateful.

I have been fortunate to be part of two vibrant PhD communities, POLSIS in Birmingham and PAIS in Warwick. It has been a pleasure working alongside fellow PhD travellers including Liam Stanley, Amin Samman, Charlotte Galpin, Mathew Cooke, Matt Kranke among many others. My PhD experience was made possible by the ESRC, which awarded me a 1+3 studentship. The ESRC provides aspiring scholars with superb opportunities to pursue their academic ambitions in financial security. Long may it continue!

I would also like to express my thanks to my friend and colleague John Roche. In 2013, John and I co-authored a report for the European Parliament on the functioning of the European Systemic Risk Board – the EU's macroprudential oversight body. This was an opportunity that opened up doors across the world of European financial regulation. I'm very grateful to John for initially spotting the call for tenders on the European Parliament website and for inviting me to help him bid for, and write, the report.

Over the last four years, I have met many central bankers and others working in and around the world of financial regulation and supervision. I am grateful to all those who gave up their time to talk to me. I am especially grateful to Clive Briault, who took part in the ESRB project and has been a source of many insights into the world of financial regulation. Clive used to be the managing director of the Financial Services Authority; these days he is an authority in his own right! I would also like to thank David Green, another ex-FSA official. Not only was David happy to recount his experiences from the FSA, he also helped me secure interviews with central bankers around the world and even helped me in my post-PhD job search.

Last but not least, I would like to thank my wife, Karla; my two daughters, Anna and Luzia; and my parents, Kathleen and Sean. To say I couldn't have done it without Karla's love and sacrifice would be an understatement. The same is true for my parents. As for the girls, they'll soon have their dad back on the weekends... I promise!

ABSTRACT

This thesis provides a comparative analysis of how the power of the United States Federal Reserve, the Bank of England and the European Central Bank has changed as a consequence of the reorientation of central banking towards financial stability since the global financial crisis. Drawing on a wide range of primary and secondary sources, including more than 30 interviews with central bankers and other public officials, the thesis demonstrates that to different extents, each of these organisations has exhibited a more authoritative relationship with its key interlocutors in recent years. The thesis attributes this variegated transformation to the policy entrepreneurship of transgovernmentally networked central bankers, who acted in concert with sympathetic executive politicians to operationalise new 'macroprudential' policy frameworks after the financial crisis. Central bankers' collective policy entrepreneurship was guided by shared normative beliefs about their appropriate role in respect of financial stability, but their embrace of macroprudential ideas was far from uniform. Central bankers in each jurisdiction pursued subtly different policy objectives within idiosyncratic political, cultural and institutional terrains, leading to distinctive local varieties of reform. The thesis argues that central banks' heightened authority since the financial crisis has been underpinned by an increase in their structural power, which owed to the heightened reliance of politicians and financial market actors on central banks' unique ability to create new base money. It also demonstrates how transformations in central banks' authority and structural power feed into

their overall capacity to achieve their financial stability objectives. The thesis argues that in the post-crisis regulatory framework, central banks are at risk of underdelivering on their mandates. A bias towards inaction in the face of uncertainty and insufficient willingness to break with pre-crisis economic tropes threaten to undermine central banks' efforts to maintain financial stability over the medium term.

LIST OF ABBREVIATIONS

AIG	American Insurance Group
AQR	Asset Quality Review
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
BU	Banking Union
CBI	Central Bank Independence
CEBS	Committee of European Banking Supervisors
CEO	Chief Executive Officer
CFTC	Commodities Futures Trading Commission
CPE	Comparative Political Economy
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
DFA	Dodd-Frank Act
EBA	European Banking Authority
EC	European Commission
ECB	European Central Bank
EIOPA	European Insurance and Occupational Pensions Authority
ECON	Committee on Economic and Monetary Affairs
ESA	European Supervisory Authority
ESCB	European System of Central Banks
ESFS	European System of Financial Supervision
ESM	European Stability Mechanism
ESMA	European Securities and Markets Authority

ESRB	European Systemic Risk Board
EU	European Union
FCA	Financial Conduct Authority
FDIC	Federal Deposit Insurance Company
FPC	Financial Policy Committee
FRBNY	Federal Reserve Bank of New York
FRS	Federal Reserve System
FSA	Financial Services Authority
FSAP	Financial Services Action Plan
FSB	Financial Stability Board
FSOC	Financial Stability Oversight Council
GAO	Government Accountability Office
IMF	International Monetary Fund
LOLR	Lender of Last Resort
MM	Modigliani-Miller
NCA	National Competent Authority
OFR	Office of Financial Research
OIG	Office of Inspector General
OLA	Orderly Liquidation Authority
OMT	Outright Monetary Transactions
OCC	Office of the Comptroller of the Currency
PRA	Prudential Regulation Authority
QE	Quantitative Easing
RWA	Risk-Weighted Assets

SEC	Securities and Exchange Commission
SIFI	Systemically Important Financial Institution
SMP	Securities Markets Programme
SSM	Single Supervisory Mechanism
SRM	Single Resolution Mechanism
TARP	Troubled Assets Relief Programme
TALF	Term Auction Loan Facility
TEU	Treaty on European Union
TFEU	Treaty on the Functioning of the European Union
TLAC	Total Loss-Absorbing Capital
TSC	Treasury Select Committee
UK	United Kingdom
US	United States

1 INTRODUCTION

1.1 THE END OF AN ERA IN CENTRAL BANKING

The global financial crisis that began in 2007 heralded the end of an era for the major central banks of the advanced industrial world. For almost two decades, starting in the late 1980s, most advanced economy central banks had focused increasingly narrowly on one objective: ensuring a low and steady rate of inflation. While central banks have always taken a close interest in the activities of banks and other financial institutions, by the late 2000s, the objective of financial stability had, for some central banks, become secondary to that of price stability. In many advanced industrial countries, the job of monitoring and controlling risk-taking by commercial banks – a central component in any effort to guard against financial crises – was assigned to organisations other than the central bank.

The period since the onset of the crisis has been one of intense innovation for the central banks of most advanced economies. Having cut nominal interest rates almost to zero by early 2009, central banks have experimented with a range of unconventional monetary policies to help boost their stagnating economies. They have pumped vast quantities of new money into their respective financial systems, buying up large volumes of government securities and other financial assets in the process. At the same time, they have placed new emphasis on the objective of financial stability. Central banks have toughened regulatory requirements for financial firms, aiming to make those institutions more resilient both individually and collectively. Much work is on-

going to limit the complex interconnectedness of banks and ‘non-bank’ financial entities, which was a major factor in the financial contagion that spread rapidly around the world from the summer of 2007. Some advanced economy central banks have taken measures to limit cyclical fluctuations in credit and asset prices, resurrecting forms of financial regulation that were common in the three decades after the Second World War, but which had fallen out of favour in the era of market triumphalism that began in the 1980s.

A core claim of this thesis is that the major central banks of the advanced industrial economies have become more powerful as a consequence of this ‘financial stability turn’ in central banking. Drawing on a wide range of primary and secondary sources, including interviews with key central bankers and public officials, the thesis supports this claim by comparing the changing power of the US Federal Reserve, the European Central Bank (ECB) and the Bank of England.¹ In order to make this comparison, the thesis proposes a threefold typology of central bank power. This typology encompasses central banks’ *authority* over other actors in society, including their ability to win policy debates both in public and behind closed doors; their *structural power*, which denotes the extent to which they are able to shape the contexts in which other actors perceive and frame their preferences; and their *capacity*, which refers to their ability to achieve their statutory and self-defined objectives whether in respect of financial markets or monetary policy.

One of the core resources contributing to a central bank’s *authority* is the formal legal authority it exercises as an agent of the state. All three of the central banks considered in this thesis have been delegated new legal authority

since 2008. In addition to their traditional monetary policy functions, each now operates in an expanded policy space that includes ‘macroprudential’ policy, which focuses on mitigating risks to financial stability arising at the level of the financial system as a whole, and ‘microprudential’ policy, which focuses on risks to the safety and soundness of individual financial institutions. However, the expansion of these central banks’ authority has been far from uniform. In the United Kingdom, the Bank of England has a broad legal mandate to implement both macroprudential and microprudential policy, in addition to its traditional monetary policy competencies. In the United States, the Federal Reserve now has strong regulatory and supervisory authority in respect of large, ‘systemically important’, financial institutions, but macroprudential oversight has been assigned to a multi-agency Financial Stability Oversight Council (FSOC), which is chaired by the Secretary of the Treasury. In the European Union (EU), the ECB has new microprudential supervisory competencies for banks in the euro area, but it shares these competencies with the supervisory authorities of member states. It also plays a leading role in macroprudential policy, albeit as one organisation in a complex multi-level framework involving differentiated levels of centralisation depending on which countries and categories of financial activity are involved (see McPhilemy 2016).

Beyond their legal mandates, many factors affect central banks’ authority. Inter-agency relations differ from one country to the next and do not always reflect what is mandated by statute. Central banks encounter varying levels of political resistance to their operations, most notably from financial institutions that stand to lose from policies oriented towards greater financial stability, but

also from wider societal constituencies, which may oppose measures that restrict access to credit and potentially lower economic growth. In the United States, the Federal Reserve and the multi-agency FSOC have faced fierce resistance from certain non-bank financial institutions, which have been supported by Republican politicians in Congress. By contrast, most legislative politicians in the European Parliament have regarded the ECB's actions to prevent systemic risks as excessively timid.

Central banks perform unique functions in their respective economies that give them an ability to shape the contexts within which other societal actors operate. By manipulating interest rates, central banks alter the financial conditions facing fiscal policymakers, market participants, firms and households. Likewise, in determining prudential policies, central banks alter the costs and rewards associated with particular categories of financial activity. To the extent that central banks can manipulate the conditions within which other actors perceive and define their preferences, they may be said to exercise *structural power*. Central banks' structural power derives from the economic functions they perform, including, most notably, their unique ability to create new money at will (or 'by fiat'). Yet central banks' structural power is by no means constant. At any given moment, structural power may be mediated by a variety of factors including the degree to which other actors rely on the central bank for their immediate political or economic survival, the substitutability of new channels of credit intermediation for existing ones and the ideological preferences of central bankers themselves.

Central banks' structural power underpins their ability to win policy debates and take actions in line with their own preferences. However, even were a central bank to be in a structurally advantageous position vis-à-vis its key interlocutors, there is no guarantee that it would have the capacity to succeed in meeting its statutory or self-defined objectives. The great failures of central banking of the past, such as the calamitous effort to restore the gold standard as the international exchange rate regime after the First World War (see Ahamed 2009), were rooted not in an inability of central bankers to impose their will over politicians or financial market participants. Rather, they arose from the ideational proclivities of central bankers and their deficient theories of how the world confronting them actually operates. Central banks' ability to attain their objectives – their *capacity* – depends on the policy choices they make, which in turn are governed in large part by the theories and assumptions they use in defining policy problems and devising solutions to them. On a practical level, successful goal attainment also depends on the extent to which central banks' policies are coordinated with other relevant agencies. Fiscal policymakers, other financial regulatory authorities and the authorities of other jurisdictions all make policies that directly impinge on the financial market activities that central banks endeavour to control.

Understanding the transformation that has taken place in the major central banks of the advanced industrial economies since the financial crisis requires attention to the technical detail of monetary and financial stability policies. However, the changing role of these central banks is a matter of more than mere technical concern. The public image of advanced economy central banks is

that they are beyond politics. They are regarded as apolitical technocratic organisations fulfilling highly complex and strictly circumscribed tasks delegated to them by democratically elected politicians. This is an appearance that central banks themselves take great care to perpetuate. Yet the decisions they take are inescapably political. Setting interest rates, manipulating the supply of credit to the real economy, defining prudential regulations and carrying out financial supervision all have important distributional consequences. They influence prospective homeowners' access to mortgages, the price at which businesses can borrow and the rewards that savers can expect to make for a given level of risk. Likewise, by buying or selling government debt, central banks directly influence the cost of borrowing for governments, constraining or enabling governments' ability to borrow and spend and, in turn, the macroeconomic strategies they can pursue. Central banks' actions are of direct material consequence to society at large. Yet neither the economic rationales informing their decisions, nor the governance processes they employ in reaching them, are well understood outside a small elite of central bankers, financial market players, academic economists and financial journalists. As a contribution to addressing this 'information asymmetry', this thesis aims to pull away the cloak of technocracy that obscures the changing power of advanced economy central banks after the global financial crisis.

1.2 HOW HAS CENTRAL BANK POWER CHANGED?

Since 2008, the central banks considered in this thesis have developed new objectives and policies, they have adopted new governance structures and they

have had new formal authority conferred upon them. Most, if not all, of these transformations have been bound by a common theme: namely, the need to strengthen the ability to identify, monitor and mitigate risks to financial stability. That central banks have a role to play in maintaining financial stability is hardly a novelty. Since the 19th century, central banks have generally been regarded as the *de facto* guarantors of systemic stability in their respective jurisdictions. However, the nature of their engagement with financial markets, and the nomenclature used to describe their policies and objectives, has changed over time. To facilitate comparisons across the three cases considered in this thesis, three elements of central banks' activities in the financial stability domain will be examined systematically. These areas are *crisis management*, *microprudential policy* and *macroprudential policy*.

Historically, the role of central banks in *crisis management* arose from the banking facilities they provided to commercial banks. In the 19th century, most central banks came to exercise a monopoly over the creation of new base money, comprising banknotes in circulation and commercial banks' reserves at the central bank. This ability to create money 'out of thin air' enabled central banks to act as lender of last resort (LOLR) to commercial banks that found themselves unable to borrow elsewhere. In turn, the ability to act as the LOLR meant that central banks have traditionally been looked upon as guardians of systemic stability in their respective banking systems. Central banks became the organisations to which teetering banks would turn when they had nowhere else to go. They also became the organisations to be held responsible in the event of financial scandals and banking panics.

The role of central banks in *microprudential policy* developed out of their LOLR functionality and their responsibilities for maintaining monetary stability. Central banks generally maintain close relationships with commercial banks. For much of the history of central banking, such relationships were largely informal, with little in the way of codified rules and few resources devoted explicitly or exclusively to ensuring that individual banks ran their businesses prudently. This situation began to change with the growth and internationalisation of banking and financial markets from the 1970s onwards. In the advanced industrial economies, prudential regulation and supervision became increasingly formal and legalistic. Later, prudential regulation and supervision also came to be seen as largely separate from monetary policy with many countries choosing to establish independent financial supervisory authorities, separate from their central banks. Since the financial crisis, this trend has been largely reversed, with more central banks playing a direct and active role in the microprudential supervision of individual firms.

Although there is no settled definition of *macroprudential policy*, many commentators would agree that this area of financial stability policy focuses on identifying and mitigating ‘systemic risks’ to financial stability, rather than ‘idiosyncratic risks’ associated with individual financial institutions (Crockett 2000). In Western Europe and North America, the explicit attempt to operationalize macroprudential policy frameworks began only after 2008, following the collapse of the US investment bank Lehman Brothers and the dramatic worsening of the global financial crisis precipitated by that event.² Yet systemic instability is by no means a novel concern for public authorities in

these countries. Measures that would today be described as macroprudential were in fact common during much of the 20th century in the United States (Elliot et al. 2013), the United Kingdom (Watson and Herzberg 2014) and much of continental Europe (Perez 1998).

In focusing on crisis management, microprudential policy and macroprudential policy, the thesis does not deny the significant transformations that have taken place in respect of central banks' monetary policy operations. Financial stability policy and monetary policy are deeply intertwined, whether in their objectives, their practice, or their consequences. Since the onset of the financial crisis, the central banks considered in this thesis have employed an array of unconventional monetary policies to encourage the supply of credit to the real economy, or sub-sectors thereof. Such policies are both instruments of macroeconomic demand management, and tools for managing the financial crisis. To the extent that they aim to address risks arising from the pro-cyclicality of credit conditions, their objectives may also be regarded as macroprudential in nature. Discussed further in the next chapter, the effectiveness of monetary policy is a crucial determinant of the effectiveness of financial stability policies and *vice versa*. Accordingly, while transformations in central banks' monetary policy functions are not the primary focus of this study, they are considered throughout the thesis, as appropriate, to the extent that they intersect with changes in the financial stability arena.

Evaluating how the power of the major advanced economy central banks has changed as a consequence of their heightened focus on financial stability requires more than mapping the new statutory rights and responsibilities of

individual central banks, or documenting their actions during the financial crisis. It involves evaluating their relationships with other actors in society, including their ability to shape financial and macroeconomic policy debates, whether publicly or behind closed doors. In turn, such an assessment requires an appreciation of the structural interdependencies between central banks and their key interlocutors in governments and in financial markets. Such interdependencies alter the bargaining position of these actors in their relations with one another. Beyond these 'relational' aspects of central banks' power, there is also the question of how 'empowered' central banks have become. In other words, it is important to interrogate whether the changes witnessed have actually increased the capacity of central banks to achieve their high-level statutory objectives and the lower-level objectives they set for themselves. Assessing the capacity of central banks entails a focus on the effectiveness – or 'fitness for purpose' – of the policies they are choosing to develop within their broadened mandates, the strategies they employ for implementing those policies and the extent to which their actions are supported or undermined by the actions of other economic policymaking bodies.

The multi-dimensional understanding of central bank power employed in this thesis reflects a recognition that far from acting as passive technocratic 'agents' fulfilling mandates conferred upon them by their political 'principals', central banks are inescapably political organisations (cf. Burnham 2001; Watson, M. 2002; Marcussen 2006; Dyson 2009; Adolph 2013; Fernandez-Albertos 2015 among others). The business of central banking is inherently political because it involves decisions that affect the relative prosperity of different actors and

societal groups. Moreover, central banks may be considered political agents because their words and deeds have a strong bearing on their own relationships vis-à-vis elected executive authorities, legislative politicians, private financial interests and the wider public. A central bank's power may be direct and compulsory, as when it uses legal authority to compel other actors to do something they would not otherwise do. It may also be indirect and collaborative, as when it shapes the context in which other actors operate or when it defines concepts and meanings in financial sector regulation. Yet it is important to recognise that central bank power may also be inclusive and empowering. By working collaboratively with other societal actors, central banks may enable societies as a whole to realise superior and more sustainable macroeconomic performance.

1.3 MECHANISMS OF CHANGE IN CENTRAL BANKING

This thesis aims not only to describe the change that has taken place in central banking in recent years, but also to identify the mechanisms through which that change has been effected. In doing so, it looks beyond the individual organisations in question, towards the transgovernmental networks of monetary authorities, associated international organisations and economic advisors within which central banks are embedded. Central bankers are highly networked. In a tradition that dates to the 1930s, the central bank governors of major economies have gathered every two months for informal and secretive meetings at the Bank for International Settlements (BIS) in Basel, Switzerland (Irwin 2013). Discussions and coordinated policy initiatives also take place

within transgovernmental governance organisations such as the G7 and G20, where central bank governors meet regularly alongside finance ministers (Baker 2006). Many new regulatory standards, codes and best practices are agreed within specialist transnational standard-setting bodies such as the Basel Committee on Banking Supervision (BCBS) and the more recently established Financial Stability Board (FSB), both of which are governed by committees composed mainly of central bankers. In addition, central banks engage with international organisations, chief amongst them the International Monetary Fund (see, for example, Clift and Tomlinson 2012; Moschella 2012), which provide advice and commentary on regulatory and institutional changes as they are enacted, legitimising and sometimes challenging the courses of reform chosen in different settings.

The major transformations in central banking since their emergence in the 19th century have been rooted in the changing economic ideas and intellectual fashions of actors within these networks (cf. Capie et al. 1994: 80). Transgovernmental networks of central bankers, and of closely associated technocratic officials of national and international organisations, have advocated and implemented reforms based on shared normative beliefs about their appropriate roles and shared causal beliefs about the nature of the policy problems they confront. To this extent, such networks conform to the image of 'epistemic communities' (cf. Verdun 1999; King 2005; Dyson 2009; Mackintosh 2014). According to Haas (1992: 3) epistemic communities are networks of experts in a given policy domain with a common policy endeavour. They are bound by shared normative convictions about the value of their role in the

domain of expertise, shared causal beliefs about the central problems of that domain and shared intersubjective criteria for weighing and validating policy relevant knowledge.

One example of the ability of the central banking epistemic community to produce change in the roles and modes of governance of central banks took place in the 1990s and 2000s with the emergence and spread of central bank independence (henceforth CBI) as a legal form (cf. King 2005). During this period, more than 100 countries around the world adopted some form of legal CBI (Marcussen 2005). This international convergence (which was sometimes superficial) reflected a pervasive consensus within the central banking community and wider technocratic and international business networks that independent central banks are superior in keeping inflation in check (Kydland and Prescott 1977; Rogoff 1985; Alesina and Summers 1993). To be sure, international convergence upon CBI was partly driven by international organisations, such as the IMF and the World Bank, which serve to promote and diffuse international standards through conditional lending programmes, technical assistance and policy training (Broome and Seabrooke 2016). However, much convergence – particularly in Europe – owed to the intellectual leadership and policy advocacy of international networks of central bankers and associated technocrats (Verdun 1999).

The recent shift in central banking towards heightened emphasis on financial stability reflects the policy entrepreneurship³ of the central banking epistemic community. As Baker (2013a) has highlighted, in late 2008 and early 2009, a widespread consensus emerged within the international central banking

community over the need for macroprudential policies and organisational frameworks to identify, manage and mitigate systemic risks to financial stability. In each of the jurisdictions considered in this thesis, initial legislative reforms were enacted, based partly on the recommendations of high-level expert groups that were composed of transnationally networked central bankers and financial supervisory officials (see Seabrooke and Tsingou 2014). Though far from identical, high-level expert studies published in 2009 in each of the three jurisdictions considered in this thesis – the *De Larosière Report* in the EU, the *Turner Review* in the United Kingdom and the *Treasury’s New Foundation for Financial Regulatory Reform* in the United States – each reflected the emerging orthodoxy that macroprudential policies were needed to supplement microprudential supervision and monetary policy.

The international consensus on the need for new macroprudential policies belies marked differences in the functions, policy styles and overall power of central banks within their respective domestic jurisdictions. Differences in the power of central banks arise because ideas about monetary and financial stability policies play out in idiosyncratic national (or regional) institutional and structural environments. Local idiosyncrasies include the structure of national financial systems – or ‘varieties of financial capitalism’ (see Hardie and Howarth et al. 2013) – that affect which actors stand to lose, and which stand to gain, from convergence on new prescriptive ideas and principles agreed at the international level. Local idiosyncrasies also include the existing structure of national regulatory systems. In the United States, bureaucratic agencies outside the central bank, sometimes supported by powerful financial sector lobby

groups, play an important role in determining the trajectory of change in financial reform. In the EU, an increasingly complex, geographically and sectorally differentiated, regulatory space constrains the options for future reform (McPhilemy 2014).

As set out in the next chapter, the thesis employs an agent-centred historical institutionalist analytical framework (Bell 2011) to explain the transformation in central bank power since the financial crisis. Such a framework offers insights into the interaction between the ideas, standards and policy prescriptions that transnational epistemic communities promulgate and the local institutional terrains in which new policies and ideas are enacted. Historical institutionalist approaches generally start from the premise that processes of institutional change are deeply constrained by existing institutional and structural environments (Pierson 2000, 2004). To understand how 'history' has shaped central banks' capacities in the area of financial stability policy, the thesis draws attention to the differential reception and implementation of new ideas in different jurisdictions. Yet the framework employed here moves beyond the deterministic conceptualisations of 'path dependence' that are characteristic of some historical institutionalist literature (see, for example, Krasner 1984; Pierson 2000, 2004). It sees policy entrepreneurs as capable of carving out discretionary spaces within the constraints imposed by the institutional and structural environments they inhabit. In exercising this discretion, they can shape and reshape their institutional environments through time. Policy entrepreneurs exist in a dynamic interaction with the structural, institutional and political terrains they find themselves in. This approach suggests that in the

context of highly interconnected administrative and financial systems, policy change will always combine elements of international convergence and enduring national distinctiveness.

1.4 LIMITATIONS OF THE EXISTING LITERATURE: THE 'EMPIRICAL GAP'

At the time of writing, neither economics nor political science has fully reflected upon the nature, mechanisms or implications of the transformation that has taken place in the role of central banks after the financial crisis. Many economists have debated the 'optimal' organisational framework for financial regulation and supervision, including the role that central banks should play in financial stability policy (Goodhart, C. and Schoenmaker 1992; 1995; Goodhart, C. 2002; Haubrich 1996; Peek et al. 1999; Abrams and Taylor 2000; Masciandaro et al. 2008, 2010; Klomp and de Haan 2009; Dincer and Eichengreen 2012). As set out in the next chapter, this debate takes place in the shadow of a widespread consensus over the supposed desirability of CBI as a means of achieving low inflation. In line with the consensus view on CBI, economists have tended to argue that politicians should delegate responsibility for banking supervision to politically independent technocrats (De Haan et al. 2009). However, theoretical and empirical research on the pros and cons of different organisational arrangements for financial supervision produced mixed conclusions, leading to a frequently voiced conventional wisdom that there is no universally applicable 'best practice' model. In particular, there has been no consensus amongst economists as to whether prudential banking supervision should be assigned to a central bank or an independent supervisory agency.

The economic literature on organisational arrangements for financial stability policy has tended to fall into one of three broad categories. Some have engaged in abstract theorisation over the potential benefits and drawbacks of integration or separation of monetary policy from bank supervisory policy (Abrams and Taylor 2000; Goodhart, C. 2002; Masciandaro 2009; Blinder 2010). Others have provided empirical analyses of institutional variations and economic outcomes across countries employing different supervisory models (Masciandaro et al. 2008, 2010; Klomp and de Haan 2009; Dincer and Eichengreen 2012). More recently, a third group of economists have endeavoured to elaborate organising frameworks that might guide central banks or other public authorities in their renewed focus on financial stability (Goodhart, C. and Tsomocos 2010; Schoenmaker 2013; Adrian et al. 2013).

Such contributions are of limited benefit in terms of explaining how the power of central banks has changed after the financial crisis. While some authors have provided historical overviews of central banks' supervisory functions (Goodhart, C. and Schoenmaker 1995; Goodhart, C. and Tsomocos 2010; Toniolo and White 2015), absent from this literature is an in-depth comparison of new national approaches to the management of financial stability or how those approaches compare to the pre-crisis status quo. Nor does the economic literature reveal much about the processes by which new approaches to financial stability have emerged, why outcomes have differed from one jurisdiction to the next and the consequences of such differences for the ability of central banks to induce deference on the part of others or to achieve their ultimate objectives.

The 'large-n', cross-sectional nature of the empirical contributions to the economic literature similarly obscure as much as they reveal. Thus, Masciandaro et al. (2008, 2010) inform us that banking supervision is likely to be more politically independent in countries where the central bank is also the banking supervisor, and that independent supervisory authorities tend to have better developed accountability arrangements than banking supervisors based in a central bank. Focusing on *de jure* governance arrangements, such accounts reveal little about the *de facto* relationships formed between central bankers, financial supervisors, politicians and the regulated industry in individual countries. Taken as a whole, the economic literature provides limited insight into the domestic and international forces that have shaped institutional change in this policy field over the last two decades. Nor does it enable adequate comprehension of the distributional consequences of different models of financial supervision in different countries.

The political science literature on central banks' capacities in respect of financial stability policy is also limited. Like their colleagues in economics, political scientists interested in central banks have tended to focus on the issue of CBI. Of particular interest have been the mechanisms and political rationales underlying the emergence and spread of CBI (Burnham 1999, 2001; McNamara 2002; King 2005; Marcussen 2005); the means by which central banks sustain their independence (Goodman 1991); concerns over democratic accountability (Elgie 1998, 2002); and the potential for independence to instantiate destabilising pathologies within national and international economic governance (Simmons 1996; Maxfield 1998; Watson, M. 2002).

More recent political science scholarship has shifted focus from CBI to the wider issue of central bank governance. From a constructivist perspective, R. Hall (2008) argued that trends towards increasingly independent, transparent and knowledge-based modes of central banking represent efforts on the part of central bankers to shape inter-subjective expectations of market actors in regards to the future stance of monetary policy and, by extension, the level of future prices. Quaglia (2008a) and Dyson and Marcussen et al. (2009) focus on the consequences of Economic and Monetary Union for central bank governance in the European Union (EU). While these accounts provide much needed comparative perspective on central banking – including differences in historical trajectories, policy capacities and central bankers’ external relations with firms and politicians – both suffer from the obvious limitation that they were produced before the global financial crisis and the transformations in central bank governance that have taken place since then. Beyond this, both of these accounts take a general approach to the study of central banks, examining their governance arrangements and policy capacities across the full range of their activities. Without losing sight of the multiple interconnections between central banks’ different functions, this thesis differs from these accounts by concentrating in particular on the consequences for central banks’ power of their enhanced emphasis on financial stability since the financial crisis.

Lavelle (2013) provides a more recent comparative account, focusing on the evolving roles of ECB and the Federal Reserve in financial regulation and supervision. This account usefully discusses the pressures leading to organisational reforms in either jurisdiction, although it does not consider the

changing nature and objectives of regulation, nor how post-crisis reforms have affected the power of either central bank, whether understood in relational or empowerment terms. Some recent political science scholarship has begun to examine the implications of the advent of macroprudential policy. For example, Casey (2014) provides an optimistic assessment of the potential for macroprudential policy to 'save neoliberalism'. Arguing that the global financial crisis resulted from the inherently pro-cyclical nature of risk taking in financial markets (Minsky 1984; see also Kindleberger 2011[1978]; Reinhart and Rogoff 2009), Casey suggests that macroprudential regulation can counteract pro-cyclicality, dampen the credit cycle and reduce volatility in the system. Casey argues for what he terms 'soft' macroprudential regulation, in which instruments affecting banks' balance sheets and the terms and conditions of borrowing are used to control overall volumes of credit 'while leaving financial markets fairly liberalised' (Casey 2014: 17). As the empirical chapters of this thesis suggest, the initial implementation of MPR appears even softer than Casey makes out: rather than aiming to control the credit cycle, as he suggests, most macroprudential tools considered until now have aimed to make financial institutions more resilient in the face of cyclical shocks.

In a series of contributions, Baker (2013a, 2013b; 2013c; 2014; 2015a) has provided a more cautious assessment of the emergence, spread and initial operationalization of macroprudential ideas and policy frameworks within the international regulatory community. While Baker sees the macroprudential shift as a radical change at the level of economic ideas, he observes that change in the practice of financial regulation and supervision is exhibiting a very

conservative and incremental dynamic. Baker attributes this to the technocratic nature of macroprudential policy. He identifies a disconnect between the intellectual radicalism of technocratic norm entrepreneurs such as Andrew Haldane of the Bank of England and Claudio Borio of the Bank for International Settlements and the modest policy prescriptions of those same individuals. This, he suggests, can be attributed to the nature of these individuals' authority in policy debates, which depends on their ability to present their ideas as scientific, evidential and impartial. Further, Baker argues that all forms of technocratic governance are prone to 'legitimacy gaps'. He suggests that while technocratic agencies are legitimate at the moment when elected politicians choose to delegate powers to them, insulated from political sentiment, officials have a propensity to become overconfident in the correctness of their policy prescriptions. Baker sees this 'central bankers' paradox' as the ultimate Achilles heel of macroprudential policy (Baker 2015): the technocratic and mathematical effort to curb financial cycles, he argues, will lead to an erosion of central banks' hard-won independence.

While Baker and Casey focused on the potentialities for macroprudential policy in general, few scholars have examined the implications of macroprudential policy in specific institutional settings. Lucy Goodhart (2014) provides one recent exception, examining the implications for the US Federal Reserve of the new legal authority delegated to it by the 'Dodd-Frank Wall Street Reform and Consumer Protection Act' (hereafter the Dodd-Frank Act), which was signed into law in the United States in 2010. Her account suggests the effort to implement macroprudential policy in the United States is likely to

undermine the Federal Reserve's independence. Her reasoning is twofold: first, that unlike in the monetary policy arena, 'there are many other agencies [involved in financial regulation and supervision] that can provide a counter-narrative to the Fed's version of events, reducing the extent to which it can project an esoteric authority' (Goodhart, L. 2014:18); second, that the costs of macroprudential policy will fall mainly on a small number of very large financial firms, which will find it easy to mobilise opposition in Congress.

This thesis is similarly concerned with understanding the implications of macroprudential policy for the power of central banks. However, as already mentioned (and explained at greater length in Chapter 2), power in this thesis is understood not only as autonomy to move policy in line with the preferences of central banks themselves. A more specific criticism of L. Goodhart's account is that it does not place the Federal Reserve's implementation of new policies within a historical context. Rather, it attributes the relative conservatism of the Federal Reserve's macroprudential policy to the ease with which well-resourced financial industry opponents of reform can mobilise in Congress. Without denying the significance of industry and Congressional opposition to certain forms of macroprudential policy, this thesis provides a more historically grounded explanation. Institutional legacies of historic experiments with 'proto-macroprudential' policies have augured against their use in the current climate. Senior managers in the Federal Reserve, some of whom have direct memory of the use of such tools, are sceptical of their economic justifications, and their potential efficacy in the context of the contemporary US financial system. The Federal Reserve's current approach is also a product of the organisational

apparatus within which it is embedded: notwithstanding major financial reforms since the financial crisis, the United States has an exceptionally fragmented regulatory architecture that impedes the ability of the Federal Reserve to effect structural change in the financial system (cf. Lavelle 2013).

1.5 ARGUMENT IN BRIEF

As already mentioned, the core argument of this thesis is that the major advanced economy central banks have, to varying extents, become more powerful since the financial crisis, with power understood in both *relational* and *empowerment* terms. From a relational perspective, these central banks have found it easier to determine policies in line with their own preferences over the preferences of other societal actors. From an empowerment perspective, they have developed new policies and new administrative capacities, which, on the whole, leave them better placed than previously to attain their statutory and self-defined policy objectives. However, new policy ideas and organisational reforms have played out within idiosyncratic institutional contexts, which have conditioned the extent and characteristics of the transformations observed in each case.

Drawing on the threefold typology of central bank power mentioned above – authority, structural power and capacity – the thesis sets out to answer three specific research questions:

1. *How has the ability of the major advanced economy central banks to determine policies in line with their own preferences changed since the onset of the financial crisis?*

2. *What has enabled these central banks to exert greater authority over politicians and market participants since the financial crisis?*
3. *How capable are these central banks of achieving their objectives, particularly those relating to financial stability?*

The first of these questions concerns central banks' authority. From a formal, or *de jure*, perspective, all three of the central banks considered in this thesis have been granted new legal authority, albeit to differing extents. The Bank of England has gained the most new formal powers, having been entrusted with exclusive competence to conduct macroprudential policy and broad authority to carry out microprudential supervision of banks, major investment firms and insurance companies. The Federal Reserve has also gained new legal powers, in particular in relation to the supervision of systemically important financial firms. However, its mandate in relation to macroprudential policy is limited. In the euro area, policymakers agreed in 2012 to establish a Single Supervisory Mechanism (SSM) centred on the ECB. A core element of the so-called 'Banking Union', the SSM constitutes a historic transfer of microprudential supervisory competencies from national central banks and supervisory authorities to the ECB. Having said that, like the Federal Reserve, the ECB has only limited macroprudential authority beyond the banking sector. It also has only a limited role in future bank resolution.

From an informal, or *de facto*, perspective, the authority of these three central banks has also increased, especially in relation to the financial industry. In the post-crisis era, these central banks have preferred to burnish their reputations as 'capital hawks' than to pursue the 'light touch' approach of

yesteryear. Beyond the domain of financial regulation, the three organisations have demonstrated varying abilities to influence wider macroeconomic policy. Their governors have frequently waded into fiscal policy debates. In itself, this is nothing new. However, while neither the Federal Reserve nor the Bank of England have exhibited a significantly greater influence over the trajectory of fiscal policy than they did prior to the crisis, the ECB has played a highly significant role in influencing the economic policies of crisis-struck European countries. Indeed, it has been criticised for appearing to dictate entire economic policy platforms to be followed by these countries' governments.

In answering the second question above, the thesis points first and foremost to the agency of central bankers themselves. Central bankers in all three cases presented policymakers with a set of prescriptions for reforming national and international financial regulations and regulatory architectures (cf. Mackintosh 2014). Acting much like an 'epistemic community' (Haas 1992), central bankers were guided by a broadly cohesive set of normative beliefs about the appropriate role that central banks should play in financial regulation. However, their diagnoses of pre-crisis failings and prescriptions for regulatory reform differed across the three jurisdictions. Likewise, local institutional factors – including the distribution of power between different branches of government, stratifications of interests within national regulatory architectures and political attitudes towards financial regulation – shaped and constrained outcomes in each case.

The financial crisis altered these central banks' 'structural relations' with markets and politicians. Financial institutions were revealed to be highly

dependent on the stabilising functions that these organisations play as LOLR to their respective financial systems. In this context, the bargaining power of financial market participants in regulatory debates was diminished, enabling the central banks to adopt a more stringent and prudent stance than in the past. Structural power also helps explain the differences between the three central banks in terms of their influence over wider macroeconomic policy. The ECB's purchases of crisis-struck Southern European countries' debt gave it (along with the European Commission and the IMF) the leverage necessary to force those countries into deep fiscal austerity and neo-liberal supply-side reforms. This dynamic was not matched in the United Kingdom or the United States, where the probability of sovereign default has never been regarded as a realistic possibility.

The third of the questions set out above directs our attention to central banks' capacity. Key to any discussion of central bank capacity is the 'fitness for purpose' (Dyson 2009) of the policies central banks are adopting. The pre-crisis orthodoxy in financial regulation, which was based upon simplified understandings of 'efficient markets' theories (Turner 2011), followed an essentially microprudential logic of ensuring the safety and soundness of individual financial institutions. While this orthodoxy has been partially surpassed by a set of new macroprudential ideas (Baker 2013a), the embrace and enactment of new ideas has differed from one jurisdiction to the next. This has fed into differential policy development and policy objectives. The Federal Reserve has exhibited the most continuity with the pre-crisis approach to financial regulation, focusing mainly on enhancing the resilience of financial

institutions. Both the ECB and the Bank of England are pursuing policies of a time-varying nature which aim to curb financial excesses and mitigate cyclical systemic risks through the financial cycle (in addition to enhancing resilience). The thesis argues that focusing predominantly or exclusively on financial institution resilience is likely to make it more difficult for the Federal Reserve to maintain financial stability in the medium term.

Central banks' capacity is also dependent on their styles of policy implementation. The three central banks exhibit differing preferences for 'rules-based' or 'discretion-based' styles of regulation and supervision. More discretionary approaches have the benefit of making policy more adaptable in the face of financial innovation, which can render detailed rulebooks obsolete. Rules-based approaches purportedly enhance the transparency of decision-making and the predictability of the overall regulatory environment. According to some regulators and economists, this can lead to greater economic efficiency and financial stability (see for example Bank of England 2009: 28; Kohn 2011). Following Best (2005), this thesis takes a sceptical view of the possible efficiency gains from rules-based financial regulation. It argues that central banks adopting more discretion-based approaches are, other things being equal, likely to have greater capacity to attain their financial stability objectives due to the greater flexibility discretion-based policy implementation affords them.

A final factor affecting central banks' capacity to maintain financial stability is the wider macroeconomic policy environment in which they are situated. The central banks considered in this thesis must adapt their monetary policies to the prevailing fiscal policy stance of politicians, which, as discussed, they have

limited (if varying) ability to influence. In turn, the prevailing mix of fiscal and monetary policy deeply affects risk-taking and reward in financial markets. In recent years, the combination of contractionary fiscal policies and rock-bottom interest rates has created major financial imbalances as market participants have ploughed investments into riskier assets in a so-called 'search-for-yield' (BIS 2014). The thesis argues that these risks redouble the necessity for time-varying countercyclical policies, which at least in theory, can mitigate systemic risks without unduly damaging the health of the economy at large.

1.6 METHODOLOGY

1.6.1 RESEARCH DESIGN

The thesis examines the transformation in central bank power after the financial crisis through a structured focused comparison of a small number of empirical case studies (George and Bennett 2005). There are three main reasons for adopting a 'small-n' comparative case study research design. First, this approach allows for a longitudinal view of each central bank, with specific focus on the evolution of financial stability frameworks in each jurisdiction and the changing relationships between central banks, financial market players and other public authorities. A longitudinal approach is a prerequisite for any research that intends to explore the constraints that past events and policy choices place on contemporary actors in on-going processes of institutional change.

Second, concentrating on a small number of case studies allows for a detailed appraisal of the rules and administrative processes that have been

agreed in each jurisdiction, and of the political, economic and social processes that have led to those rules and processes. By examining the chosen cases in detail, the thesis can better differentiate between the 'old' and the 'new' in financial stability policy. This approach provides space for an appraisal of both the initial reform of the institutional arrangements for financial stability in each jurisdiction and the initial implementation and periods of operation of those new arrangements. This is a key benefit of the chosen approach over 'large-n' quantitative studies, which tend to focus only on *de jure* aspects of financial governance arrangements and therefore fail to capture important gaps between the behaviour prescribed by formal rules and real life activity under them.

The third benefit of the chosen research design is that it provides at least some means of distinguishing between factors that are common to central banks in many (or all) jurisdictions and factors that are idiosyncratic to individual countries. Comparative research enables the explanatory power of different potential influences on a given phenomenon to be tested in different empirical settings. Adopting either a 'method of difference' or a 'method of agreement' (as originally proposed by John Stewart Mill in 1843), causal variables can be identified through a process of logical inference. Of course, the phenomenon of interest in this thesis – namely, the expansion of central bank power since the financial crisis – is unlikely to be the result of a single cause. Complex social phenomena of this kind result from the interaction of multiple non-independent causal mechanisms. Under such circumstances, it is impossible to isolate or control for every potential causal factor, and the

inclusion of a small number of cases makes this approach even more unrealistic. Nevertheless, the cases selected in this thesis are characterised by a number of broad similarities that make them apt for comparison, even if any commonalities we may identify between them cannot automatically be extended to cases not examined here.

1.6.2 SELECTION OF CASE STUDIES

This thesis focuses on the three major Western central banks: the Bank of England, the US Federal Reserve and the ECB. At first sight, three more different cases could hardly have been proposed. Most obviously, the ECB is not a standalone central bank, but rather the central hub within a federal 'Eurosystem' comprising 18 other national central banks. The Federal Reserve also has a complex structure. Like the Eurosystem, it is not a unitary central bank but a federation composed of a seven-member Board of Governors, located in Washington DC, and 12 regional Federal Reserve Banks located throughout the United States. Unlike the ECB, however, it is embedded within a single national setting with long-established, highly centralised, economic policymaking structures. The Bank of England differs from the other two cases since it is a unitary central bank. It exercises authority within a unitary polity, also with highly centralised economic policymaking institutions, notwithstanding the devolution of certain economic policymaking powers to Scotland, Wales and Northern Ireland.

These differences aside, the Federal Reserve System, the Eurosystem and the Bank of England, have much in common. All are independent public authorities,

insulated from the control of elected politicians, with sole responsibility for calibrating and implementing monetary policy in their respective jurisdictions. Although there are differences of emphasis in their formal mandates with respect to the goals of price stability and employment, in the years preceding the financial crisis each of them placed overwhelming emphasis on controlling inflation. Each of them is governed through collective internal decision-making processes and all have sought to represent themselves as scientific, apolitical and concerned with matters so esoteric as to warrant little interest from the population at large (cf. Marcussen 2006; Dyson 2009).

A further similarity between the chosen cases is that since 2007, all have been forced to respond to systemic banking crises and severe economic recessions. In this regard, the global financial crisis can be regarded as akin to a natural experiment: the thesis examines a sample of cases that are similar in many important respects and which have been exposed to a common experience. Examining the variations in the post-crisis reform outcomes in each jurisdiction provides an opportunity to identify and weigh the domestic and international factors shaping change in practices of central banking and the power of central banks.

There are benefits and drawbacks to this comparison. On the one hand, the chosen cases represent the most influential central banking systems internationally in terms of standard setting and policy entrepreneurship. More than any other central banks, these three institutions are responsible for the 'upload' of policy norms to the international level. They are, therefore, inherently interesting cases in themselves. On the other hand, the

aforementioned diversity in their internal composition poses a challenge in terms of organising a comparative research project, especially accounting for the unique multi-level character of the ECB.

1.6.3 RESEARCH METHODS AND DATA SOURCES

To meet the first overarching objective set out above – that of explaining how the power of central banks has been affected as result of the heightened emphasis on financial stability policy – the thesis draws mainly upon sources in the public domain. This includes legislation conferring new powers on central banks and other authorities; central banks’ published procedural documents, such as their rules of procedure; and official financial stability-related communications, such as warnings and recommendations designed to prevent or mitigate systemic risks.

Meeting the second overarching objective – identifying the mechanisms through which changes in central bank power have been realised – represents a greater challenge. As discussed in the next chapter, the exercise of power has both overt and hidden faces. It can be difficult to identify precisely which actors and organisations have been most influential in shaping institutional change when agenda-setting processes take place away from the public gaze. The thesis uses historical process tracing to piece together the main influences that have shaped the reform processes in each jurisdiction. Historical process tracing involves building-up a ‘thick’ description of a series of events, drawing on multiple sources (Bennett 2010). The main source of primary information informing this element of the research is a body of 34 elite interviews,

conducted between 2010 and 2014 in Belgium, Germany, Spain, the United Kingdom and the United States. Interviews have been conducted with current and former central bankers, supervisory officials, politicians, financial journalists, market participants and academic economists with first hand knowledge of behind-the-scenes decision-making processes. Information gathered in these interviews has been cross-checked with other available sources, including the official testimony of central bankers and other relevant actors before legislative committees; the memoirs of key players, where available; speeches and other public communications from officials involved in the reform process; and contemporary press coverage.

1.7 PLAN OF THE THESIS

The thesis is organised as follows. Building on the initial discussion of the literature above, the next chapter sets out a range of perspectives on central bank power and explains how these relate to scientific arguments surrounding the organisational structure for financial stability policy. This chapter also elaborates on the conceptualisation of power and provides the analytical framework that will be used in subsequent chapters to explain how central bank power has changed since the onset of the global financial crisis and the mechanisms through which those changes have been effected.

Chapter 3 provides a historical overview of the three central banks considered in this thesis. It highlights how the functions of central banks changed over the course of the twentieth century and, in particular, why their financial stability functions became increasingly marginalised in the two

decades preceding the onset of the global financial crisis in 2007. This chapter highlights some of the idiosyncrasies of each central bank, including the changing nature of their formal and informal relationships with banks, executive politicians and legislatures.

The next three chapters provide the main empirical content of the thesis. Chapter 4 endeavours to answer the first research question set out above, namely to identify how the ability of the three central banks to define policies in line with their own preferences has changed since the financial crisis. This chapter highlights the variation between the three central banks in terms of both the scope of their revised mandates and their autonomy from control by politicians. It also explores their *de facto* authority, focusing on changes in their informal relations with financial market participants and politicians. Chapter 5 sets out to identify the mechanisms through which the outcomes discussed in Chapter 4 came to pass. It documents the role that central banks have played as an 'epistemic community' in driving reforms. The chapter documents the differential reception and enactment of new ideas about central banking and financial governance in different local institutional, cultural and (party) political terrains. This chapter also discusses the more indirect structural dimension of central bank power. Chapter 6 explores the capacity of each central bank, offering a judgement on the prospects for success of the different approaches they have adopted. Here power is viewed not as a relational concept between actors, but rather as an ability to achieve one's objectives. This chapter builds on the foregoing analysis of *authority* and *structural power* to evaluate the particular advantages and disadvantages of each central bank in terms of

fulfilling their financial stability objectives. The aim of this chapter is to link the discussion of central bank power to outcomes in the financial sector.

The final chapter draws conclusions about the reasons for, and mechanisms of, institutional change in central banking and financial regulation; it speculates on the extent to which central banks' heightened power might be expected to endure; and discusses the implications of the 'financial stability turn' in central banking for the future legitimacy of central banks as politically independent 'non-majoritarian' decision-makers.

¹ The purpose of this thesis is to examine and compare transformations affecting the major central banks of the advanced industrial economies. Its claims are not generalisable to central banks beyond its scope, especially those of emerging or frontier economies.

² In the 1990s and 2000s, financial policies of a macroprudential nature were also used in some East European and East Asian countries (Watson and Herzberg 2014).

³ Following Kingdon (2011 [1984]), the term 'policy entrepreneurs' in this thesis refers simply to actors that invests time, energy, reputation or other resources in the hope of securing policy change of which they approve.

2 CENTRAL BANK POWER: BETWEEN DEMOCRACY AND THE MARKET

2.1 INTRODUCTION

The post-crisis transformation in central banks' financial stability functions speaks to some of the central issues in political science, political economy and the associated sub-field of Comparative Political Economy (CPE). One such issue concerns the relationship between elected politicians and unelected 'non-majoritarian' bureaucrats that sit at one remove from the democratic process. Political scientists have examined many aspects of this relationship, including the rationales underpinning politicians' decisions to delegate authority to unelected officials, the means by which political 'principals' establish and maintain control over their bureaucratic 'agents' and the implications of delegation in terms of the efficiency of policy outcomes, distributional effects and democratic legitimacy (see McCubbins and Page 1987; Majone 1996; Thatcher and Stone Sweet 2002; Hawkins et al. 2006). As this chapter will discuss, the emergence and spread of central bank independence (CBI) in the 1990s proved a rich empirical terrain for political economy scholars interested in the relationship between democratic and non-majoritarian forms of governance (see, for example, Burnham 1999, 2001, 2007; McNamara 1998, 2002; Marcussen 2005; King 2005).

A second issue, which is particularly important for political economy scholars, concerns the relationship between public and private sources of authority in the production of public policies (Cuttler et al. 1999; Graz and Nölke 2008). Central banks' financial stability functions involve the production of rules

that set limits on market participants' activities. They also involve the production of rules that define the very nature of what financial institutions do, the markets they operate in and the products they sell.¹ Financial market participants contest these rulemaking processes directly through lobbying and by funding the election campaigns of their favoured politicians, who in turn can apply pressure on central banks through formal and informal control mechanisms (see for example Grossman and Helpman 2001). Financial market participants also influence rulemaking indirectly because policymakers, including central banks, depend on them to generate revenue and employment and to help stimulate wider economic activity. It is therefore necessary to make rules that are attractive (or at least not excessively repellent) to internationally mobile firms and financial transactions. This indirect, or 'structural', power of business and finance is mediated by the ideas and analyses of public officials, who may give greater or lesser credence to market participants' perspectives and their implied or actual threats of 'exit' (Bell 2012). In turn, policymakers' ideas and perspectives reflect manifold factors, including institutional legacies of past policy choices, intellectual fads and fashions, and shifting political and cultural logics (Carstensen 2011). Understanding the factors that determine the ability of financial market participants to influence central banks' activities is a prerequisite for explaining the varying trajectories of change in central banking after the financial crisis.

A third issue concerns differentiated processes of financial system and capitalist change in response to changing international economic and political circumstances (among others see Zysman 1983; Hall, P. and Soskice 2001;

Hardie and Howarth 2013; Clift 2012, 2014). This is a concern that is central to the sub-field of CPE. Historically, the functions and modes of governance of central banks around the world have passed through a number of distinct epochs. In the four decades preceding the First World War, central banks operated relatively autonomously from political control: they were concerned chiefly with maintaining the gold standard, which was a largely unquestioned and widely shared objective. Following some thirty years of monetary and economic tumult, by the end of the Second World War many Western central banks had become largely subordinate to control by politicians. From the 1970s onwards, central banks increasingly regained their independence and they came to focus narrowly on maintaining a low and steady rate of inflation, to the exclusion of many of their traditional functions in relation to financial stability. Common developments in central banking arose because central bankers and financial policymakers responded to (and participated in) common processes of change at the international level. This included material changes, such as the changing freedom with which capital moved across international borders; institutional changes, such as the rise and fall of international monetary regimes; and ideational changes, including the evolution of the economic ideas and theories used by central bankers to design and justify their monetary and financial policies.

Notwithstanding these broad trends, as several authors have indicated, 'convergence' amongst central banks has often been superficial (cf. Marcussen 2006; Dyson 2009). Central banks have tended to differ in respect of the range of functions they perform, the specific objectives they set for themselves, and

the nature of the relationships they form with key interlocutors in governments and financial markets. Enduring differences and the appearance of new national idiosyncrasies reflect specific historic and institutional contexts. They also reflect the creative and reflective agency of institutionally situated policy entrepreneurs, who ‘translate’ new ideas and policy prescriptions into local (or national) contexts (Campbell 2004). The most recent transformations in central banking have followed this overall pattern of ‘convergence within national diversity’ (to paraphrase Lütz 2004). As the empirical chapters of this thesis demonstrate, the broad ‘financial stability turn’ in central banking has been far from uniform across the three cases considered. Transnationally networked central bankers in coalition with like-minded policymakers in national executives – or ‘sympathetic interlocutors’ (Broome and Seabrooke 2016) – have consciously reshaped their domestic policy environments such that they adhere to newly popular economic ideas and international standards, whilst conforming to domestic (or regional) political logics.

This chapter has two overarching objectives. The first is to situate the discussion of post-crisis transformations in central banking in relation to the core concerns of political science and political economy scholarship highlighted here: specifically, delegation to non-majoritarian actors, the relationship between public and private sources of authority in public policymaking and variegated patterns of national institutional change in response to changing international circumstances. Section 2.2 begins this task by reviewing existing perspectives on the delegation of financial stability functions to central banks. It reviews the economic arguments for and against central bank autonomy in this

area before proposing some political explanations for cross-national divergences in central banks' mandates, drawing on existing perspectives from the CPE sub-field. Section 2.3 then examines existing perspectives on the power of financial market participants in regulatory processes. Exploring the nature of financial power is important for understanding the pressures operating on central banks as they begin to fulfil their enhanced financial stability mandates. This section also discusses reasons why the political power of finance may differ in different jurisdictions.

The second overarching objective of this chapter is to provide a conceptual apparatus capable of explaining how the power of central banks has changed in the aftermath of the financial crisis and the mechanisms through which that change has been effected. Developing the threefold definition of central bank power – authority, structural power and capacity – introduced in the previous chapter, Section 2.5 details how the concept of central bank power is operationalised to enable comparisons across the three case studies to be made. Section 2.6 then sets out an agent-centred historical institutionalist analytical framework, which guides and underpins the empirical analysis. This framework provides a conceptualisation of how agents, institutions and structures interact to produce institutional change within national settings. This framework also sets out a number of mechanisms of international policy convergence and highlights how convergence takes place alongside new divergences and persistent difference.

2.2 DELEGATING FINANCIAL STABILITY POLICY

In many ways, the post-crisis transformation in central banks' financial stability functions is analogous to the widespread adoption of CBI as a legal form in the 1990s and 2000s. In both cases, politicians in many different countries have delegated new tasks to central banks, all within a relatively short timeframe. They have done so with the active encouragement and support of transnational networks of central bankers, financial regulators and academic and professional economists. In both cases, delegation of powers to central banks has been backed by an ostensibly robust economic rationale.²

2.2.1 ECONOMIC RATIONALES FOR DELEGATION TO CENTRAL BANKS

The economic rationale for CBI grew out of research on the so-called 'time inconsistency' of policymaking (Kydland and Prescott 1977; Barrow and Gordon 1983; Rogoff 1985). Building from 'rational expectations' assumptions about the behaviour of individuals, the time-inconsistency problem suggests that policymakers possessing discretion over the setting of monetary policy will inevitably lack credibility in the eyes of market actors. This is because a principal means by which policymakers can control inflation is through influencing the inflation expectations of households and firms. One means of doing this is to pre-announce their future policy intentions, for example, by promising to raise interest rates at some point in the future. Having made such an announcement, policymakers may be tempted to renege on their commitment if conditions subsequently change. The conventional wisdom holds policymakers are particularly prone to break their promises in the run up to elections, as running

expansionary monetary policies (i.e. setting lower interest rates) can boost growth and employment in the short term and thus improve their chances of re-election. The credibility problem arises because rational economic agents are aware that policymakers are likely to renege on their promises. Thus, firms and households do not believe policymakers will follow through on their policy commitments, thereby making their pre-announcements ineffective in the first place. According to this rationale, then, policymakers should relinquish their discretionary control over monetary policy. By establishing a rule-based system – for instance by creating an independent central bank with a legal mandate to pursue price stability – firms and households will have more confidence in the credibility of policy announcements.

Economists have argued that like monetary policy, financial stability policy is also subject to a time inconsistency problem (Masciandaro et al. 2008; Cihak 2010).³ This view holds that prudential regulation and supervision will be ineffective unless market players believe policymakers will enforce rules when they are contravened. However, if market actors believe policymakers will take a tough approach – for example, by ‘blowing the whistle’ on banks that breach regulatory capital requirements – it can be rational for those policymakers to act leniently in the short-run. This is because turning a blind eye to rule breaches can be less costly for the financial institution involved, if that institution is subsequently able to recover. A lenient approach can also be politically convenient for policymakers, who tend to suffer reputational damage if banks or other large financial institutions are seen to fail ‘on their watch’. As with monetary policy, the time inconsistency problem arises because –

according to 'rational expectations' assumptions – market participants *know* that policymakers have a short-term incentive to act leniently. This means they will not really believe the policymakers' promises to be 'tough' in the first place. The time inconsistency problem provides a basic rationale for delegating prudential regulation and supervision to independent technocratic officials who are sufficiently insulated from democratic pressures as to be able to adopt a more time-consistent approach.

Arguably, the economic rationale for political independence in financial stability policy is stronger than the corresponding rationale in relation to monetary policy. Financial crises permanently lower gross domestic product (Martin et al. 2014). By preventing or diminishing the frequency and severity of crises, financial stability policy can contribute to greater long run social welfare. However, the tools required to achieve financial stability have economic costs in the short-run that are more unevenly distributed throughout society than costs associated with interest rate changes. For example, macroprudential policies such as 'loan-to-income' or 'loan-to-value' ratios on residential mortgage lending are designed to prevent real estate bubbles. The short-term pain of such policies falls on specific groups of prospective homeowners who are prevented from accessing the credit they need to buy a home, and banks and mortgage originators which will potentially make fewer profits. Microprudential policy is more targeted still. It is focused on controlling the activities of individual financial institutions. Since the benefits of financial stability are diffuse and become apparent only in the long run, financial stability policy is subject to a 'collective action' problem (Olson 1971). That is to say, those who

stand to suffer from financial stability policies, at least in the short-run, will be better organised and will lobby more fiercely than those who stand to gain.

These rationalist arguments underpin the orthodox case for financial stability policy to be placed beyond the direct control of executive politicians. They do not, however, specify a specific organisational structure for financial stability policy. As this thesis documents, the division of labour between finance ministries, central banks and independent supervisory authorities varies from one country to the next and has shifted over time. Historically, there has been no consensus in the transnational policy community over the merits and drawbacks of different organisational architectures for financial stability policy. Common arguments regarding the roles of different public authorities differ in respect of the three core aspects of financial stability policy identified in the previous chapter, namely, crisis management, macroprudential regulation and microprudential supervision.

CRISIS MANAGEMENT

Central banks have traditionally taken the lead in crisis management, acting as lender of last resort (LOLR) to banks that find themselves in distress (see Chapter 3). Central banks' ability to provide LOLR facilities derives from their exclusive right to issue new base money (that is, currency and bank reserves held on account at the central bank) 'by fiat'. However, as Buiter (2009) observes, 'there is a limit to the amount of real resources that can be extracted through the issuance of nominal base money'.⁴ Since central banks' balance sheets are relatively small relative to large ('too-big-to-fail') commercial banks,

it is rare for central banks to be able to resolve an incipient banking panic using their own resources alone.

Traditionally, the first resort for central banks faced with the impending failure of a systemically important financial institution has been to facilitate (or to demand) that other still-solvent institutions step in to purchase or help resolve their failing competitor. Yet as Goodhart (2002) argues, changes in the structure of banking, particularly its internationalisation, have diminished central banks' ability to pressure private banks into providing such solutions (cf. Woll 2014a). Called upon to rescue a failing firm, international banks will claim that domestic pressures – such as their fiduciary responsibilities to shareholders and the demands of their 'home country' regulators – prevent them from risking their capital (Goodhart 2002). This has meant that in practice, central banks have needed to rely on taxpayer funds to pay for bank bailouts. This provides a strong rationale for central banks to work jointly with finance ministries in this aspect of financial stability policy.

MACROPRUDENTIAL REGULATION

Few commentators dispute that central banks have an important role to play in the macroprudential aspects of financial stability policy. Most debate on the organisational structure of macroprudential policy centres on whether this function should belong *exclusively* to the central bank or whether other public authorities should also be involved. There are two commonly cited reasons why central banks should be primarily responsible for macroprudential regulation. First, central bank personnel are said to possess informational advantages, skills

and expertise that make them uniquely well suited to the task of identifying systemic risks, either in the financial system at large or at a sectoral level (Nier et al. 2011a, 2011b). These advantages stem from the macroeconomic analytical capacities needed to support other functions that central banks perform, including monetary policy, oversight of payments systems and the provision of LOLR facilities.

Second, there are complementarities between macroprudential regulation and monetary policy (Goodhart and Schoenmaker 1995; Goodhart 2002; Whelan 2012; Bank of England 2013a). In general terms, stable prices ensure that money acts as a reliable store of value, which is important in providing certainty to savers and borrowers about the real value of their investments and debts (Bank of England 2013a). Equally, by preventing financial crises, financial stability policy ensures financial markets act as a smooth transmission mechanism for monetary policy decisions, thereby helping central banks meet their price stability objectives.

These arguments run up against the counterargument that central bankers may be reluctant to concentrate on risks that have arisen from actions they themselves have taken. Monetary policy can have adverse consequences for financial stability through multiple channels. For example, when a central bank lowers its policy interest rate, it stimulates aggregate demand. Consumers and firms will fund a proportion of their additional consumption or investment through borrowing, which can be a source of systemic risk if these borrowers do not adequately factor-in the costs of servicing their debts when interest rates eventually rise (Bank of England 2013a).⁵ The potential for monetary policy to

create financial stability risks provides a rationale for including a wider range of perspectives in the governance arrangements for macroprudential policy than those of central bankers alone.

There is also an argument for including microprudential supervisors in macroprudential policymaking (where microprudential supervision is not already a function of the central bank). If macroprudential policy is entrusted solely to decision-makers who are first and foremost concerned with price stability, it is possible they will underappreciate the consequences of decisions that are designed to mitigate systemic risks for the safety and soundness of individual firms. For example, a central bank facing a looming recession may decide to relax capital or liquidity standards for banks. This countercyclical action would potentially help support banks' lending to the real economy and potentially avert or mitigate the severity of a credit crunch. Yet from a microprudential perspective, such an action could enable banks to operate with too little capital or liquidity, thus raising the possibility that individual firms would fail.

MICROPRUDENTIAL SUPERVISION

Central banks role in microprudential supervision has been the source of much contestation (see, for example, ECB 2001; Briault 1999, 2002 for influential contributions on either side of this debate). As with macroprudential policy, there are informational synergies between monetary policy and microprudential supervision. The transmission mechanism of monetary policy flows largely through financial intermediation in the banking system. Thus, a

central bank can benefit from having access to proprietary information about banks' exposures. This can provide for better analysis and forecasting about the impact of changes in the monetary policy stance (Peek et al. 1999).

Yet economists frequently point to potential conflicts between monetary policy and microprudential supervision. A central bank may use its ability to create money by pumping liquidity into the financial system or otherwise monetising financial distress (Goodhart and Schoenmaker 1995; Hermings and Carmassi 2008). This would have the effect of increasing the 'moral hazard' of financial institutions taking excessive risks in the knowledge that the monetary authorities will pick up the tab if their bets turn sour. Central banks may be particularly prone to forbearing on, or bailing out, troubled banks because the reputational risk associated with bank failures could negatively affect their reputation for competence and, in turn, their cherished credibility in the monetary policy arena (Goodhart 2002).

2.2.2 THE POLITICS OF DELEGATION

Politicians' decisions over the design of financial stability architectures may be influenced by arguments of economists, but such considerations are rarely decisive. After all, the economic case for independence in financial stability policy and the economic case for CBI in monetary policy are very similar. Yet the direction of change in supervisory structures prior to the financial crisis was for governments to *increase* their control over prudential regulation and supervision (Masciandaro and Quintyn 2009), even as they relinquished control over monetary policy. The creation of independent financial regulatory

authorities, such as the Financial Services Authority (FSA) in the United Kingdom or the *Bundesanstalt für Finanzdienstleistungsaufsicht* (BaFin) in Germany, was part of a process of rationalisation of financial regulation, wherein executive politicians sought to enhance democratic control over financial markets by establishing formalised, legalistic and accountable regulatory authorities (Moran 2002, 2003; Westrup 2007; Perez and Westrup 2010; McPhilemy 2013). As this suggests, the organisational structure of financial stability policy at any given moment is not necessarily a 'first best' reflection of economic and administrative thinking (notwithstanding the customary arguments to the contrary from incumbent politicians and financial policymakers). Ultimately, delegation of authority for financial stability policy is a political act requiring a political explanation.

One obvious explanation for politicians' decisions to enhance central banks' mandates after the financial crisis is that financial stability is a vote-winner with the 'median voter'. Homeowners have a preference for house prices to rise and can find themselves in severe economic difficulty if they do not. Likewise, pensioners and people saving for retirement demand safe returns on their investments and protection from sudden episodes of wealth destruction. In accordance with the economic arguments reviewed above, it could be argued that politicians delegate financial stability policy to technocratic central banks in order to provide voters with greater assurance that their wealth will be guaranteed. This explanation chimes with previous scholarship on CBI in monetary policy, which highlighted the popularity of CBI with the home-owning median voter (King 2005).

Such an explanation takes us only so far. The exposure of western publics to financial risks ('financialisation') is a secular phenomenon that has been going on for many decades (Langley 2008). Were politicians' choices over the structure of financial stability architectures ultimately determined by the demands of the median voter, at least some Western central banks would surely have been delegated strong financial stability mandates even before the financial crisis. Furthermore, it is difficult to explain the rapid transformation in central banking in the last few years as simply a reflection of the demands of the median voter. To be sure, politicians hope to gain an electoral advantage from strengthening the powers of central banks in respect of financial stability. But as the economic arguments reviewed above suggest, there exist many potential organisational structures for financial supervision. It remains to be explained, then, why central banks *in particular* have emerged as the major 'winners' in bureaucratic terms since the onset of the financial crisis.

The political economy literature on post-crisis delegation of financial stability functions to central banks remains at a nascent stage. However, a common rule-of-thumb in comparative political economy scholarship is that political decisions and processes of institutional change tend to reflect some combination of ideational, material and institutional influences (Hall, P. 1997; Blyth 2002; Hay 2004). Following this heuristic, it is possible to propose three categories of explanation for post-crisis delegation to central banks: policy entrepreneurship, sectoral politics and institutional constraints.

Scholarship on the previous revolution in central banking – the advent of CBI in the 1990s and the 2000s – hints at what could be the core dynamic underlying the remarkably rapid transformation in central banking that has taken place since the onset of the financial crisis. Several explanations for the emergence and worldwide spread CBI suggested that the phenomenon was ultimately a reflection of the changing ideas and policy entrepreneurship (Kingdon 2011 [1984]) of transnational networks of central bankers, officials from international organisations (such as the IMF) and private sector financial experts. Such networks are alleged to have adopted the economic ‘dogma’ of CBI and then persuaded politicians to champion their ideas through deliberative and semi-coercive processes (Marcussen 2005: 919). Scholars have given a number of reasons for politicians’ acquiescence to the demands of such networks. McNamara (2002) suggests politicians adopted CBI as a means of legitimising their rule by mimicking organisational forms viewed as successful in other jurisdictions. Maxfield (1998) suggests that for emerging market economies, CBI was a means of signalling creditworthiness to international investors. As discussed, King (2005) suggested the adoption of CBI in the United Kingdom was an electoral strategy on the part of the Labour Party aimed at convincing the electorate of its anti-inflationary intentions.

This thesis argues that the transformation of central banking since the financial crisis also has its roots in the shifting ideas of transnationally networked central bankers, financial regulators, staff of international organisations, and private sector analysts. As Baker (2013a: 2) highlights, a rapid

ideational shift took place in late 2008 and early 2009, wherein ‘the idea of macroprudential regulation (MPR) moved to the centre of the policy agenda and became the principal interpretative frame for financial technocrats and regulators seeking to navigate the crisis and respond to it’. Central bankers may be regarded as having acted as an ‘epistemic community’ (Hass 1992). With shared normative beliefs about the role that central banks ought to play in post-crisis regulatory reforms, and broadly similar causal beliefs about the policy problems they confronted, they sought to mobilise political support for their new macroprudential thinking through processes of learning and persuasion. At the same time, the thesis highlights the particular conditions that have facilitated the transmission of these actors’ messages. Specifically, it focuses on the advantages that central bankers enjoy by virtue of the particular functions they perform in the wider economy, and the dependency of other actors (public and private) on their actions, especially during times of crisis.

That central bankers and associated technocratic experts have been the primary advocates for enhancing central bank power in respect of financial stability is hardly controversial. However, the agency of transnationally networked central bankers and financial experts does not provide a complete explanation for the reforms witnessed in recent years. The three major Western central banks considered in this thesis have all emerged with enhanced powers in the financial stability arena. Yet they differ markedly in respect of their new mandates and in their initial efforts to fulfil those mandates. To explain this variation, it is necessary to turn our gaze away from factors common to all advanced economies, towards the idiosyncrasies of individual jurisdictions.

National financial systems are commonly categorised as being either capital market-based or bank-based (Zysman 1983; Allen and Gale 2001; Rajan and Zingales 2003; for a recent critique of this distinction see Hardie and Howarth et al. 2013). As discussed, empowering central banks to take action to prevent or mitigate systemic risks entails costs and benefits that are unevenly spread throughout society. Certain groups – including both actors in the financial sector and societal groups that depend on access to credit – may be exposed to significant short-term costs. Other things being equal, politicians are less likely to delegate strong financial stability powers to the central bank in countries where the constituencies that stand to suffer from such delegation (at least in the short-run) are large, politically well connected or central to the health of the wider economy. For example, where large, highly leveraged, banks play a central role in the provision of credit to non-financial firms, politicians may be reluctant to delegate strong financial stability mandates to their central banks because doing so could lead to unwelcome restrictions on the supply of credit in the economy. Likewise, where households are heavily dependent on access to cheap credit to smooth their consumption, governments may be disinclined to delegate sweeping powers to the central bank, since the electoral costs of restricting access to credit would be relatively high.

The characteristics of national ‘varieties of financial capitalism’ (Hardie and Howarth et al. 2013) will not map neatly to observed levels of central bank involvement in financial stability policy because political institutions, party systems and prevailing political and cultural factors mediate which groups’

preferences are served in the democratic process. If politicians depend on the support of negatively affected constituencies, they can be expected to oppose such delegations. Conversely, politicians are more likely to delegate strong financial stability mandates to central banks when the issue of financial stability has become so salient that the popularity of such moves outweighs the political backlash from negatively affected groups. In the aftermath of the financial crisis, ‘stability cultures’ (Tognato 2012) and narratives of ‘living within one’s means’ (Stanley 2014) have become more pervasive within Western publics. This has made stability-oriented macroeconomic programmes – including delegation of financial stability responsibilities to central banks and, ultimately, greater restrictions on the supply of credit to households – more popular than in the past.

INSTITUTIONAL CONSTRAINTS

To the extent that the varieties of financial capitalism literature provides for a mediating role for national institutions in the formation of policy preferences, it shades into the third category of explanation, which focuses specifically on interaction between agents and the structural and institutional terrains they operate in. There are many varieties of new institutionalist scholarship (see Hall, P. and Taylor 1996; Peters 2012) and it is beyond the scope of this thesis to assess how each of them might explain the changing power of central banks after the financial crisis. As set out in Section 2.5 below, the thesis builds on ‘historical institutionalist’ insights, which draw attention to the dialectical

interaction between interpretive agents and the institutional and structural terrains they inhabit.

A historical institutionalist explanation for the nature of post-crisis delegation to central banks would focus on the interactions between policymakers and the organisational structures, institutional cultures, and policy legacies they confront. Policy choices, once made, can produce 'path dependencies' and 'sunk costs' that make certain policy choices for policymakers more difficult. To take one example, over the course of the 20th century, the United States has established a bewildering array of financial regulatory authorities. The managers and employees of each of these agencies have a material interest in preserving (or expanding) the range of competencies that is assigned to their agency. Likewise these agencies have developed long-standing relationships both with the financial market participants they supervise and the congressional politicians that oversee them. These actors often have vested interests in maintaining the *status quo*. Policy entrepreneurs seeking to reform the US regulatory architecture, for example, face resistance from coalitions of other public bodies and their allies in Washington and Wall Street, keen to defend existing preferential relationships.

To summarise the discussion so far, this section has explored the reasons why politicians delegate powers to central banks in the area of financial stability. It has reviewed the economic rationales for central banks to play a leading role in this area and it has identified a number of potential political explanations for the variegated paths of organisational reform that are adopted in different countries. The arguments considered so far concern the relationship

between democratic politicians and non-majoritarian bureaucrats in central banks and other independent regulatory agencies. Just as important for an understanding how central bank power has changed in the aftermath of the financial crisis is the relationship between central banks and the financial market actors they are responsible for overseeing. It is to this relationship that we now turn.

2.3 PERSPECTIVES ON FINANCIAL POWER

Whether implicitly or explicitly, much of the communication from central banks, in speeches, policy reports or economic research, is couched in terms of maximizing 'aggregate social welfare' or protecting the 'public interest'. Such notions generally draw a sceptical response from political economists. Central banks are in the business of making decisions with distributional consequences. Without denying that some policies may be 'positive sum', the business of setting interest rates, controlling the money supply or regulating the financial system creates winners and losers, especially in the short-run. Thus, central banks' actions are generally subject to a high level of contestation from affected parties and their political representatives in legislatures and governments. It is for this reason that central bank watchers tend to 'hang on to every gubernatorial semi-colon' (Haldane 2014: 6). While all advanced country central banks enjoy some level of legal and *de facto* independence from political control over their day-to-day operations, they do not operate in a vacuum. Financial market participants and wider societal interest groups can and do exert influence over central bank policy.

The influence of the financial industry on public policies may be direct, as, for example, when financial firms successfully lobby central banks for a rule change. It may also be indirect, such as when policymakers feel compelled to implement market-friendly policies in order to enhance the international competitiveness of their 'home' jurisdictions in the eyes of ostensibly mobile financial capital. Scholarship on the concept of 'structural power' (Strange 1988; Gill and Law 1988; see below) suggests that at any given moment, the relative power of business actors and public officials depends in part on the extent to which those actors are dependent on one another. This is not to say that central banks' actions are a simple reflection of the balance of interdependencies between public and private actors or of the particular stratification of societal interests at a given moment. The power of public or societal actors is mediated (can be enhanced or diminished) by the ideas and beliefs that actors use to interpret the world, and by the broad intellectual climates within which relationships between public and private actors play out (cf. Bell 2012; Bell and Hindmoor 2014; 2015). Before considering further how 'ideas' mediate the structural power of finance, it is worth considering further the mechanisms by which market participants help shape central bank policies. To do so, this section reviews some competing perspectives in political science and political economy scholarship on the power of private interest groups to shape regulation towards their own ends.

2.3.1 THE ECONOMIC THEORY OF REGULATION

Starting in the 1970s, public choice theorists applied the techniques of microeconomics to the study of political behaviour (Stigler 1971; Peltzman 1976; Becker 1983). Challenging the prevailing orthodoxy of the time, which asserted that politicians work impartially and selflessly in the 'public interest' to correct market failures, these authors contended that the behaviour of politicians, like that of economic agents in society at large, was motivated by narrow self-interest. Politicians, it was argued, trade-off the costs and benefits of supporting one group over another (for more recent contributions building on similar assumptions see Grossman and Helpman 1994, 2001). For example, a politician would be willing to support a regulation that raised the price of goods or services if the suppliers of those goods and services could provide campaign funding or other forms of support that more than compensated for the electoral costs that higher prices would engender (Peltzman 1976). This theory of 'regulatory capture' provides a rationale for delegating powers to independent regulatory agencies, since it is assumed that technocratic elites will be more insulated from special interest groups than politicians concerned with securing re-election.

At the same time, some scholars in this tradition have argued that the establishment of independent regulatory agencies is not sufficient to prevent regulation from being captured by those that are subject to it. Tirole (1986) set out a three-tiered principal/supervisor/agent model of 'collusion' in organisations. His model suggested that agents (such as firms or regulated individuals) make side payments to supervisors to induce them into withholding

information from principals. Applied to a business regulation, this model suggests firms will bribe supervisors into setting policies that afford them unjustifiable rents (Dal Bo 2006). Other scholarship on 'regulatory capture' does not rely on the notion of firms bribing regulators. One of the most discussed mechanisms by which capture is said to occur is the so-called 'revolving door' (for a useful review see Dal Bo 2006). The promise of lucrative future employment in a regulated firm, so the argument goes, may induce regulators to take a lenient approach, either because the regulator has an explicit or implicit agreement with a regulated firm that this will lead to future employment, or because the regulator wishes to enhance his or her credentials in the job market. While the revolving door does not involve bribery, it produces regulatory capture by providing material incentives for individual regulators to act leniently.⁶

2.3.2 MACRO-LEVEL REGULATORY CAPTURE

Recent literature on the regulatory failures that contributed to the financial crisis has offered new perspectives on the mechanisms by which the financial industry (in particular) exerts power in regulatory processes. In the aftermath of the financial crisis, allegations of outright bribery of regulatory officials were few, although some scholars did claim that regulatory failures were attributable to the revolving door and the material incentives facing senior regulators (see Miller and Dinan 2009; Perrow 2010). More commonly, authors alleged that a form of 'macro-level regulatory capture' had taken hold, wherein multiple overlapping mechanisms came together to cause regulators to view the

preferences of the financial industry as more or less identical to their own (Johnson and Kwak 2010; Baker 2010). For example, Johnson and Kwak 2010 argued that over the course of the 1990s, the US financial industry was able to convert its enormous financial resources into political power through a trio of perfectly legal mechanisms. Large-scale lobbying campaigns and generous donations to politicians' electoral funds won the financial sector friends in Congress. At the same time, a 'Wall Street-Washington corridor' saw former bankers and finance industry insiders assume key positions of power within the US administration and regulatory bodies. Finally, an 'ideology of finance' – which prized financial innovation, homeownership and the ideal of a career in financial services – became widespread, especially within academic, business and government elites. This was driven in part by the first two factors – financial industry lobbying and the revolving door – and in part by cultural phenomena, including the glorification of financial excess in films such as Oliver Stone's *Wall Street*.

Similarly, Baker (2010) sets out a 'multi-level' conception of regulatory capture. In addition to direct lobbying and campaign finance, he points to the tendency of 'boom-time' politicians to favour policies that will leave financial market activity unrestrained (see also Persaud 2009). Baker also highlights the revolving doors phenomenon and the cultural affinities and shared perspectives of actors working in linked academic, business and official 'professional ecologies' (see also Seabrooke and Tsingou 2009). Finally, Baker (2010: 653) points to 'intellectual or cognitive capture', wherein 'the personal connections, networks and repeated interactions... [between financial market participants

and regulators] can lead to the personnel of leading banks heavily influencing the thinking and mindsets of regulators.’ Cognitive capture was most evident, he suggests, in the long reign of Alan Greenspan as Federal Reserve Chairman, whose evangelism for efficient market ideas elevated such thinking to the status of market orthodoxy.

2.3.3 THE STRUCTURAL POWER OF FINANCE

Ultimately accounts of regulatory capture focus on interactions between financial market actors and public authorities. Power is exerted either through material inducements, ideological persuasion or processes of socialisation. However multifaceted such accounts may be, they give little explanation as to *why* financial market actors are powerful in the first place, save for the ample material resources available to them to fund their lobbying campaigns. Yet the ability of an industry to exert influence through lobbying and campaign donations is at best only a partial explanation of its power. Another body of political economy scholarship suggests that the political power of financial actors is structural (Strange 1988, 1996; Bell 2012; Johal et al. 2014; Woll 2014a; Culpepper and Reinke 2014). According to these authors, financial actors’ power stems not only from their ability to shape arguments or win’ debates, but also from the unique role that finance plays in the wider economy. Financial market players have power because they perform specific functions that other actors depend on. As Woll (2014a: 46) puts it:

the power of A over B does not necessarily rest on activities and influence peddling. The degree to which B needs A is more important. The dependence of B on A is a structural feature and not the result of individual interactions.

Banks and non-bank financial intermediaries perform several functions that are vital for the normal functioning of modern capitalist economies. They provide savers with a means of investing their money, such that it retains (or gains) value. Banks facilitate payments between consumers and firms, by providing customers with checking accounts and instant access to their deposits. Most importantly, they provide firms and households with the credit they need to invest. The provision of credit is central to a healthy economy. To the extent that the supply of credit affects asset prices, and in particular the price of housing, the supply of credit also determines how wealthy people are and how affluent they feel.

The importance of these functions for the broader macro-economy places financial firms in a privileged position relative to politicians and their agents in central banks and regulatory agencies. Politicians, central bankers and financial regulators are aware that there are often significant short run trade-offs between regulations to promote financial stability and economic growth. To a large extent, politicians' electoral fortunes, and central bankers' bureaucratic standing, hinge on economic prosperity. They therefore have an incentive to ensure that regulations do not unduly constrain the credit supply or asset prices. The structural position of the financial industry within the wider

economy thus sets limits on the kinds of policies that public authorities will be willing to countenance.

2.3.4 ACCOUNTING FOR VARIATION

As Bell (2012: 662) notes, there is broad recognition that scholarship focusing on the structural power of business is too 'structuralist'. The financial industry performs functions that are central to the economic health of all advanced economies, but the power of financial actors to shape regulation varies from one country to the next. In part, this is because national varieties of financial capitalism differ. It is to be expected that governments in countries where banks play a relatively more important role in supplying firms and households with credit will, other things being equal, adopt a more deferential and protective stance towards their banks than countries where capital markets play a greater role in funding commercial businesses. Conversely, countries in which non-bank sources of funding are more prevalent may be more inclined to resist stringent controls on entities outside of the regulated banking sector.

A variety of additional factors could mediate the structural power of the financial industry. Some authors suggest that power is exercised through discursive and inter-subjective processes (Barnett and Duval 2005). The ever-increasing complexity of finance effectively restricts meaningful societal participation in regulatory processes to all but a small elite of industry insiders, government officials and some academic economists. Within these networks, market participants and public officials co-create knowledge about how financial systems work; they define key concepts and policy problems; and they

help frame the sorts of solutions to those problems that policymakers will consider. Beyond this, some scholars further suggest that the structural power of finance is enhanced because the models and technologies that regulators and market participants rely on have the peculiar quality of unwittingly transforming the very nature of markets they are designed to observe. This is the so-called ‘performativity’ of finance (see MacKenzie 2006).

An alternative factor that may mediate the structural power of finance is the *ideas* government actors possess about the likely consequences of particular courses of action (Bell 2012; Bell and Hindmoor 2014, 2015). For example, a firm may threaten to ‘exit’ a jurisdiction that imposes more costly regulatory standards than the international baseline. Such a threat pertains to the firm’s structural power; the functions the firm performs are deemed necessary for the wider economy. This structural power will be enhanced if policymakers truly believe the firm’s exit threat to be credible. On the other hand, the firm’s structural power will be diminished if policymakers view such threats as unlikely to be followed by action. Bell (2012) and Bell and Hindmoor (2014, 2015) remind us that central banks and financial regulatory authorities are by no means passive entities to be fought over by financial market actors or other interest groups. Central bankers may endeavour to be ‘objective’ in reaching ‘evidence-based’ judgements regarding the probable ramifications of different courses of action. Yet the sorts of policies they choose to implement inevitably will be oriented towards prevailing intellectual fashions regarding appropriate role of regulation and public authority in managing how financial markets operate. In turn, changing intellectual fashions will to a significant extent reflect

changing political priorities and public sentiments (Campbell 2004), which themselves can be the product of manifold factors including the political legacies of past events and financial crises and the changing public appetite for more or less stringent approaches to regulation.

Admitting that the structural power of finance may be mediated by the ideas and intellectual fashions of policymakers shifts the focus of discussion away from the power of financial market participants to the power of public officials themselves. The next section addresses the flipside of the discussion of financial power presented here, namely, the power of central banks vis-à-vis financial actors. To do so, it first examines a number of prominent efforts within political science and political philosophy to define power as a concept more generally. It then sets out the operational definition of central bank power that will be used as the basis for the comparative analysis in the empirical chapters that follow.

2.4 OPERATIONALISING CENTRAL BANK POWER

2.4.1 POWER IN THEORY

Power can be a difficult concept to pin down, having been defined in numerous and often very different ways. Conceptualisations of power tend to reflect different analytical choices as much as empirical phenomena. Contemporary social studies of power tend to define power either as ‘power over’ or as ‘power to’. Within the former camp, the canonical statement of power was provided by Dahl (1957: 202-03): ‘A has power over B to the extent that he can get B to do something that B would not otherwise do.’ Dahl’s definition suggested power is direct, instrumental and compulsory. It exists where there is open and

observable conflict between actors, and where one actor (or group of actors) prevails over another.

Bachrach and Baratz (1962) famously challenged this view, suggesting power in fact has two 'faces'. One face is observable: actors with openly stated preferences exert power over one another in transparent decision-making processes. The other face is covert: the powerful limit 'decision-making to relatively non-controversial matters, by influencing community values and political procedures and rituals' (Bachrach and Baratz 1962: 949). In other words, the second face of power involves agenda setting. The powerful define the policies and forms of behaviour that are considered legitimate areas of debate, ensuring issues that threaten their own interests are not open for discussion.

Lukes (1974) subsequently added a 'third dimension' of power. In addition to contests between competing groups in overt decision-making processes (the one-dimensional view) and the more covert processes of agenda-setting (the two-dimensional view), Lukes maintained that power was also exerted when actors influence, shape and determine the very wants and desires of those they exercise power over. For Lukes, the powerful convince the dominated to acquiesce in their own domination through ideology. The enduring value of this contribution was its recognition that power may be exercised through patterns of indirect normative control that more often than not take place unbeknownst either to the powerful or the dominated.

In contemporary social studies, this third dimension of power is commonly labelled 'structural power'. It refers to the ability of actors to shape the

structures that define 'the parameters of what is socially, politically and economically possible for others' (Hay 2002: 185).⁷ Within political economy scholarship (and especially the sub-field of International Political Economy), the concept of 'structural power' is strongly associated with the work of Susan Strange. She argued:

The possessor [of structural power] is able to change the range of choices open to others, without apparently putting pressure directly on them to take one decision or to make one choice rather than others. Such power is less 'visible'. The range of options open to the others will be extended by giving them opportunities they would not otherwise have had. And it may be restricted by imposing costs or risks upon them larger than they would otherwise have faced, thus making it less easy to make some choices while making it more easy to make others (Strange 1988:31).

Strange famously identified four key sources of structural power in international relations: control over security, control over production, control over finance and control over knowledge. As several scholars have argued, this fell well short of a theory of structural power because it offers no indication of how actors come to exercise power over these structures (Helleiner 2005; Cohen 2013). It was also tautological, suggesting actors exercise structural power because of their power over structures. Even so, like Lukes' related third dimension of power, the concept of structural power has enduring resonance: the basic intuition that some forms of power are exercised indirectly by actors shaping

and constraining the contexts in which other actors operate gained widespread acceptance.

Overt coercive power (Dahl 1957), behind the scenes agenda setting power (Bachrach and Baratz 1962) and structural power (Lukes 1974; Strange 1988) are all *relational* conceptualisations of power. Each implies a causal social relationship in which actor A exerts 'power over' actor B either directly or indirectly (cf. Johal et al. 2014). Viewed in relational terms, power is often cast in a negative light: A exercises power over B, causing B to do something that he or she would not otherwise do. From this understanding of power, it is a short step to viewing power as a form of domination. This relational conceptualisation of power ('power over') can be contrasted with an *empowerment* perspective (the 'power to' do something). According to this alternative understanding of the concept, actors have power when they have the ability to achieve their desired ends (Morriss 2002: 29). A key difference between 'power over' and 'power to' is that the latter refers to a form of power that is necessarily intentional. Whereas Lukes' maintained that the third dimension of power could be exercised unbeknownst either to the powerful or the dominated, when power is exercised as a capacity it is always intended.

While some view the concepts of 'power over' and 'power to' as rivals (Morriss 2002), there are at least two reasons to think of these concepts as complementary. First, as Dowding (1991) notes, 'power over' may be considered a subcategory of 'power to', since A's ability to cause B to change his or her behaviour necessarily requires A *to be able to do something*. Second, as Pansardi (2012) argues, 'power to', like 'power over', requires an understanding

of social relations. As actors set about achieving their objectives, exercising 'power over' other actors might not be their primary intention. However, doing just about anything in the social world involves interactions with others of some sort. Thus, having the 'power to' achieve one's objectives almost always requires one to exercise 'power over' other actors, however obliquely or indirectly.

At the same time, the concepts do not collapse into one another entirely. While all human interactions involve a relational element, 'power to' enables us to explore actors' ability to achieve their ends where power relations vis-à-vis other actors are not obvious (cf. Morriss 2012). A central bank may have the power to create new money, either using the printing press, or via electronic means. Such a power is difficult to describe in relational terms. To be sure, money creation may benefit some actors in society and penalise others. Yet it is both intuitively and conceptually clearer to describe this as a central banks' 'power to' create money, rather than its 'power over' other actors (even if the latter derives ultimately from the former). Conversely, when there are good reasons for emphasising the nature of relationships between actors, 'power over' concepts are more appropriate. For example, where central banks have participated in political debates over post-crisis regulatory reforms, we are interested in assessing their ability (or lack of ability) to move policy closer to their preferences, *over the wishes of actors with different preferences*.

Before proceeding, a point of clarification is in order. In analysing the power of central banks, this thesis is concerned with certain enduring properties of central banks, as opposed to any specific actions they have taken. As Morriss (2002) argues, much of the difficulty and confusion surrounding usages of the concept of power in political science stems from the conflation of ‘dispositional’ and ‘episodic’ concepts. A dispositional concept refers to the capacities of an object or actor. An episodic concept refers to a happening or event (including the exercise of dispositions). Power is a dispositional concept. In other words, an actor can possess power without necessarily choosing to exercise his or her power. It follows that one need not necessarily observe an actor exercising his or her power to know that he or she is powerful. As Morriss (2002: 16) illustrates:

When I go to a zoo, I can see that a lion is powerful enough to eat me up by observing its jaws, teeth and muscles, and combining these observations with my general knowledge of animals’ masticatory performances. If I am still in doubt, I can observe what the lion does to a hunk of meat, and induce. Not even the most dogmatic positivist would declare that he couldn’t know if the lion could eat him up until it had actually done so.

As a dispositional property, power involves having certain enduring capacities, or resources, which may or may not be put into action (Pansardi 2012). However, avoiding the ‘exercise fallacy’ – confusing power with the exercise of

power – does not preclude us from observing the exercise of power as a means of identifying the resources by which actors are powerful. To adapt Morriss’s zoological example: we know that the lion in the zoo is powerful because we know how lions (in general) eat other animals. This knowledge enables us to recognise the lion’s teeth, jaws and muscles as the sources of its power. As Dowding (2008) notes:

To confuse the dispositional power of an object or an actor with the exercise of that power is a mistake. It is not a mistake, of course, to use the evidence provided by the exercise of power to examine the properties or resources of the actor to try to understand the basis or foundations of that actor’s power.

In short, whilst recognising that power is a dispositional concept, we are not precluded from using the evidence of the exercise of power to understand why actors are powerful.

2.4.2 CORE ELEMENTS OF CENTRAL BANK POWER

A necessary precondition for explaining how central bank power has changed in recent years is an operational definition of ‘central bank power’. Building on the theoretical discussion, this section elaborates a typology of central bank power based on three core elements. These are ‘authority’, ‘structural power’ and ‘capacity’.

AUTHORITY

For the purposes of this thesis, the concept of ‘authority’ refers to *the ability of central banks to move policy in line with their own preferences, over the opposition of other actors*. Conceptually, this element of central bank power is close to the first and second ‘faces’ of power discussed above. That is to say, it concerns central banks’ ability to get other actors to do what they would not otherwise do. It also concerns central banks’ ability to win policy debates and set agendas, both in their core policy domains and in policy areas tangential to, but potentially affecting, those domains (cf. Maxfield 1998: 21). Authority is a relational concept of power; it denotes actors’ ‘power over’ other actors.

The concept of authority employed here concerns the ability of a central bank to ‘*choose a course of action independently... without yielding to pressures of other actors*’ (Wooley 1984: 13, emphasis in the original). In this sense, it is similar to the categories of ‘autonomy’ (Quaglia 2008a; L. Goodhart 2014), ‘behavioural independence’ (Maxfield 1998) and ‘political independence’ (Wooley 1984: 13) that have been discussed in existing scholarship on central banks. However, the concept of central bank authority employed here is broader than these categories. This is because it encompasses both the formal legal authority conferred upon central banks by executive and legislative politicians and the ‘room for manoeuvre’ central banks have in performing their functions free from control by other actors.

The analysis distinguishes between *de jure* and *de facto* aspects of central banks’ authority. *De jure* authority has two key components. First, as public bureaucracies, central banks are imbued with authority that has been delegated

to them by elected politicians. Whether following 'logics of appropriateness' or 'logics of consequences' (March and Olsen 1995), firms and private individuals comply with central banks' strictures first and foremost because central banks are statutory bodies, which ultimately can compel compliance with their decisions through legal means. Any assessment of the power of central banks must, therefore, start with the range of formal objectives and specific 'powers' that have been delegated to them by politicians.

The second component of central banks' *de jure* authority is the set of formal mechanisms establishing their autonomy from (or control by) politicians. Formal contracts between politicians (as 'principals') and central banks (as 'agents') tend to consist of both *ex ante* and *ex post* control mechanisms (cf. Hawkins et al. 2006). *Ex ante* controls aim to prevent agents from straying away from the mandates delegated to them by their principals. An example of an *ex ante* control mechanism is requirements for bureaucratic officials to implement detailed rulebooks. On the whole, 'rule-based' regimes leave bureaucratic officials with little room to exercise their discretion. Another example of an *ex ante* control mechanism is short terms of appointment of key officials. Other things being equal, the shorter the term of appointment, the more likely bureaucratic officials are to act in line with the preferences of their principals, who can decide whether to reappoint them or not. *Ex post* controls provide means by which principals (and the interest groups they represent) can influence agents' activities after they have delegated authority to them. Examples of *ex post* control mechanisms include requirements for central bank

officials to account for their decisions before legislative committees and other obligations around transparency of decision-making.

As discussed, authority also has a *de facto* component. The *de facto* authority of central banks refers to their ability to adopt policies that are controversial and which are likely to engender societal resistance, whether from market participants, public interest pressure groups or politicians in the executive or legislative branches of government. Even the most insulated central banks respond to public opinion to some extent, if only to avoid political censure through formal mechanisms. Elsewhere, the concept of authority has been defined in more abstract terms ‘as the ability to induce deference in others’ (Avant et al. 2010).⁸ The notion of ‘inducing deference’ is an apt in discussions of *de facto* authority because it directs attention to interactions between central banks and commercial banks, such as agenda setting and negotiation, where power is more contested. For example, an authoritative central bank would be said to induce deference if it can set an agenda for establishing more stringent regulatory standards against the opposition of market participants who stand to be negatively affected by those reforms.

In assessing how the *de facto* authority of central banks has changed since the crisis, it is necessary to recognise that the nature of the societal resistance to central banks’ policies depends on the particular issues at hand. Generally speaking, central banks’ *de facto* authority in the monetary policy domain is bolstered by the fact that advanced Western societies exhibit strong ‘stability cultures’ (Tognato 2012), meaning that there is a high level of public support for central banks’ efforts to maintain low and stable inflation. In contrast to

monetary policy, financial stability policies tend to have concentrated short-term costs and benefits that are diffuse and apparent only in the long term. Financial market participants and politicians opposed to restrictions on access to credit will lobby against central banks adopting 'hawkish' financial regulations. Accordingly, central banks' *de facto* authority in this domain is likely to be less pronounced than in the monetary policy domain.

Central banks' *de facto* authority does not stop at the boundaries of their formal mandates. While central bank governors may be unlikely ever to opine on the defence budget (Jones 2015), it is common for them to intervene in debates over fiscal policy or other aspects of government economic policy. Moreover, as this thesis helps to demonstrate, central banks have historically played an important role in driving organisational reforms of domestic, regional and international regulatory architectures (see, for example, Verdun 1998; King 2005; Mackintosh 2014). In exploring central banks' *de facto* authority, then, it is important to explore how capable these organisations have been in driving wider economic and institutional reforms.

STRUCTURAL POWER

The second core element of central bank power examined in this thesis is structural power. This is defined as a central bank's *ability to shape the context in which other actors perceive and define their preferences*. Like authority, structural power refers to central banks' 'power over' other actors in society. However, it differs from authority because of the indirect nature of its exercise. Whereas authority refers to central banks' ability to win policy debates and set

policy agendas over the preferences of other actors, structural power, refers to central banks' ability to shape the parameters of what is possible for other actors, thereby influencing how other actors frame and determine their preferences in the first place.

The thesis contends that at any given moment, a central banks' structural power depends on the extent to which other actors in society 'need' the central bank. A central bank is more likely to be able to exert a transformative change over the objectives and character of financial regulation when their key interlocutors – specifically, governments and financial sector actors – are dependent upon them for their immediate political or economic survival. For example, market participants will be less capable of mobilising political opposition to 'hawkish' central bank financial stability policies, if those actors are simultaneously relying on central bank liquidity provision and emergency lending facilities for their immediate economic survival. Similarly, policymakers may be more willing to countenance delegating greater authority to central banks at times when they are unwilling or unable to use other tools (notably fiscal policy) for the purposes of countercyclical stabilisation.

Beyond this, however, the thesis follows Bell and Hindmoor (2014, 2015) in contending that central banks' structural power may be mediated by their 'ideational relations' with interlocutors in the financial markets. In the first instance, it falls to public officials to confront policy problems and fashion solutions to them. Officials must interpret and react to the pressures and demands of financial market actors. The power of governmental actors will depend to some extent on the 'causal, strategic and normative ideas' they use

to interpret such pressures and demands (Bell and Hindmoor 2015: 456). Central banks that give a high level of credence to the proselytization of commercial banks regarding the impact of particular prudential or monetary policies can diminish their own structural power (cf. Bell 2012). Likewise, a central bank that shares an ‘economic worldview’ with senior bank executives may inadvertently diminish its power vis-à-vis those actors.

CAPACITY

Scholarship on the capacity of public authorities – whether at the level of states in general or individual sectors – has yielded a wealth of overlapping concepts, definitions and typologies (see for example Polidano 2000; Hamilton-Hart 2000; Painter and Pierre et al. 2005). In this thesis, the concept of *capacity* refers to central banks’ *ability to attain their specified objectives*, such as price stability or financial stability. Depending on the nature of the central banks’ mandate, such objectives may be either defined statutorily or they may be established by the central bank itself. Capacity is distinct from ‘authority’ and ‘structural power’ because it concerns central banks’ ‘power to’ achieve their given ends, rather than their ‘power over’ other actors. This is not to say that central banks do not exercise power over other actors when they perform tasks in pursuit of their price stability or financial stability objectives. Rather, the concept of capacity recognises that central banks may be more or less effective in achieving those objectives, and that the effectiveness of their operations is not wholly determined by their ability (or inability) to exercise power over other actors.

It is perfectly possible that a central bank that enjoys a very high level of authority vis-à-vis financial market participants and elected politicians will nevertheless lack capacity. For example, a central bank may develop policies that are not 'fit for purpose' (cf. Dyson 2009). This could be because policies are oriented towards objectives that are poorly conceived or which are unlikely to succeed in maintaining financial stability. This was clearly the case prior to the financial crisis, when central banks (and in some countries independent financial regulators) focused on ensuring the safety and soundness of individual financial institutions (mainly for the purposes of consumer protection) rather than systemic financial stability. As will be shown, the central banks considered in this thesis have each adopted subtly different policy instruments after the financial crisis and they have prioritised different 'intermediate' objectives, such as dampening the credit cycle versus enhancing the resilience of financial institutions. The evaluation of the 'fitness for purpose' of these divergent approaches draws on the burgeoning empirical literature in economics on the effectiveness of different financial stability policies.

A further factor affecting the capacity of central banks is their styles of policy implementation, in particular the extent to which central banks reserve to themselves discretion to adapt and adjust policies to particular circumstances. An enduring theme in the literature on central banking is the dichotomy between rules-based and discretion-based styles of policy implementation. While this dichotomy has received most attention in regards to the monetary policy domain (see Kydland and Prescott 1977), the thesis documents that the three central banks have exhibited differing preferences for 'rules-based' and

‘discretion-based’ approaches to implementing macroprudential and microprudential policies. Such divergences reflect organisational cultures of each central bank and the institutional environments they are embedded within.

Finally, capacity is partly dependent on the extent to which central bank policies are coordinated with those of other authorities involved in financial regulation or macroeconomic policymaking. In no country does the central bank have control over all aspects of financial regulation and supervision. If elements of the regulatory system are working at cross-purposes to the central bank, the central bank’s effectiveness will naturally suffer. For example, the existence of multiple regulatory agencies can provide opportunities for financial market participants to engage in ‘forum shopping’, whereby they evade regulation by the central bank by deliberately seeking to be regulated by a different agency. Central government macroeconomic policy can also have adverse consequences for the capacity of the central bank. One much discussed example is that the tax deductibility of debt interest payments incentivises banks to fund themselves with debt rather than equity; this is a source of systemic risk that central banks can only partially offset through capital adequacy regulation.

It is worth noting that the factors shaping the relative capacity of the Federal Reserve, the Bank of England and the ECB differ from those affecting central bank capacity in emerging economies. In a study focusing on central bank capacity in East Asia, Hamilton-Hart (2002) draws attention to organisational characteristics of central banks that affect their ability to implement policies in a consistent and rule-abiding way, such that scope for corruption and

opportunistic behaviour on the part of market participants is diminished. While these are important factors for all central banks, the three central banks considered in this thesis are each situated in jurisdictions where the rule-of-law is well established. Broadly speaking, banks seek to comply with the letter of central banks' rules, even if they will readily circumvent their spirit where there is a profit to be made. Accordingly, the capacity to ensure consistent implementation and high levels of compliance are less relevant for this thesis, which seeks to compare the capacity of the major advanced economy central banks relative to each other.

TABLE 1: A TYPOLOGY OF CENTRAL BANK POWER

Core elements	Component Variables		Examples
Authority	<i>De jure</i> authority	Delegated authority	<ul style="list-style-type: none"> - Authority to set prudential regulations. - Authority to supervise banks.
		<i>Formal</i> autonomy	<ul style="list-style-type: none"> - Rule-based vs. discretion-based mandates. - Length of CB governor's tenure. - Parliamentary oversight arrangements.
	- <i>De facto</i> authority		<ul style="list-style-type: none"> - Contractionary monetary policies - 'Hawkish' prudential policies - Influence beyond 'formal' mandate
Structural Power	- Economic functions of finance		<ul style="list-style-type: none"> - Banks' provision of credit to the real economy. - Substitutability of alternative forms of finance
	- Economic functions of central bank		<ul style="list-style-type: none"> - Prudential rule-maker. - Lender of last resort.
	- Central bankers' economic ideas		<ul style="list-style-type: none"> - Beliefs about risk of capital flight. - Beliefs about drivers of financial crises.
Capacity	- Policy objectives		<ul style="list-style-type: none"> - 'Fitness for purpose' of macro-prudential 'toolkit'.

		- Effectiveness of coordination between monetary policy, macroprudential and microprudential objectives.
	- Policy styles	- Principles-based microprudential regulation/supervision. - Discretionary macroprudential policy. - Rules-based stress-testing frameworks.
	- Policy coordination	- Supportiveness of fiscal policy. - Inter-agency regulatory competition

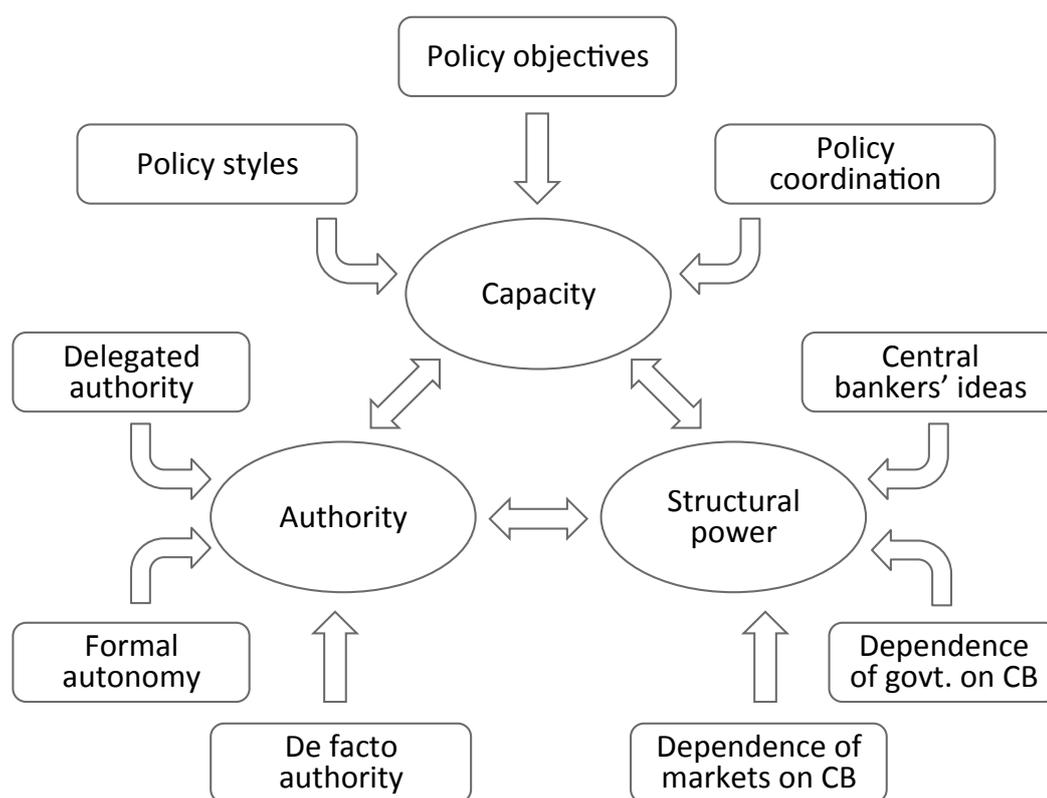
2.4.3 INTERACTION BETWEEN THE CORE ELEMENTS

The three core elements of central bank power outlined here – *authority*, *structural power* and *capacity* – are not mutually exclusive (see Figure 2). A central bank’s capacity is not *only* a function of the fitness for purpose of its policy objectives and instruments, its style of policy implementation or the extent to which its policies are coordinated with the wider systems of economic governance within which it is embedded. Capacity also depends on the authority to act autonomously of pressures from financial actors and societal interest groups, and these actors’ political representatives. Moreover, effective goal attainment to some extent relies on the central bank’s structural power. That is to say, the success or failure of a set of monetary or financial policies depends, to some extent, on the ability of the central bank to mould the national financial system – and societal preferences – in-line with its own preferred model of economic organisation.

Similarly, a central bank’s authority depends both on its reputation for effectiveness and its structural position. If a central bank is seen to have been effective in meeting its objectives, it is more likely that it will be able to lead the policy agenda. Typically, central banks’ have a preference for low inflation,

competitiveness and fiscal discipline. The existence of broad societal support for these policies will likewise strengthen its hand vis-à-vis public authorities, social groups and other interlocutors that do not share its policy stance. Finally, the structural power of a central bank depends on both its capacity and its authority vis-à-vis societal actors. As discussed, a central banks' structural power depends on the functions it performs. A central bank that fails to maintain financial stability or a low and steady rate of inflation risks breaking down the economic structures that shape private actors' preferences in support of its given policy stance. In crisis periods, central banks' ability to shape economic structures is obviously influenced by its authority vis-à-vis market actors and politicians, and more specifically, its ability to win policy battles and set agendas for financial and organisational reform.

FIGURE 1: INTERACTION BETWEEN CORE ELEMENTS OF CENTRAL BANK POWER



2.5 CONVERGENCE, DIVERGENCE AND INSTITUTIONAL CHANGE

The financial crisis marked a critical juncture for central banks of most advanced economies. It brought to a sudden close an era in which central banks paid scant attention to the interactions between financial markets and the real economy, and in which a pervasive intellectual and political consensus supported their singular focus on maintaining a low and steady rate of inflation. After the crisis, central banks have experimented with unconventional monetary policies against a backdrop of deflationary pressures. They have been delegated new formal powers in respect of macroprudential policy, microprudential policy and crisis management. And they have been working to establish new macroeconomic models that incorporate newly fashionable ideas about the behaviour of individuals and assumptions about the operation of markets. These broad changes are common to each of the three central banks considered in this thesis. As discussed, the thesis suggests that these changes are attributable first and foremost to the policy entrepreneurship of transnationally networked central bankers themselves. Acting much like an 'epistemic community' (Haas 1992), central bankers advocated for macroprudential reforms based on broad (if not absolute) consensus over the regulatory mistakes of the pre-crisis era and the appropriate role that central banks should play in managing the financial system after the crisis.

Within this common overarching transformation, the thesis demonstrates considerable diversity. The thesis is not the first to examine cross-national variations in financial supervisory architectures or developments in central bank governance (see for example Lütz 2004; Marcussen 2005; Busch 2008; Quaglia

2008a 2008b; Dyson and Marcussen et al. 2009). As several of these authors have argued, cross-national convergence can be superficial. For example, Marcussen (2005: 921) argues that 'legal independence [of central banks] is not implemented in the same way anywhere, and legal or statutory independence is far from being the same as behavioural or real independence'. In their studies of broader central bank governance, Dyson and Marcussen et al. (2009) suggest central banks have converged in respect of their legal independence, their monetary policy objectives, their inclinations towards transparency, and their pursuit of 'quasi-scientific' styles of policymaking. Yet these authors also note specific national path dependencies, most notably in respect of the range of functions central banks perform and the sorts of policies they are willing to countenance.

Some studies on national variation in financial supervisory structures have viewed institutional variables as structures of incentives that determine the costs and benefits for policymakers of particular policies or courses of action (Lütz 2004; Busch 2008; Quaglia 2008b). In these accounts, regulators' choices may be 'read-off' from the structure of the national financial system and the differential empowerment of particular private interests and societal groups in the national political system. As Crouch (2005: 3) suggests, this places actors 'in an iron cage of institutions', in which they are stripped of their capacity to act innovatively to change the environment around them. It also leaves us with a narrow understanding of institutions as structures of incentives, rather than repositories of shared understandings or norms, which might influence how actors define their objectives and preferences. These approaches leave us with

a view of national regulatory and supervisory regimes as rigid, deterministic and fated to evolve along characteristic national paths.

This thesis aims to show that convergence coexists with new divergences and persistent difference. Campbell (2004: 79) employs the concept of 'translation' to describe the process of institutional change that occurs when new ideas, principles and practices are enacted within local institutional terrains. Such an approach is well suited to explaining the differential transformation the main Western central banks since the onset of the financial crisis. Domestic institutional variables – including both the differential empowerment of coalitions for and against reform and the normative and ideational aspects of individual central banks' organisational cultures – resulted in differential delegation to central banks and significant variation in the initial implementation of new macroprudential policies. The concept of 'translation' suggests we should be cautious of accounts of cross-national institutional 'isomorphism', because even where different countries or organisations appear to have followed similar paths of reform, local practices may differ in subtle but potentially significant ways (Campbell 2004: 83).

To explain the coexistence of convergence and divergence, the thesis builds on the agent-centred historical institutionalist approach proposed by Bell (2011). In common with most new institutionalist scholarship, this approach starts from the proposition that actors exist within environments that are pre-populated by existing institutions (Steinmo and Thelen 1992; Pierson 2004). Institutions are regarded as having both material and ideational properties. On the one hand, institutions act as more or less formal rules or 'duties' that actors

must navigate or negotiate (Bell 2011). They have 'real' effects, empowering or disempowering certain groups of actors within society and implying costs and benefits on different courses of action. On the other hand, institutions are themselves constituted by agents through ideational processes and shared understandings. This is not to say that actors are ontologically prior to institutions. On the contrary, as Bell (2011: 891) notes, 'institutions have properties that help structure thought and behaviour at one remove from the immediacy of thought or action by agents at any given point in time'.

This approach is agent-centred because it emphasises the role of interpretive agents actively reshaping their institutional terrains. Some variants of historical institutionalism present an excessively deterministic view of path-dependence, which affords little role to agents in interpreting the world around them. By contrast, the approach adopted here view agents and institutions as locked in an on-going dialectical interaction, mutually shaping one another over time. Bell identifies three 'openings' that allow institutionally situated agents to re-constitute their institutional terrains. First, actors interpret and (re-)construct institutions using subjective and inter-subjective cognitive and normative frameworks, much as constructivist scholars suggest (see Blyth 2002; Hay 2004; Schmidt 2008). Second, within their constrained institutional terrains, actors operate with 'bounded discretion', which enables them to shape institutions over time. Finally, institutions do not only constrain behaviour: they also enable it. Institutions provide actors with resources and capabilities for achieving change. Agency does not consist of 'dull conformity or blind compliance' (Bell 2011: 894). Rather agents act innovatively with bounded discretion in

interpreting and reshaping their institutional environments over time. Viewing institutions as resources helps us to avoid determinist notions of path dependency, in which truly path diverging change can only result from an exogenous shock. As Campbell (2004) suggests, actors craft new institutional solutions by recombining elements of their repertoire of already existing institutions through innovative processes of 'bricolage' (2004: 69). In this way, new institutions emerge that combine elements of the old and the new.

The agent centred historical institutionalist approach adopted here also provides a means of bringing the analysis of power into the conceptualisation of institutional change, a link that is sometimes implicit or under-theorised in institutionalist literature (cf. Moe 2005). As discussed, structural power – understood as the ability to shape the contexts within which other actors perceive and frame their preferences – derives from the asymmetric capabilities of different actors and their differential degrees of dependence on each other. Such differential capabilities are themselves institutional artefacts. For example, the role of central banks as *de facto* guarantors of systemic stability in their respective jurisdictions is an inter-subjectively defined social institution, which grew out of the emergence of central banks as the monopoly providers of currency in their respective jurisdictions (another social institution). Actors shape and reshape institutions using bounded discretion and through processes of ideational and institutional bricolage (Campbell 2004; Bell 2011). Institutions, in turn, define the differential capabilities of actors and are, thus, the basis of their structural power. Yet the structural interdependencies of actors do not wholly determine outcomes. The agency of governments (and central bankers)

and business actors matters a great deal because actors interpret their (structural) relationships with each other. Actor A may give greater or lesser credence to the possibility that Actor B will withdraw the services upon which Actor A depends. In this way, Actor A can mediate structural power of Actor B (Bell 2012).

2.6 CONCLUSION

This chapter has endeavoured to situate the discussion of central bank power within existing debates over the delegation of power to non-majoritarian actors and the relative power of central banks vis-à-vis financial market actors. It has also aimed to provide the conceptual tools and theoretical foundations necessary for explaining the combination of convergence and divergence witnessed in the three jurisdictions considered in this thesis. Section 2.2 set out a range of economic and political explanations for the delegation of financial stability functions to central banks. Section 2.3 examined the different ways that business in general, and the financial industry in particular, exerts influence in public policy processes. Section 2.4 identified the three different core elements of central bank power – authority, structural power and capacity – that will be compared and contrasted in the empirical chapters to follow. Finally, Section 2.4 conceptualised the interaction between agents and institutions in processes of institutional change, highlighting the mechanisms by which cross-national convergence co-exists with new divergences and perpetual difference.

The unifying theme of this chapter has been that the ideas and intellectual fashions of central bankers and related experts in transnational networks matter a great deal to the power of central banks. As with the emergence and spread of CBI in the 1990s and 2000s, the prime impetus for the enhancement of central banks' financial stability functions since the financial crisis has been the active advocacy of the transnational community of central bankers, international organisation staff and academic and private sector economists. These actors adopted macroprudential ideas as their new orthodoxy and persuaded policymakers of the importance of empowering central banks to implement new macroprudential policies. Central bankers' ideas also play an important role in shaping their relationships with the financial industry. The structural power of the financial industry within policymaking processes is manifested only through the agency of the actors involved. Actors must interpret their respective claims and perspectives drawing on causal and normative beliefs that enhance or diminish their power. Finally, as the final part of this chapter has demonstrated, ideas are of course central to any process of institutional change.

In the remainder of this thesis, the analysis moves from the abstract to the empirical. Chapters 4-6 demonstrate how new ideas have been translated into local institutional contexts, transforming the power of central banks vis-à-vis both market actors and democratic authorities in the process. It is no exaggeration to say that the changes discussed herald the beginning a new era in central banking. While this may sound a grandiose claim, the post-crisis

transformations in central banking are merely the latest a long history of reinventions of central banking. It is to this history we now turn.

¹ Building on a distinction first proposed by the philosopher John Searle, Rethel and Sinclair (2012) distinguish between ‘regulative’ rules, which place limits on banks’ activities, and ‘constitutive’ rules, which define what banks are and what they do.

² Many economists view the case for CBI in respect of monetary policy as beyond question. As Blinder (2010:2) puts it ‘to economists, at least, that debate ended long ago.’

³ Haldane (2014: 3) summarises the time-inconsistency problem in monetary policy as ‘the temptation to over-supply money or over-relax regulations today, often to finance wars or to win elections, at the expense of inflation tomorrow’. See Kydland and Prescott 1977 for the original statement of the time inconsistency problem in relation to monetary policy.

⁴ ‘Printing money’ eventually will drive up inflation expectations and interest rates. After a certain point, this will drive down tax revenues and the demand for new base money.

⁵ This conflict has been readily apparent in the years since the onset of the global financial crisis. A prolonged period of very low interest rates has stimulated a ‘search for yield’ in which institutional investors have bought riskier assets at knocked-down prices the hope of increasing or maintaining levels of return.

⁶ The work of Seabrooke and Tsingou (2009) on ‘linked professional ecologies’ provides a perspective on revolving doors that highlights processes of socialisation and learning rather than material incentives.

⁷ This view of power overcomes the problematic assumption of ‘false consciousness’, which is implicit in Luke’s third dimension of power (Hay 1997; 2002: 179).

⁸ The concept of deference is preferred to compliance because the central banks considered in this thesis are situated in advanced industrial economies where the rule of law is well established. On the whole, these central banks can expect financial market participants to ‘comply’ with their rules as a matter of course, since those rules are generally legally binding and enforceable.

3 FINANCIAL STABILITY AND CENTRAL BANK POWER BEFORE 2008

3.1 INTRODUCTION

The origins of the three central banks discussed in this thesis could hardly be more different. The Bank of England was established in 1694 and is the second oldest central bank in the world, after the Swedish *Riksbank* (established in 1668). Created initially as a mechanism for funding England's wars against France, it was not until the 19th century that it accumulated most of the financial market functions that are the essential features of a modern central bank. The Federal Reserve was established in 1913, a date by which most other industrialised countries had long-since established their central banks. Unlike the Bank of England, it was created specifically out of concerns over financial stability. Its founders were motivated to equip the chronically crisis-prone US banking system with a lender of last resort (LOLR). The European Central Bank (ECB) was formally established in 1998. Its origins lie in the federalist ambitions of an elite group of political leaders concerned with cementing the unification of Europe through the creation of a common currency. Banking and financial stability were not the primary preoccupations of the forefathers of either the ECB or the euro; the scramble to reform the architecture of EU-level financial regulation and supervision since 2008 attests to this.

In order to evaluate how the power of the Federal Reserve, the Bank of England and the ECB has changed since the onset of the financial crisis, it is necessary to appreciate how their power developed and evolved in the pre-crisis era. This chapter provides this contextualisation. The chapter starts from

the premise that notwithstanding important variations in the size, scope and functions of these and other central banks, the institution of central banking (in general) has been through a number of distinct macro-historical phases. Central banks' influence in economic policy debates, their ability to chart an independent course of policy in line with their own preferences, and their capacity to facilitate favourable macroeconomic and financial outcomes, has waxed and waned at different moments in the history of central banking. These changes have followed macro-historical events, including the impact of the World Wars and the Great Depression. Transformations in central banking have also reflected broad structural changes in the global economy, such as the growth of international capital mobility, technological change and the geographic expansion of international markets for goods and labour in the latter part of the 20th Century. More proximately, the changing power of central banks has reflected changing economic theories and intellectual fashions amongst central bankers, politicians and market participants. Ultimately, these ideational factors matter because 'structures do not come with an instruction sheet' (Blyth 2002). In other words, intellectual fads and fashions influence how actors produce and reproduce structures through time and space (Giddens 1984: 374).

In the two decades preceding the financial crisis, central banks around the world exhibited a considerable degree of convergence. This was most apparent in the widespread adoption of central bank independence (CBI) as an organisational model for central bank governance (McNamara 2002; Marcussen 2005). Other elements of convergence included the advent in many countries of

inflation targeting as the primary organising principle for monetary policy (Begg 2009) and a shift towards ostensibly apolitical, 'quasi-scientific', modes of policymaking (Marcussen 2006). During this period, most central banks came to emphasise their responsibilities in respect of monetary policy, at the expense of other concerns, including financial stability. In some countries, this was reflected in organisational reforms that stripped the central bank of its banking supervisory functions. These changes took place within an ideational context dominated by a particular neoliberal 'interpretive frame' (Baker 2006, 2013a). Dominant economic theories and beliefs held markets to be essentially self-correcting. Because this ideational context also held politicians to be self-serving and venal, it privileged 'depoliticising' governing strategies, which place at one remove the political character of economic policies (Burnham 2001).

For all their similarities, in no two countries are central banks identical. Central banks' legal statutes, their functions and their *de jure* and *de facto* relations with other societal actors all exhibit important national idiosyncrasies (Deane and Pringle 1994; Davies and Green 2010). One motivation for this thesis is to explain how 'history' has influenced the responses of the United States, the United Kingdom and the euro area to the global financial crisis in 2007. To do so, it is necessary to explore the historic trajectories and peculiarities of each central bank. Accordingly, after first discussing the macro-history of central banking since its origins in the 17th century, this chapter will turn to the micro-institutional development of each central bank, focusing in particular on the role that each has played in the management of financial stability throughout its history.

3.2 THE MACRO-HISTORY OF CENTRAL BANKING

While recognising the great diversity between central banks in different countries, it is possible to identify a number of broad trends in the history of central banking that transcend individual cases. Scholars have tended to identify four distinct 'ages' of central banking, which have loosely corresponded to transformations in the international monetary order (Capie et al. 1994; Marcussen 2006; Goodhart 2010). The power of central banks – whether understood in *relational* terms as their ability to move policy in line with their own preferences, or *empowerment* terms as their ability to attain specified objectives – has ebbed and flowed through these different ages. Likewise, the functions of central banks have varied considerably over time, not least with respect to the maintenance of financial stability.

3.2.1 EMERGENCE, 1668 - 1873

The first age of central banking involved the initial emergence of central banks, beginning in Sweden and England in the 17th Century and subsequently in many other industrialised countries in the 19th Century (see Table 2). There were a number of motivations behind the formation of central banks. In some countries, including Austro-Hungary and most Scandinavian countries, central banks were established at least in part to provide commercial banking services where otherwise there would have been none (Capie et al. 1994: 5). Another motivation for the formation of central banks was to enhance monetary stability by placing the power to issue currency in a quasi-autonomous institution at one remove from governments, many of which had issued

excessive quantities of paper money during times of war, stoking high rates of inflation. The most significant motivation for the formation of central banks was the desire of governments to be able to raise debts to finance wars. During times of war, this function – providing a source of funds for wartime expenditures – has tended to supersede all others, including the maintenance of price stability.

Most central banks established before the end of the 19th century were typically private, profit-seeking, companies. Central banks typically competed with other commercial banks, including in the issuance of currency. However, the role of central banks as banker to their respective governments marked them out from the competition. As Capie et al. (1994), R. Hall (2008), Eichengreen (2008) and others have argued, the convertibility of bank notes into gold during this first age of central banking was often suspended, especially during times of war. One outcome of such suspensions was that governments conferred special status on the notes issued by their central banks, effectively establishing central bank liabilities as ‘legal tender’. In turn, this helped establish the primacy of central bank-issued bills, notes and deposits as the pre-eminent forms of currency circulating in their respective economies (Capie et al. 8).

TABLE 2: ADVANCED ECONOMY CENTRAL - BANKS DATES OF ESTABLISHMENT

Central Bank	Year of Establishment
Swedish <i>Riksbank</i>	1668
Bank of England	1694
First Bank of the United States	1791
Bank of France	1800
Bank of the Netherlands	1814
National Bank of Austria	1816
Bank of Norway	1816
Second Bank of the United States	1816
Danish National Bank	1818
Bank of Spain	1829
Bank of Russia	1860
German <i>Reichsbank</i>	1875
Bank of Japan	1882
Bank of Italy	1893
Swedish National Bank	1905
United States Federal Reserve System	1913

3.2.2 THE INTERNATIONAL GOLD STANDARD, 1873 - 1914

In the final quarter of the 19th Century, a second era of central banking emerged. Until the mid-19th century, only Britain had been on the gold standard. While a number of countries had shifted onto gold in the 1860s, a turning point came in the early 1870s when Germany decided to abandon its bimetallic gold and silver standard in favour of gold. Several countries quickly followed. Thus began the age of the international gold standard (Eichengreen 2008). During this period, which lasted until the onset of the First World War in 1914, the foremost objective for almost all central banks was to maintain the value of the domestic currency by preserving its convertibility into gold. Then, as now, the primary instrument for achieving monetary policy objectives was altering short-term interest rates. As Knafo (2014) suggests, the advent of the

international gold standard came about because European governments and central banks wished to emulate the ostensibly successful monetary policy of Britain. In particular, the gold standard facilitated the expansion of commerce by providing a stable, state-controlled, paper currency.

Central banks operated relatively autonomously from government interference during this period. This relative autonomy was supported by the prevalence of *laissez faire* economic doctrines, which foresaw no role for governments to intervene countercyclically in the economy and which provided strong backing for the ostensibly 'rule-based' sound money approach to monetary policymaking that the link to gold implied (Eichengreen 2008). According to the orthodox view of the gold standard, any central bank faced with a prospective balance of payments deficit would have to raise interest rates to restore competitiveness, or face the prospect of gold reserves flowing out of the country. In fact, monetary policy under the gold standard rarely adhered to these so-called 'rules of the game'¹, at least in the short run (Eichengreen 2008). Sometimes, deviations from the rules of the game could involve temporary suspensions of the convertibility of paper currencies into gold, in order to prevent damaging outflows in crisis periods (Hall, R. 2008). At other times, central banks could temporarily lower rates in a crisis situation, restoring competitiveness by stimulating the economy through cheaper credit. In short, central banks under the gold standard were by no means as highly constrained and rule-bound as some contemporary proponents of the restoration of the gold standard imagine.

During the era of the international gold standard, the functions and institutional form of central banks began to coalesce upon a single model. Institutional reforms saw central banks become more like branches of the state than private enterprises. Central banks increasingly withdrew from direct competition with their commercial counterparts and in some continental European countries they began returning profits to their governments, rather than to shareholders. In exchange, many central banks were provided with a public monopoly over the issue of currency.

It was at this time that central banks' financial stability functions also began to develop. During the 1870s and 1880s numerous continental European central banks acted as crisis managers, intervening as the LOLR to quell incipient banking panics and to restore confidence following stock market crashes. In 1873, the British journalist Walter Bagehot endorsed this function in his highly influential book, *Lombard Street*. Bagehot argued that central banks should intervene to prevent banking panics by lending freely against good collateral at a high level of interest. This dictum quickly became the received wisdom in central banking circles. Still, central banks' financial stability functions remained highly contingent and informal. As Capie et al. (1994: 15) suggest, 'on occasions [central banks] might help to rescue financial institutions, but it was on an *ad hoc*, cooperative, basis without general commitment and without accepting any formal regulatory or supervisory role'.

The outbreak of the First World War ushered in a period of upheaval in the world of central banking. This upheaval traversed the international monetary system, the functions of central banks, their relationships with governments

and the economic ideas and objectives underpinning monetary and financial stability policies. Most European countries suspended the convertibility of their currencies into gold a few days before war was declared in 1914. As in previous conflicts, central banks were co-opted into their respective countries' war efforts, which in practice meant that they printed money to finance the public deficits. During the war, the monetary base doubled in the United Kingdom, tripled in France and quadrupled in Germany (Ahamed 2003). After the hostilities ceased, central banks in Europe and the United States made an ultimately disastrous attempt to restore the gold standard. Gold bullion was in short supply in Europe and European currencies re-fixed to gold at unrealistic rates. This decision was a major contributory factor leading to the Wall Street Crash and the ensuing Great Depression (Ahamed 2009).

C. Goodhart (2010) describes the period from 1914 to 1931-33 as a 'confused interregnum' in the history of central banking. Central bankers desire to restore the gold standard was rooted in their ideational proclivities, particularly the nostalgia for the ostensibly 'rule-based' and moral discipline imposed by the adherence to gold (Hall, R. 2008). The immediate post-war era was also one in which support for central bank independence remained strong. Having subordinated their central banks to government control during the war, the governments of industrialised countries committed to restoring central bank independence when the war ended. In 1920, the League of Nations staged an international financial conference in Brussels in which the 34 countries participating agreed the recommendation that 'banks, and especially Banks of Issue, should be freed from political pressure and should be conducted solely on

the lines of prudent finance' (League of Nations 1922). This was seen as an essential prerequisite for curbing inflation in the aftermath of the war.

3.2.3 SUBORDINATION TO GOVERNMENT CONTROL, 1933 - 1971

The Great Depression of 1929-33 heralded the beginning of a third age of central banking. Blamed for their policy mistakes in the early pre-war years, central banks increasingly came under greater political control. Against a political backdrop of the rise of socialism and the build-up to the Second World War, support for central bank independence ebbed. This was also a period in which more interventionist forms of macroeconomic policy were gaining support, influenced in part by the emergence of Keynesian economic theory.

From the 1930s through to the 1970s, finance ministers and other executive politicians often had a hand in setting interest rates. During this period, central bank policy was directed towards multiple goals including full employment, growth, price stability and maintaining the exchange rate (Marcussen 2006). Both macroeconomic policy and financial policy became more interventionist. In the 1950s, monetary policy was generally conducted through quantitative controls on bank lending and other forms of active manipulation of credit conditions (see Elliot et al. 2013; Perez 1998). On the regulatory side, competition between banks was stifled through policies such as ceilings on the interest rates that banks could pay to depositors. 'Structural policies' placed prohibitions on the sorts of financial activity different categories of firm could participate in. Financial services companies tended to specialise in particular market segments, whether it was the provision of mortgages or finance for

consumer goods. This was a period in which banking crises were exceptionally rare (Reinhart and Rogoff 2009). Stability did not arise out of central bankers' devotion to systemic financial stability. Rather, stability was a product of anti-competitive regulations that afforded banks bumper profits and enabled them to operate with little leverage by today's standards.

The international monetary system during the era of subordination to government control was based on the so-called 'gold-dollar standard'. National currencies were pegged to the dollar, with the possibility of periodic adjustments in the exchange rate. The dollar, in turn, could be exchanged for gold at the US Treasury's 'Teller Window' at a rate of 35 dollars per ounce. The beginning of the end for this system began in the 1960s with the emergence of the Eurodollar markets in London and an associated increase in international capital mobility. Capital mobility undermined the system of fixed but adjustable exchange rate pegs, forcing destabilising devaluations. At the same time, the rising stock of US dollars held outside the United States placed increasing pressure on the convertibility of dollars into gold (Eichengreen 2012). This pressure culminated with the seminal decision in 1971 of the Nixon administration to suspend the convertibility of the dollar into gold, thereby bringing the Bretton Woods era to a close.

3.2.4 ORTHODOXY RESTORED, 1989 - 2007

It would be almost two decades before a 'fourth age' of central banking would emerge. Following the abandonment of their exchange rate pegs in the early 1970s, many countries found themselves freed from balance of payments

constraints. However, boom-time conditions were quickly punctured by the oil price shock of 1973, which ushered in a period of high inflation and high unemployment, or 'stagflation'. Reacting to the inflationary pressure, by the mid 1970s, central banks around the world began to privilege the objective of price stability over other macroeconomic goals (Capie et al. 1994 p 29). In the monetary policy domain, central banks began targeting monetary aggregates, either by varying short-term interest rates or by directly controlling the size of the monetary base (bank reserves and currency in circulation). Though central banks were largely unsuccessful at hitting their targets through most of the 1970s, eventually they succeeded in bringing inflation under control in the early 1980s, albeit only after raising interest rates to very high levels and precipitating severe economic downturns.

The policy of targeting of monetary aggregates itself gave way to more discretionary approaches during the 1980s. Central banks began using their main policy instrument – short-term interest rates – to target expected future inflation. During this period, economists and policymakers came to focus less on the precise operational techniques of monetary policy, such as whether to control the price or the quantity of money, and more on the governance arrangements around the conduct of monetary policy. The degree of independence of the central bank from political control took on special significance.

The beginning of the fourth age of central banking can be dated to the 1989 reform of the Reserve Bank of New Zealand, under which it was granted formal legal independence. During the 1990s, this legal innovation was adopted in

many scores of countries across the advanced and developing worlds. As Marcussen (2005: 916) put it, it was a 'veritable collective endeavour on a world-wide scale'. The proximate transmitters of this institutional reform were international financial organisations such as the IMF, which convey their policy preferences via technical assistance, training programmes and conditional lending programmes. Ultimately, however, the roots of this transformation lay in a loose consensus amongst leading public officials – finance ministry staff and central bankers – around the desirability of establishing monetary stability (Baker 2006). This loose consensus was supported by the simultaneous resurgence of a set of complementary ideas, including belief in the epistemological rigour of micro-founded economic models, based on assumptions of rational utility maximisation, and wider tropes concerning the self-correcting nature of financial markets and the virtues of sound money.

For Burnham (2001), central bank independence is evidence of governing strategies of 'depoliticisation', the conscious effort on the part of politicians and civil servants to place at one remove the political (or distributional) character of economic decision-making. Indeed, as Marcussen (2006) has highlighted, central banks in the advanced industrial countries went beyond depoliticisation to present themselves as 'apolitical'. That is to say, they began to present themselves more like scientific organisations, forging connections with academia and developing reputations as research powerhouses. At the same time, central banks presented monetary policy as a highly technical endeavour, divorced from politics. As Bowman et al. (2012) note, the scientisation and the technocratic credentials of central bankers helped reinforce the case for

independence. Put differently, it reinforced central banks' relational 'power over' their interlocutors in the executive branches of governments.

The three decades immediately preceding the financial crisis also witnessed the transformation of the role of central banks in financial stability. The constraints that had stultified competition between banks in the two decades after the Second World War, such as restrictions on inter-state branching in the United States and limitations on the ability of individual firms to engage in multiple different financial activities in the United Kingdom, were, by the 1970s losing their effectiveness. During the 1960s banks began to rely more on wholesale funding, notably through the so-called Eurodollar markets based in London. Banks were becoming more international and unstable. In 1974, the relatively small *Herstatt* Bank in Germany collapsed as a result of failed speculation in international currency markets, causing many of its international creditors to suffer losses (Kindleberger 2011[1978]).

In response to these developments, prudential regulation became more formalised, programmatic and international. In 1974, banking supervisors of the leading central banks took their first steps towards international cooperation and coordination, establishing the 'Committee on Banking Regulations and Supervisory Practices', which would later be renamed the Basel Committee on Banking Supervision. Several years of informal discussions and meetings culminated in the agreement of the Basel Concordat in 1983, which set out principles for cooperation between 'home' and 'host' country authorities of international banks (see Goodhart 2011). This agreement foreshadowed the even more influential Basel Accord of 1988, wherein the central banks and

financial supervisory authorities coalesced around the use of capital adequacy requirements as the main prudential tool for mitigating risk-taking by banks and they agreed to set minimum capital requirement of 8% of banks' risk-weighted assets.

Despite the greater resources devoted to regulatory and supervisory tasks, prudential regulation became increasingly separate from monetary policy during the 1990s and 2000s. Some countries – notably the United Kingdom and Germany – formally separated out prudential regulation and supervision from central banks (see Masciandaro et al. 2008). Where prudential supervisory functions continued to reside with central banks, they were generally regarded as secondary in prestige to monetary policy. The roots of the separation between monetary and prudential policy lay in the prevalence of orthodox economic ideas. In particular the notion that financial markets are self-correcting enabled central banks to coalesce around the idea that maintaining price stability was a sufficient condition for maintaining financial stability. This period also saw the rise of the so-called 'Greenspan Put'; that is, the contention that it is better to 'clean' up the mess of a burst financial bubble by lowering rates after the event than it is to 'lean' against the emergence of a bubble in the first place by raising rates ahead of time.

During this era, advanced economy central banks' 'power' exhibited divergent tendencies. From a *relational* perspective, central banks' 'power over' other actors increased in the field of monetary policy as they became increasingly free to determine policy free from governmental interference. Yet simultaneously, central banks' remit narrowed; their ability to control financial

market activity dwindled and some governments stripped them of their supervisory powers. Likewise, central banks' structural power in financial markets was diminished by the dominant economic ideas of the time, which gave credence to the notion that internationally mobile financial firms would relocate ('exit') to other jurisdictions if any single jurisdiction chose to adopt particularly stringent financial regulations.

3.3 THE FEDERAL RESERVE

3.3.1 EMERGENCE AND PRE-HISTORY

As mentioned above, the Federal Reserve stands out from the other two central banks considered in this thesis because financial stability was a pre-eminent consideration in its foundation. During the 19th century, the United States' banking system was primitive and fragmented (Ahmed 2010). Lacking a central bank or a stable currency, bank runs and more generalised banking panics were a frequent occurrence. A particularly severe bank run in 1907 convinced the nation's high financiers and politicians of the need for monetary reform. In 1908, Congress established a National Monetary Commission to investigate possible reforms. When this commission failed to produce concrete proposals for reform, a group of six prominent bankers and politicians convened in secret on Jekyll Island, off the coast of Georgia, to discuss options for establishing a new central bank. While their call for a National Reserve Association, comprising a privately owned central bank with a network of branches across the country, failed to win support in Congress, in 1913, a modified version of their plan was introduced the House of Representatives, sponsored by

Congressman Carter Glass. This bill proposed a new Federal Reserve System, composed of a Federal Reserve Board in Washington DC and 12 regional Federal Reserve Banks to be situated in major cities across the United States. Ultimately successful, President Woodrow Wilson signed this bill into law as the Federal Reserve Act in 1913.

The creation of the Federal Reserve took place against a backdrop of an enduring struggle between competing societal coalitions in the United States, each with divergent material interests and disparate ideas about the utility of a central bank. On the one hand, there is a long history of populist suspicion of banking, finance and the institution of central banking in the United States. This emanates, in particular, from Southern agrarian states, which have traditionally feared the accumulation of power at the federal level of government and amongst East-coast financiers. On the other hand, the financial community (based to a large extent in New York), supported by internationally oriented business and to some extent the urban middle class, have generally supported the development of the nation's financial system. This has included support for the establishment of the legal and regulatory institutions necessary to support a modern financial system.

When it was established in 1913, the Federal Reserve was, in fact, the United States' third attempt at creating a central bank. A first central bank, which has come to be known as the 'First Bank of the United States', was established in 1791, on a proposal from Treasury Secretary Alexander Hamilton. Privately owned, this bank acted as banker to the Federal Government – making loans to the government and taking deposits of public funds – and it issued banknotes

that could be used as a medium of exchange (currency). The First Bank of the United States was opposed by Southern Agrarian states, which stood to lose materially from the emergence of a national central bank, since their own state-chartered banks already issued their own currencies and could be relied upon as a source of credit (Lavelle 2013: 36). Spearheading this opposition was the President, Thomas Jefferson, who perceived banking and finance in general to be a source of instability. In 1811, the First Bank of the United States' initial 20-year charter was allowed to expire and it ceased operating. Subsequently, a 'Second Bank of the United States', was established in 1816. It too functioned as banker to the Federal government and competed with state-chartered banks in the issue banknotes. Like its predecessor, the Second Bank of the United States ceased operating after its initial 20-year charter was not renewed. Opposition to the Second Bank of the United States was led by the President, Andrew Jackson, who allied with Democrats, old Jeffersonians and small bankers and businesses concerned about being denied access to credit (Lavelle 2013: 37).

Suspicion of central banks was still very much in evidence some seventy years later at the time of the formation of the Federal Reserve. Arguably, the decentralised constitution of the Federal Reserve System is itself a reflection of these tensions. Yet the Federal Reserve was not merely a compromise between Southern farmers and East-coast financiers. Rather, as Greider (1987: 277) argues, it also reflected a historic compromise between public and private (financier-led) control of the monetary system. Indeed, this compromise is clearly evident in the composition of the Federal Reserve System. The Federal Reserve Board in Washington D.C. would be effectively under government

control: it was to be composed of seven members including the Secretary of the Treasury, the Comptroller of the Currency and five others appointed by Congress. The 12 regional Federal Reserve Banks would be more like private bankers' cooperatives. They would issue stock, which would be purchased by commercial banks. These commercial banks would then become the Reserve Banks' 'member banks'. The member banks would then have the right to appoint six of the nine directors of each Reserve Bank.

3.3.2 SUBORDINATION TO GOVERNMENT CONTROL

As a relative latecomer to the international community of central banks, the Federal Reserve was not in existence during the era of the international gold standard, in which central banks enjoyed relative independence from government control. Rather, the formation of the Federal Reserve coincided with the onset of the First World War. From the outset, the Federal Reserve Board generally accepted the discount rates decided by the Treasury (Capie et al. 1994). At the same time, during its initial years of operation, there remained some ambiguity as to whether the Federal Reserve System constituted the nation's central bank, or merely a loosely coordinated network of 12 regional banks (Todd 2012). Notably, the Federal Reserve Bank of New York (FRBNY) operated with little constraint from the Federal Reserve Board in Washington. Under the Governorship of Benjamin Strong, the FRBNY was criticised for being too close to the commercial banks in Wall Street. It was also criticised for behaving as though *it* was the *de facto* central bank of the United States,

extending large loans to European financial institutions in an effort to shore-up financial stability in Europe.

During the Great Depression, the power of the Federal Reserve Board relative to the banker-led regional Federal Reserve Banks increased. The 1933 Glass-Steagall Act extended the powers of the Federal Reserve Board over the Regional Federal Reserve Banks, in particular, by placing responsibility for the regulation and supervision of bank holding companies with the Federal Reserve Board. Two years later, the Banking Act of 1935 further centralised authority in the Federal Reserve Board (which it renamed the 'Board of Governors of the Federal Reserve System') by effectively removing the legal basis for the regional Reserve Banks to act as semiautonomous organisations, free to manage their own portfolios (Meltzer 2003: 415).

At the same time, the power of the Federal Reserve System as a whole diminished relative to the Treasury. While the Banking Act removed the Secretary of the Treasury and the Comptroller of the Currency from the Board of Governors, other Depression-era legislation effectively subordinated the Fed to government control. For instance, the Emergency Banking Act of 1933 forced the Fed to cooperate with the government or face its policies being overridden. Likewise, the 'Thomas Amendment' to the Agricultural Adjustment Act enabled the Secretary of the Treasury to control the Fed's credit policy (Capie et al. 1994). Executive control over the Federal Reserve increased further still as the economy as a whole shifted onto a war footing. For example, in 1941, President Roosevelt ordered the Federal Reserve to impose restrictions on the provision of consumer credit, including for automobiles and other durable goods. This

measure was justified by the need to ensure that productive resources would be redirected to the war effort (Elliot et al. 2013).

During and immediately after the Second World War, the Federal Reserve committed to maintaining low interest rates. This obligation was removed in 1951, when the 'Treasury Accord' set out a new framework for monetary policy decision-making, somewhat increasing the independence of the central bank (Lavelle 2013: 50). Yet even after this date, the Fed frequently bowed to pressure from the administration (see Todd 2012). Much depended on the personalities involved. For example, in 1965 Federal Reserve Chairman William McChesney Martin faced down President Lyndon B Johnson over the Fed's decision to raise rates during the midst of the Vietnam War. A decade later, Martin's successor, Arthur Burns, took a much more acquiescent approach when President Nixon demanded an easing of monetary conditions (see Meltzer 2010).

The period of subordination to government control was one in which the Federal Reserve's capacity to exert control over financial market conditions was relatively strong. Indeed, by today's standards, the Federal Reserve was highly interventionist. As Elliot et al. (2013) have documented, the Fed operated numerous policies that would today be classed as 'macroprudential measures'. After the Second World War, the Fed continued to impose restrictions on the terms of consumer credit, constraining demand for credit for durable goods into the early 1950s. Congress also gave the Fed power to impose new limits on mortgage underwriting standards, at the behest of the President. Other proto-macroprudential policies included variations on margin requirements for stock

market investors (which limited the amount of leverage investors could take on); the imposition of voluntary restraints on banks' supply of credit to 'non-productive' uses; and varying reserve requirements for regulated banks, which influence the volume of credit in the economy.

It should be noted that these powers were always controversial and generally unpopular in Congress. Congress revoked the Fed's ability to apply selective credit controls in the mid-1950s. Subsequently, the 1969 Credit Control Act renewed the Fed's formal authority to impose countercyclical financial regulations, although the central bank did not make extensive use of it before the Act was rescinded in 1982. Having said that, as late as 1980, the Federal Reserve did impose credit controls, albeit for the purposes of tackling inflation, rather than as a means of bursting asset price bubbles or mitigating other systemic risks. Imposing a series of reserve requirements on banks and money market funds (institutional investment funds that act much like banks) it invoked a sharp decline in the supply of credit for mortgages, consumer goods and automobiles (Elliot et al. 2013). This would prove to be the last experiment with countercyclical controls on the supply of credit in the United States.

3.3.3 ORTHODOXY RESTORED

The era of central bank independence in the United States began when Paul Volcker succeeded Arthur Burns as Chairman of the Federal Reserve. Faced with chronic and deeply engrained high inflation, Volcker's Federal Reserve made a major policy shift in 1979 when it started targeting monetary aggregates rather than interest rates. This policy shift had the effect of sending the Federal Funds

Rate up to unprecedented levels, precipitating a sharp recession. The Fed's policy engendered considerable resistance within Congress and the Administration, but ultimately inflation was tamed and the reputation of the Fed as an independent, inflation-busting, central bank was greatly enhanced. Effectively establishing the Federal Reserve's independence, this event owed to internal organisational changes and policy decisions within the Federal Reserve itself, rather than any legislative initiative on the part of politicians (L. Goodhart 2014).

Like other central banks, the Federal Reserve in the 1980s came to focus less on macroeconomic objectives and more on the narrow pursuit of monetary stability (Bernanke 2013). Indeed, under the Chairmanship of Alan Greenspan, who was perhaps the world's most influential evangelist for liberal market ideas, the Federal Reserve appeared to succumb to the illusion that the maintenance of price stability would be a sufficient condition for the maintenance of financial stability. When the collapse of Long Term Capital Management (LTCM), a hedge fund, threatened to provoke a systemic financial crisis in 1997, Greenspan's Fed responded by lowering interest rates aggressively. It reacted in the same way to the bursting of the dot-com bubble in 1999, and to the terror attacks of September 11th 2001. Greenspan was firmly of the opinion that it would be futile for a central bank to take action to deflate speculative bubbles; the most it could do was to 'mop-up' after a bubble had burst by lowering interest rates (Davies and Green 2010: 5).

Under Greenspan's 19-year tenure, proto-macroprudential tools fell out of use, giving way to a doctrine of 'post-hoc intervention' (Golub et al. 2014). The

Federal Reserve became highly respected for presiding over largely uninterrupted growth and systemic financial stability. However, from an *empowerment* perspective (see Chapter 2), its power in the financial stability domain was greatly diminished. While the Federal Reserve retained a role in regulation and supervision of banks and bank holding companies, neither it nor the wider regulatory architecture within which it was embedded kept pace with innovation and structural change in US financial markets. The Federal Reserve had no role in the supervision of the large investment banks at the epicentre of the financial crisis in 2007. Likewise, it had virtually no jurisdiction over non-bank securitisation entities, such as off-balance sheet Asset Backed Commercial Paper Conduits, which played an increasingly important role in the intermediation of credit in the United States in the two decades prior to the financial collapse.

The Federal Reserve's *relational* power differed in respect of the different functions it performed (cf. Kohn 2014a). After the 'Volcker Revolution' of 1979, it enjoyed a high level of autonomy with respect to monetary policy. It periodically raised rates to tackle inflation, sometimes against the wishes of the incumbent administration (see, for instance, Greenspan 2007: 119-121; Suskind 2004: 46).² The Fed's autonomy in respect of prudential regulation and supervision was never equal to its autonomy in the monetary policy arena. In part, this is because the Federal Reserve shares power with many other regulatory and supervisory agencies. Unlike monetary policy – where the Federal Reserve has a monopoly over the creation of new base money – the functions of regulation and supervision are a collective endeavour involving

multiple public agencies, each of which must compromise with one another in pursuing its objectives (see Chapter 6). These agencies have been established at different times reflecting different crises, political priorities and power struggles throughout US history (Lavelle 2013). The Office of the Comptroller of the Currency – which is today an offshoot of the Treasury – predates the Federal Reserve itself. Many regulatory agencies were established during the Great Depression, including the Federal Deposit Insurance Company and the Securities and Exchange Commission. In addition, each state has a collection of banking, securities and insurance regulators. The variable nature of the Fed’s autonomy is also enshrined in the formal mechanisms establishing its accountability to Congress. In the late 1970s, Congress passed legislation requiring the Government Accountability Office to audit the Federal Reserve Board and the 12 Federal Reserve Regional Banks. However, it excluded several functions from this oversight including transactions involving foreign central banks and governments, deliberations and decisions relating to monetary policy and transactions under the direction of the Federal Open Market Committee (the Fed’s rate setting body).

3.4 BANK OF ENGLAND

3.4.1 EMERGENCE AND EARLY HISTORY

The ‘Governor and Company of the Bank of England’, was established under the Finance Act of 1694 as a privately owned, joint stock bank. Created as a mechanism for the government to raise debts to finance its wars with France, the entire £1.2 million capital of the Bank was lent to the government upon its

foundation. The Bank acquired other functions only gradually. The first, and arguably most important, was the issuance of banknotes. Bank of England notes became 'legal tender' in 1812. In 1844, an Act of Parliament prohibited other note issuing banks from being established and prevented those already in existence from expanding their stock of notes in circulation. This effectively cemented the Bank of England's position as the monopoly supplier of paper money, although the last banknote to be printed by a private bank in Britain was issued as late as 1921.

Unlike most other countries, Britain adhered to the gold standard throughout most of the 19th century. During the era of the international gold standard (1873-1914), the Bank of England operated relatively independently from government, although it was never entirely immune from political pressures. As Eichengreen (2008) and other scholars have shown, the Bank was never slavishly bound by the 'rules of the game' of the gold standard (see Section 3.2.2 above). Discount rates reflected multiple objectives beyond preserving gold reserves, including preserving the Bank's own profitability, the impact on macroeconomic conditions and the effect on government debt servicing costs. The Bank did, however, strive at all times to maintain the convertibility of currency into gold. Convertibility had been suspended in 1797 as a consequence of the Napoleonic Wars. After it was restored in 1821, it was preserved until the start of the First World War in 1914.

Over the course of the 19th Century, the Bank of England also emerged as the LOLR to the London banking system. When the discount house Overend, Gurney & Co collapsed in 1866, the Bank of England discounted large amounts

of bills and extended loans in an effort to stem the ensuing panic. This occasion was an important milestone in the development of the Bank's LOLR functionality, mainly because the Bank's actions were regarded as having been insufficient to quell the panic (Eichengreen 2008: 35). Two decades later, when the collapse of Baring Brothers caused an incipient panic, the Bank acted more forcefully. Indeed, the Bank went so far as to borrow additional bullion from foreign central banks in order to be able to channel liquidity to the banking system whilst preserving the credibility of its commitment to maintain convertibility of sterling into gold (Eichengreen 2008: 33).

3.4.2 SUBORDINATION TO GOVERNMENT CONTROL

The First World War marked the beginning of the gradual subordination of the Bank to government control. At the outset of hostilities, convertibility of sterling into gold was suspended. Under pressure to help finance the war effort, the Governor of the Bank, Walter Cunliffe, clashed with the Treasury in 1917. The latter made it clear to the Governor that the government was ultimately responsible for monetary policy, that the Bank's private interests around its own profitability were of secondary importance, and that the government stood ready to take direct control of the Bank should it refuse to comply with its directions. After the War, there was widespread support for a return to a more independent form of central banking, including restoring the ostensible discipline imposed by maintaining the link to gold.³ Under the Governorship of the enigmatic Montagu Norman, the Bank achieved this objective in 1925, after subjecting the country to a period of highly deflationary monetary policy. Yet

the interwar gold standard would prove to be a short-lived affair. Facing chronic balance of payments deficits and a shortage of bullion, the Bank of England came off the gold standard in 1931, never to return.

This relationship between the Bank and the government was formalised in 1946 when the Labour government of Clement Attlee nationalised the Bank under the Bank of England Act. As Burnham (2007) argues, this did not, in itself, weaken the position of the Bank relative to HM Treasury, nor the Governor relative to the Chancellor. Indeed, by providing a statutory basis for the Bank's powers over commercial bankers, and by codifying the Bank's relations with HM Treasury, the Act arguably strengthened the Bank, both in *relational* and *empowerment* terms.⁴

It was not until the 1970s that HM Treasury's ascendancy over the Bank became more apparent. In the early 1970s, the Bank announced a new monetary policy regime. 'Competition and Credit Control', as the policy was named, involved the abandonment of interventionist constraints on credit – such as quantitative lending limits – and a more market-determined approach to setting Bank Rate (Moran 1986). The policy produced volatile interest rates, high inflation and was quickly abandoned. However, its lasting legacy was to prompt HM Treasury to become more assertive in its relations with the Bank. From the early 1970s, HM Treasury took it upon itself to announce interest rate decisions. Inspired by the rise of monetarism, the Treasury also began publishing targets for growth in monetary aggregates – such as broad money, or 'M3' – in the mid-1970s.

Under the Premiership of Margaret Thatcher, relations between the government and the Bank deteriorated. Dissatisfied with a lack of success in meeting monetary targets, in 1983 Thatcher decided not to reappoint the Governor, Gordon Richardson. His replacement, Robert Leigh-Pemberton, was a figure many believed would be easily controlled (Elgie and Thompson 1998). Beyond the immediate relationships between key personalities, there was a high level of political opposition to central bank independence in Britain in the 1980s and early 1990s. Such opposition stemmed from several factors including functionalist concerns that uncoordinated fiscal and monetary policy would lead to sub-optimal outcomes; 'democratic' concerns that monetary policy was an inappropriate policy area for delegation to unelected technocrats; and nationalistic tendencies to oppose a model of governance associated with continental Europe, particularly Germany (Howarth and Loedel 2005). Arguably, domestic institutional factors were also important. In particular, the unitary and highly centralised 'Westminster model' of British government, wherein the Cabinet and especially the Prime Minister enjoy very strong formal and informal authority, was thought to be incompatible with a model of central banking in which the central bank itself occupies a highly authoritative position (Busch 1994).

3.4.3 ORTHODOXY RESTORED

Under the premiership of John Major, the United Kingdom formally entered the Exchange Rate Mechanism in 1990. As Quaglia (2008a) suggests, its subsequent withdrawal from this monetary regime two years later, on a date forever to be

remembered as 'Black Wednesday', marked the first in a series of developments that would transform the governance of monetary policy in the United Kingdom and strengthen the central bank's authority relative to the government. Shortly after Black Wednesday, HM Treasury set an inflation target for the Bank of England to pursue. Under the leadership of Chancellor Kenneth Clarke, in 1994 HM Treasury ceased its practice of examining the Bank's *Inflation Report* prior to publication. HM Treasury also granted authority to the Bank to determine the timing of interest rate decisions and it decided to publish the minutes of monthly meetings between the Chancellor and the Governor. Finally, with the election of the New Labour government in 1997, the Bank of England finally gained formal legal independence. Led by Prime Minister Tony Blair and Chancellor Gordon Brown, the new government resolved to transform the central bank, establishing an operationally independent Monetary Policy Committee to take decisions over the size and timing of interest rate changes.

Offsetting this major enhancement in the Bank's formal autonomy, the government also set about rationalising the United Kingdom's fragmented system of financial regulation and supervision. It decided to establish a one-stop-shop financial services regulator and supervisor – the Financial Services Authority (FSA) – that would bring together the existing array of quasi-self-regulatory financial supervisory agencies and take on the Bank's responsibility for banking regulation and supervision. Under the new regime, responsibility for ensuring financial stability would be shared between HM Treasury, the Bank and the FSA, with the respective roles of each organisation set out in a Memorandum of Understanding.

Even before this reform, financial regulation and supervision were in a state of considerable change. Beginning in the 1970s, a gradual process of formalisation, codification and juridification had taken place in the organisation and methods of financial supervision in the United Kingdom (Moran 2003). Arguably, these changes were reflective of structural and sociological changes in the UK economy and society, in which growing public aversion to risk combined with increasing exposure of individuals to the vagaries of financial markets (via their pensions and mortgages) produced heightened public demand for regulation (Giddens 1991; Beck 1992; Clarke 2000; cf. McPhilemy 2013). The more immediate impetus for reform was a succession of increasingly frequent financial crises and ‘fiascos’ of various kinds. In the early 1970s, a crisis of minimally regulated ‘secondary banks’ in the United Kingdom and the international fallout from the collapse of the German bank Herstatt prompted the Bank of England to establish a separate ‘Supervision Division’ (Blanden 1974). The formalisation of banking regulation and supervision continued with the passage of the Banking Act of 1979 and in response to further crises and scandals, such as the collapse of Johnson Matthey bank in 1984, the failure of the Bank of Commerce and Credit International in 1992, and the fiasco of Nick Leeson’s rogue trading at Barings Bank in 1995.

The Governor, Eddie George, was reported to have considered resigning when he heard that the Government was planning to relieve the Bank of its supervisory competencies (Peston 1997). However, the reform gave organisational expression to the trend of *de facto* de-prioritisation of financial stability and prudential supervision amongst the objectives of central banks.

This trend reflected growing confidence – of central bankers, finance ministry officials and market participants – in the self-correcting nature of financial markets and the ostensible benefits of financial innovation. At the same time, the creation of the FSA brought UK financial services regulation and supervision under greater democratic control. It diminished the extent to which capital markets relied on self-regulation and placed authority for financial market governance in the hands of officials that were somewhat more accountable to the executive than central bankers (Westrup 2007).

The FSA presided over a further formalisation of financial supervision and an enormous expansion in the volume and scope of financial regulation. Regulation became more voluminous and expensive, but also less focused on core prudential concerns, such as the underlying business risks that firms were taking or the risks they posed to financial stability as a whole. This played into the hands of ‘bulge bracket’ financial firms, which benefited from the liberal orientation of financial policy whilst also enjoying *de facto* protection from competition from new entrants to the markets, for which compliance with the increasing volume of regulation was relatively more burdensome (see Persaud 2005).

Against the backdrop of buoyant financial markets and increasingly pervasive beliefs in the efficiency of financial markets, the FSA was routinely derided in the press as a ‘box-ticker’s charter’ (Harrison 2006). Famously, Prime Minister Tony Blair (2005) gave a speech in which he declared:

something is seriously awry when [...] the Financial Services Authority that was established to provide clear guidelines and rules for the financial services sector and to protect the consumer against the fraudulent, is seen as hugely inhibiting of efficient business by perfectly respectable companies that have never defrauded anyone.

It would appear paradoxical that the FSA has now become a byword for the 'failed' light touch approach to financial regulation and supervision. However, this apparent paradox disappears when we consider that the increasingly formalised nature of financial regulation and supervision in London was itself a symptom of the increasing structural power of financial market actors in the United Kingdom during the 1980s and 1990s. An influx of foreign financial firms to the City of London brought a more litigious culture, undermining the informal 'club governance' of the old regime (Moran 2003). At the same time, the economy as a whole became dependent on the continuation of the finance led-boom. Adapting to these changes, regulators adopted what in hindsight appears to have been an excessively lawyerly and formalistic approach. Yet the content of regulations – such as the setting of capital adequacy requirements or the amount of liquid assets banks were required to hold in reserve – was excessively liberal. In retrospect, the decision to remove banking supervision from the Bank of England accelerated the ascendance of financial markets relative to public sources of authority. Financial services governance in the United Kingdom became more responsive to the demands of politicians, who, in

turn, were in thrall to the interests of the City (see Warwick Commission 2009; Persaud 2009).

3.5 THE EUROPEAN CENTRAL BANK

3.5.1 EMERGENCE

Established on 1st June 1998, the ECB is by far the youngest of the three central banks considered in this thesis. The culmination of several decades of gradual and often halting attempts to institutionalise monetary cooperation in Europe, the supranational ECB, and the single currency over which it presides, are a uniquely ambitious innovation in the history of central banking. Efforts to deepen the political and economic integration of Europe were always elite driven. The process that led to the advent of the euro and the ECB may be attributed to a convergence in the preferences of key politicians in the EU's most important member states, above all France and Germany. For the French political establishment, guided by senior figures such as former President Giscard d'Estaing, the creation of a common European currency and a single monetary authority was a means of challenging the supremacy of the German *Deutsche Mark*. For German politicians, led by Federalist figures such as former Chancellor Helmut Schmidt, monetary integration was both a necessary next step for completing the internal market and a means of reconciling Europe to the restoration of Germany's economic power after the Second World War.

While convergent political preferences provided the background conditions for monetary integration, as several authors have noted, Europe's community of national central bankers was highly influential in designing the architecture of

the new European monetary authority (Howarth and Loedel 2005; Dyson 1994; Verdun 1999). Most notably, in 1988, an expert committee, convened under the Chairmanship of European Commission President Jacques Delors and composed of national central bank governors, set forth a three-stage project for EMU. These stages comprised liberalising capital movements within the EU (1990-1994), establishing the ECB within a quasi-federal European System of Central Banks (ESCB) (1994-1999) and irrevocably fixing exchange rates against a new currency (1999 onwards). The Delors Report was written into the 1992 Treaty on European Union (TEU) – ‘the Maastricht Treaty’ – with few substantive changes. It envisaged a highly independent central bank, with a foremost focus on price stability. These principles reflect the characteristic preference of central bankers for freedom to pursue ‘sound money’ objectives in the absence of interference from politicians. At the same time, this institutional design also conformed closely to German national preferences, which are shaped by the traumatic experience of hyperinflation in the interwar years and the subsequent emergence of a strong cultural predilection for ‘stability-oriented’ macroeconomic and monetary policies (see Tognato 2012).

It is often said that the ECB was modelled on the German *Bundesbank* (Howarth and Loedel 2005; Quaglia 2008a; Dyson 2009; Howarth 2009). Like the *Bundesbank*, the ECB would enjoy a high level of political autonomy. It would focus predominantly on monetary policy and, within that, its primary objective would be to maintain price stability. Both central banks were based in Frankfurt. Moreover, both had ‘federal’ structures, comprising Land and Federal officials in the case of the *Bundesbank* and national and supranational officials in the case

of the ECB. In fact, to some extent, the ECB was even more ‘German’ than the *Bundesbank* itself. Notably, its independence would enjoy quasi-constitutional status, being enshrined in both the treaties of the European Union and the founding statute of the ECB and the ESCB (TEU Article 130; ECB/ESCB Statute Article 7)⁵. By contrast, the *Bundesbank* never enjoyed a constitutionally protected status, even if in practice it operated as a highly autonomous central bank, with strong public support for its stability-oriented policies (see Marsh 1992).

3.5.2 PRE-CRISIS YEARS

Following an initial period in of criticism in the early 2000s, the ECB successfully established a reputation as a credible monetary authority. The analytical basis for its monetary policy decisions, which involved a combination of traditional analysis of macroeconomic variables and a focus on monetary aggregates, resulted in predictable policy decisions, notwithstanding the reservations of some members of the international community of central bankers and monetary experts over its analytical merits (see Howarth 2009). The ECB’s credibility was reinforced as a result of the low rate of inflation in the euro area – a product of the so-called Great Moderation (Bowman et al. 2012) – and by the gradual strengthening of the euro exchange rate, after an initial period of weakness shortly after the single currency was introduced.

In contrast to its position in the monetary policy arena, the ECB had only a limited role to play in financial services governance. The 1990s and 2000s were a period in which financial markets in the EU underwent considerable

integration both in terms of the volume of cross-border financial transactions and capital flows, and in terms of the institutional framework within which European consumers and providers of financial services operated. With progress towards EMU largely settled, in 1999 the European Commission (EC) launched a '*Financial Services Action Plan*' (FSAP), which aimed to reinvigorate stalled efforts to establish a Single European Market for financial services and to capitalise on the opportunities offered by the creation of a single currency (EC 1999). Regarded as highly successful (EC 2007a), the FSAP led to an outpouring of new EU-level financial services legislation. Indirectly, it also led to the emergence of a new, more integrated, system of EU-level policymaking for financial services. In 2001 a 'Committee of Wise Men' was convened under the chairmanship of Alexandre Lamfalussy, the former President of the European Monetary Institute, which was the forerunner to the ECB. Following the recommendations of this Committee, a complex four-level system of committee governance was established (initially in the securities sector), wherein existing informal networks of national financial regulators and supervisors were formally incorporated within the EU-level policymaking process (Eberlein and Newman 2008).

The ECB played only a minimal role in these innovations. The founding fathers of the ECB had afforded the central bank a limited role in financial supervision. Under Article 5 of the TEU, the ESCB was assigned the task of contributing 'to the smooth conduct of policies pursued by the competent authorities [of member states] relating to the prudential supervision of credit institutions and the stability of the financial system'. It also had the right to be

consulted on legislation falling within its field of competence.⁶ During the 2000s, the ECB periodically pitched for an expansion of its supervisory role. In 2001, it published a paper setting out the case for attributing both macro- and micro-prudential responsibilities to national central banks, which, by extension, would have enhanced its own role in coordinating supervision at the EU level (ECB 2001). A year later, the ECB's then-President Wim Duisenburg and his deputy Tommaso Padoa-Schioppa made public their long-standing interest in seeing the ECB itself take on a stronger supervisory role. Their move was blocked in the European Council under opposition from the British and German finance ministers, both of which were supporting the single supervisor model of financial supervision at the time (Crooks 2002). Subsequently, policymakers did agree greater European coordination in banking supervision, extending the Lamfalussy Process from the securities sector to the banking (and insurance) sectors. Yet reflecting British and German interests in maintaining political control over financial services governance (Westrup 2007), this process privileged financial supervisory authorities over central banks. Thus, a Committee of European Banking Supervisors (CEBS) was established in London in 2004, in which central bankers and the ECB were invited to participate as non-voting observers only.

It should be noted that the Lamfalussy process fell far short of outright supranationalisation of financial services governance. It involved enhanced cooperation between national officials within a fundamentally decentralised system, wherein the responsibility for the safety and soundness of financial institutions and the stability of national financial systems continued to reside at

the national level (see McPhilemy 2014). As the next chapter highlights, it was only with the onset of the global financial crisis that this decentralised system of financial services governance – and the limited role it afforded to central bankers – would start to be reappraised.

3.6 CONCLUSION

This chapter has demonstrated that the institution of central banking has been in a process of continual evolution since its emergence in the late 17th century. The four ages of central banking identified – emergence, the international gold standard, subordination to government control and the return to orthodoxy – have seen central banks lose and gain functions and establish very different institutional relations with their key interlocutors in governments and financial markets. The chapter has also demonstrated the great diversity of political and economic forces that have shaped the development of each central bank. In the United States, the emergence and development of the Federal Reserve mirrors the major struggles in US society, between agrarian and metropolitan interests, between state and federal levels of government and between public and private sources of authority. In the United Kingdom, the Bank of England metamorphosed over the course of the 20th century from a private financial market institution geared towards the protection of the interests of the City of London to an instrument for the exertion of public control over financial markets. The ECB was born in the era of market orthodoxy, with an ancestry untainted by the history of subordination to government control.

Notwithstanding the differences between them, on the eve of the financial crisis in 2007, the three central banks shared a number of common characteristics. All enjoyed considerable autonomy to determine interest rates free from interference from their political 'masters'. At the same time, these institutions' mandates (with the partial exception of the US Federal Reserve) were narrow. For all three central banks, price stability had become their most important objective. This was established formally in the case of the Bank of England and the ECB and on a *de facto* basis in the case of the Federal Reserve. Financial stability had become a secondary concern. In the EU, this was partly because the ECB's mandate in the financial stability arena was limited and ambiguous. In the United Kingdom, financial stability had become a shared competence between the tripartite authorities (the Bank, HM Treasury and the FSA). In the United States, the Federal Reserve had responsibility for microprudential supervision of bank holding companies and the state member banks of the Federal Reserve System, but it had no statutory duty in respect of financial stability. Underlying these developments was the ascendance of orthodox economics and the widespread acceptance of efficient market ideas. In turn, this ascendance was supported by the growth and development of financial markets, which, appeared to most observers to be a remarkably benign and positive development.

During the immediate pre-crisis period, central bank governors – above all the Chairman of the US Federal Reserve – were commonly characterised as omniscient Delphic oracles, singularly responsible for establishing the conditions for ostensibly stable finance-led economic growth and prosperity. It

is a matter of some irony, then, that the pre-crisis period was one in which central banks were extremely passive relative both to the interventionism of the post-war years, and to the hyper-innovation of the crisis response. As the next chapter demonstrates, the financial crisis heralded another twist in the long history of central banking with all three central banks accumulating new functions and overhauling their formal and informal relationships with politicians and financial market actors alike.

¹ According to John Maynard Keynes' famous formulation, the 'rules of the game' of the gold standard held that any country faced with a balance of payments deficit would be required to raise interest rates, or face the prospect of gold flowing out of its central banks' coffers, as overseas merchants and their bankers exchanged unwanted national currency into gold at the central bank. By raising rates, a central bank could restrict the money supply and cause prices to fall. This would increase the competitiveness of the country vis-à-vis its trading partners, dampening the demand for gold at the central bank.

² For example, supporters of President George HW Bush accused the Federal Reserve of running an excessively restrictive monetary policy in 1990-91, contributing to Bush's election defeat to Bill Clinton.

³ This view was expressed in the United Kingdom most prominently by the Cunliffe Committee in 1918, which argued for a return to the gold standard at the pre-war rates of exchange.

⁴ The incumbent Governor, Thomas Catto, was reappointed following nationalisation on secure terms of employment (Burnham 2007). While the Act

gave the Treasury a power of direction over the Bank, this power was never used and quickly took on the status of a 'nuclear option' that could be exercised only in the most extreme situations. As if to underline the Bank's relative autonomy post-nationalisation, a series of disputes regarding the conduct of exchange rate policy soured relations between the Bank and the Treasury during the 1950s.

⁵ Both documents prohibit members of the ECB's decision-making bodies (including national central bank governors) from seeking or taking instructions from national or EU-level political bodies.

⁶ The Maastricht Treaty also contained a mechanism whereby, under certain circumstances, the ECB could take on 'specific tasks concerning *policies relating to* the prudential supervision of credit institutions and other financial institutions with the exception of insurance undertakings' (Article 105(6) TEU, now Article 127(6) TFEU; emphasis added). The emphasised words indicate that this provision was intended to *prevent* the ECB from becoming a pan-European banking supervisor. Despite this, Article 127(6) has been used as the legal basis for the creation of the SSM, a development that some lawyers regard as illegal (Barker, 2012).

4 HOW HAS CENTRAL BANK POWER CHANGED?

4.1 INTRODUCTION

When *Forbes* magazine issues its annual list of the ‘World’s Most Powerful People’, the Chairman of the United States Federal Reserve is rarely far from the top. Most commentators agree that central banks are powerful, but it is not always clear what people mean when they talk of central banks’ ‘power’. This chapter examines how *the ability of the major advanced economy central banks to move policy in line with their own preferences* has changed in recent years (see Chapter 2). This understanding of power, which we may label ‘central bank authority’, aligns with intuitive notions of power in popular discourse, including in the *Forbes* list (Howard 2014). That is to say, it is concerned with central banks’ ‘power over’ actors with whom they have direct interactions, specifically financial market participants and executive politicians in governments. To paraphrase Dahl (1957), central bank authority concerns central banks’ ability to cause other actors to do things they would not otherwise do.

A starting point for explaining how the authority of the central banks considered in this thesis has changed is recognition that their authority varies across the different functions they perform. As bureaucratic agencies of the state, the ability of these central banks’ to determine outcomes in a given policy domain depends, in part, on the scope of the formal mandate delegated to them by politicians. This includes the range of objectives delegated to them and the specific ‘powers’ assigned to them in law. A central bank’s ability to move policy in line with its own preferences also depends on how autonomous it is.

Autonomy, in turn, depends on the level of discretion afforded to the central bank in its statutory mandate, including whether it is required to follow prescriptive rules or if it has freedom to determine for itself how to meet its statutory objectives. Autonomy also depends on what principal-agent theory terms ‘*ex post* control mechanisms’. That is to say, it depends on the strength and efficacy of the accountability arrangements and other means by which politicians (as ‘principals’) control the actions of their ‘agents’ after they have delegated authority to them.

The authority of central banks also depends on less formal aspects of their relationships with other actors. Central banks are likely to be able to move policy in line with their own preferences if their goals are widely shared by society as a whole. Even the most independent (or least accountable) central banks respond to public pressures (Kane 1980). A key determinant of central bank authority in a given policy domain is, therefore, the nature of the policies they are planning to implement, which actors are affected by them, and whether or not adversely affected groups have the knowledge and organisational capacity to mobilise themselves in opposition to the central bank. Additionally, central banks’ authority will depend on other elements of central bank power (see Section 2.4). For example, a central bank’s ability to move policy in line with its own preferences depends crucially on ‘structural’ features of its relationships with other parties (see Chapter 5). Likewise, a central bank’s persuasiveness in policy debates will be reinforced if it has a reputation for successfully attaining its objectives of monetary and financial stability (see Chapter 6).

As this chapter demonstrates, from a formal or *de jure* perspective, the authority of each of the three central banks considered in this thesis has increased. Most obviously, this is because in each case, the central bank has been delegated new formal rights and responsibilities in the financial stability domain. Although there are some differences between them, each central bank now operates in an expanded policy space that encompasses microprudential policy, macroprudential policy and crisis management, in addition to the existing monetary policy domain. Moreover, in no case have politicians significantly diminished the autonomy of their central banks, either by narrowing *ex ante* discretion within their mandates or by imposing significantly tighter *ex post* controls on their operations. While there are clear differences between each central bank in terms of their formal autonomy, these differences have not been radically altered in post-crisis reforms.

The three central banks have also demonstrated increased authority from an informal, or *de facto*, perspective. Each has shown increased willingness to implement policies that contradict the stated preferences of key interlocutors in financial markets and the executive branches of national governments. Here, however, some significant differences between the three cases may be observed. Both the Bank of England and the Federal Reserve have demonstrated their willingness to take a tough stance in the face of significant opposition from industry representatives and their political supporters in the executive and legislative branches of governments. They have reversed the customary image of British and US authorities as bastions of deregulation and 'light-touch' supervision, taking a consistently prudent stance in international

negotiations over financial policies and in their interpretation and implementation of internationally-agreed standards (see, for instance, Bair 2012). The ECB is just beginning to develop its regulatory and supervisory capacities within the Single Supervisory Mechanism (SSM), which began operating in November 2014. It remains to be seen whether it will adopt a similarly prudent approach, or if it will follow the somewhat less prescriptive policies favoured by some of its key members in recent years, including the French and German authorities (see Howarth and Quaglia 2013). However, in contrast to the other two central banks, the ECB has demonstrated considerable authority in the macroeconomic domain. It has implemented monetary policies that have at times been opposed by its most powerful political ‘principal’, the German government. It has also been a key driver of fiscal austerity and structural reforms – going beyond its immediate monetary policy remit – across the EU, notwithstanding significant popular opposition in crisis-struck Southern European countries.

The remainder of this chapter is organised as follows. The next section examines how the formal mandates of the three central banks have been reformed in recent years, focusing in particular on the key areas of financial stability policy discussed in the introduction, namely microprudential policy, macroprudential policy and crisis management. The third section continues the analysis of the formal aspects of central banks’ authority, focusing on the legal provisions that establish each central bank’s independence from, and control by, executive and legislative politicians. The fourth section turns to the informal, or *de facto*, aspects of central banks’ authority, examining their relationships

with legislative and executive politicians, and financial market participants. The concluding section summarises the foregoing analysis.

4.2 DELEGATED AUTHORITY

Most countries' central banks are nominally 'independent' (see Marcussen 2005). However, as Alan Sproul, the third president of the Federal Reserve Bank of New York, once put it, central bank independence does not mean 'independence from the government but independence within the government' (Sproul 1952, quoted in Meltzer 2003: 713, n.238). While central banks sometimes have idiosyncratic legal structures, to all intents and purposes they are statutory bodies. In the jurisdictions considered in this thesis, central banks exercise authority delegated to them by elected politicians and they are accountable to national (or, in the case of the EU, regional) legislatures. A first step in setting out how these central banks' authority has changed since the financial crisis is, therefore, to specify the range of objectives and formal powers that have been delegated to them.

4.2.1 MICROPRUDENTIAL POLICY

As the previous chapter identified, prior to the financial crisis, the Federal Reserve, the Bank of England and the ECB differed in respect of their formal powers to conduct microprudential prudential regulation and supervision. Specifically, while neither the Bank of England nor the ECB played much of a role in this area, the Federal Reserve was responsible for regulating and

supervising several categories of bank, including bank holding companies and state banks that are members of the Federal Reserve System.

After the financial crisis, the three central banks have converged in respect of their microprudential supervisory authority, at least in terms of their formal responsibilities. In the United States, the 2010 *Dodd Frank Act* (DFA) established the Federal Reserve as the primary regulator of all systemically important financial institutions (SIFIs). Section 165 of the DFA grants the Federal Reserve new authority in relation to bank holding companies with assets over 50 billion dollars, the US operations of some foreign banking organisations, and systemically important 'non-bank' financial institutions, such as insurance companies and investment firms. The DFA requires the Federal Reserve to establish prudential standards for these institutions that are more stringent than the standards applying to less systemically important firms, including requirements for risk-based capital, leverage, liquidity, risk-management, large exposures, resolution planning and reporting of credit exposures (DFA Section 165(b)). Under the DFA, the Fed is required to establish a programme of stress tests, in coordination with other federal agencies, to ensure these firms will be resilient in the face of adverse financial or macroeconomic developments.¹ The scope of Federal Reserve supervision now encompasses all of the major Wall Street investment banks that were at the centre of the financial crisis in 2008, with the obvious exception of Lehman Brothers.² Combined with the aforementioned provisions in the DFA, it now has broad authority to determine rules for, and conduct supervision of, systemically banks in the United States.

There are, however, limits to the Federal Reserve's formal authority in the microprudential policy domain. Under the DFA, the responsibility for designating non-bank financial institutions as 'systemically important' – and therefore meriting enhanced supervision by the Fed – was delegated to the newly created Financial Stability Oversight Council (FSOC) (see below). As of December 2014, the FSOC had designated only three non-banks as systemically important. As a practical matter, this is a clear limit on the Federal Reserve's supervisory reach. It should also be noted that the Federal Reserve is by no means the only regulatory agency involved in supervising systemically important banks. As before the crisis, the Fed is the 'umbrella supervisor' of financial groups at a consolidated level. It must cooperate closely with an array of primary supervisors of the various financial entities within each group, which creates challenges of misaligned incentives and intra-agency turf-wars (discussed further in Chapter 6).

In the United Kingdom, the Bank of England has gone from having practically no role in this area to a comprehensive remit for prudential regulation and supervision of banks, insurance companies and large securities firms. In 2010, the incoming Conservative-Liberal Democrat coalition government announced its intention to disband the Financial Services Authority (FSA), which had been created by the previous administration some 13 years earlier as a 'one-stop-shop' regulator of all financial services companies (see Chapter 3). In its place, the new government introduced a new 'twin peaks' regulatory system consisting of two new regulatory authorities: the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA). The PRA's primary

objective is to promote the 'safety and soundness' of the financial institutions that it authorises. The FCA has responsibility for upholding market integrity (including promoting transparency and preventing financial crime), promoting competition and ensuring consumer protection.³

The PRA was established as a 'subsidiary' of the Bank of England, reflecting concerns over conflicts of interest between monetary policy and prudential supervision (see HM Treasury 2010). Supervisory decisions in respect of individual firms are reserved to the PRA board (PRA 2014). Likewise, the PRA board decides strategic decisions on the direction of regulatory policy. In practice, however, the PRA is closely integrated with the rest of the Bank. The Governor chairs the PRA board and the PRA Chief Executive Officer (CEO) is the Bank's Deputy Governor for prudential regulation. With a view to maintaining a degree of separation between prudential policy and monetary policy, the PRA CEO does not sit on the Bank's Monetary Policy Committee. Still, in most respects, the PRA is closely integrated with the wider Bank of England. For instance, the PRA's policymaking functions have been subsumed within a new 'Prudential Policy Directorate', which reports both to the PRA board and to the new Financial Policy Committee (see below).

In effect, then, the Bank of England has formal authority for microprudential regulation and supervision of all large financial institutions, including banks, building societies, credit unions, insurance companies and large investment firms. Indeed, the Bank of England's supervisory remit now exceeds its authority prior to the creation of the FSA in 1997, since previously its supervisory responsibilities extended mainly to banks. The Bank is responsible for

authorising firms to carry out various categories of financial activity and for supervising their compliance with rules on an on-going basis. While much of the financial regulation applying in the United Kingdom is determined at the EU-level, the Bank has responsibility for implementing that policy through domestic rules and guidance, and for participating in intergovernmental negotiations over new regulations. At the EU level, this includes participating in working groups of bodies such as the European Banking Authority, which was established in 2011 with a remit to create a 'Single Rulebook' for all banks in the EU. At the international level Bank of England also participates in international negotiations in forums such as the Basel Committee on Banking Supervision (BCBS) and the Financial Stability Board (FSB).

The ECB too has gained new formal authority in the microprudential policy domain. On the 4th November 2014, the ECB became responsible for the microprudential supervision of all banks in the euro area. This development arose from the decision to establish the ECB as the central organisation within the 'Single Supervisory Mechanism' (SSM). The SSM is one of two pillars of the so-called 'Banking Union', along with the 'Single Resolution Mechanism' for handling bank failures. For approximately 130 'significant' banks, the ECB leads joint supervisory teams composed of officials from the ECB and national supervisors. For these large banks, the ECB is responsible for all key microprudential supervisory tasks, including granting authorisations, ensuring on-going compliance and carrying out supervisory reviews of banks' own internal capital adequacy assessments. Additionally, the ECB is responsible for issuing regulations, guidelines and general instructions to national supervisory

authorities in respect of some 6000 less significant banks that will remain under national supervision (Council Regulation 1024/2013, Articles 4, 6).

On the whole, the ECB's new microprudential authority relates to supervision, rather than regulation. However, as with the national competent authorities of individual member states, the ECB will play a role in implementing European regulations and directives, which will in practice require it to make rules and issue guidance. Like the other central banks considered in this thesis, the ECB also influences the creation of new financial regulations in international negotiations. At the EU-level, the ECB has 'observer' status in the European Banking Authority (EBA). It is a full member of both the BCBS and the FSB.

While the population of banks falling within ECB's supervisory remit is very large, it should be noted that the ECB has no direct authority over insurance or securities firms. In this respect, its mandate is not as encompassing that of either the Bank of England or the Federal Reserve. Furthermore, unlike either of the other two central banks considered in this thesis, decision-making within the ECB is essentially an intergovernmental process involving representatives from the 18 euro area member states that currently participate in the Banking Union (several non-euro area states have indicated their intention to join). Supervisory decisions are the responsibility of a new Supervisory Board within the ECB, composed of a Chair and a Vice Chair, four ECB representatives and one representative from each country's national competent authority. Ultimate decision-making authority resides with the ECB's highest decision-making body, the Governing Council, which is itself composed of national central bank governors of the euro area and six ECB executive officials.⁴

4.2.2 MACROPRUDENTIAL POLICY

In contrast to the microprudential policy domain, the three central banks differ significantly in respect of their macroprudential mandates. The 'big ticket' macroprudential reform in the United States did not primarily involve the central bank. Rather, the DFA established the FSOC under the chairmanship of the Secretary of the Treasury. The FSOC is a deliberative and decision-making body composed of ten voting members and five non-voting members. The Chairperson of the Federal Reserve is one of the voting members; the others are heads of other financial regulatory agencies in the United States.⁵ The DFA also established within the Treasury a quasi-independent Office for Financial Research (OFR) to provide analytical and statistical support to the FSOC's deliberations.

Aside from its Chairman's participation as a voting member of the FSOC, the Federal Reserve's role in macroprudential policy derives mainly from its capacities as the SIFI regulator. Prudential rules, such as those for bank capital and liquidity adequacy, can be put to either macroprudential or microprudential ends. Given its authority to determine and enforce these rules, the Federal Reserve has considerable scope to pursue a macroprudential agenda. In particular, the enhanced (micro-) prudential authority delegated to the Fed has two arguably macroprudential characteristics. First, stress tests necessarily take into account forward-looking assessments of systemic risks and possible adverse developments in the financial system. The Fed can emphasise particular sectors or financial activities in its adverse stress test scenarios, thereby requiring banks to have more capital as a buffer against potential losses in those

areas. Second, the DFA requires the Federal Reserve to tailor its prudential standards, such that the most systemically significant firms are held to the most stringent rules.

Section 121 of the DFA further enhances the Federal Reserve's authority by enabling it to take a range of actions to mitigate risks posed by systemically important firms, if it considers those firms to pose a 'grave threat' to US financial stability. These actions range from prohibiting firms from engaging in mergers and acquisitions, to requiring divestitures of assets and off-balance sheet items (that is, forcing banks to break up). Though not normally categorised as such, these instruments may be considered 'macroprudential' since they mitigate systemic risks arising from the structure of the financial system. However, to use these instruments, the Federal Reserve must have the support of at least two-thirds of the voting members of the FSOC. As discussed below, achieving agreement within the FSOC is by no means straightforward.

In contrast to the arrangements in the United States, the Bank of England has broad authority to conduct macroprudential policy. In 2011, the Bank of England created an interim Financial Policy Committee (FPC) in anticipation of changes that would be introduced in the *Financial Services Act 2012*. The FPC helps the Bank of England achieve its statutory financial stability objective, which was introduced under the outgoing Labour administration in 2009. The FPC is required to identify, monitor and mitigate systemic risks to UK financial stability, in particular risks arising from the structure of the UK financial system, the distribution of risk among market participants, and from levels of debt, leverage and credit growth (*Financial Services Act 2012*: Chapter 6). The

Governor chairs the FPC, which is also composed of the Bank's Deputy Governors, the Chief Executive of the FCA, four external members, and two senior executives from within the Bank.

When it comes to taking action to mitigate or eliminate systemic risks, the FPC has two statutory 'powers' (Bank of England 2013a). First, it can issue recommendations. These recommendations can be addressed to anyone, but if they are addressed to either the PRA or the FCA, they may be made on a 'comply-or-explain' basis. 'Comply or explain' mechanisms are designed to increase the likelihood that recommendations will induce deference on the part of their recipients. In practice, this provision is relevant only in the case of prospective recommendations to the FCA, since it is highly improbable that the PRA – as an integrated part of the Bank of England – would ever refuse or fail to comply with a recommendation from the FPC.

The second statutory 'power' of the FPC is the power to issue 'directions' to the PRA and the FCA in respect of certain macroprudential tools. Under a direction, compliance is mandatory. The Treasury is responsible for designating which macroprudential tools fall within the FPC's powers of direction. As of May 2015, it had given the FPC control over three macroprudential tools: it can raise or lower bank capital requirements against lending to specific sectors of the economy, it can impose a countercyclical capital buffer and it can impose 'loan-to-value' and 'loan-to-income' limits on the size of mortgage loans available to prospective homeowners.

In comparative terms, ECB's formal authority in respect of macroprudential policy lies between that of the Bank of England and that of the Federal Reserve.

Formal authority for macroprudential policy in the EU is assigned to the European Systemic Risk Board (ESRB), which was established in 2011 as part of a new European System of Financial Supervision.⁶ The ECB dominates the ESRB. The ECB President serves as the ESRB Chair and the ECB staffs, funds and hosts the ESRB Secretariat. More than half of the additional staff recruited to help run the ESRB work within the ECB itself, notably in helping to collate, process and channel supervisory information from national authorities to the new macroprudential body (see Israël 2013).

The ESRB has been criticised as somewhat ineffectual in its first years of operation (McPhilemy and Roche 2013). It is required to 'provide warnings and, where appropriate, issue recommendations for remedial action, including, where appropriate, for legislative initiatives' (*Regulation 1092/2010*: Article 16). Warnings and recommendations may be addressed to the member states, the three microprudential 'European Supervisory Authorities' (which were created alongside the ESRB in 2011) or, in the case of recommendations for legislative action, the European Commission. Recommendations carry a comply-or-explain requirement. However, it is unclear whether in practice the comply-or-explain mechanism has induced a greater degree of deference on the part of its recipients than had the recommendations not carried such a requirement. Some members of the General Board of the ESRB have expressed the view that the formal nature of such mechanisms can have the paradoxical effect of diminishing compliance because the organisations they address feel compelled to respond with legalistic explanations of their non-compliance (see McPhilemy and Roche 2013).

The ECB's authority in macroprudential policy has been further enhanced as a consequence of the SSM. Under the Regulation establishing the SSM, the ECB is authorised to implement a range of macroprudential tools affecting banks domiciled in countries participating in the SSM (Regulation 1024/2013 Article 5). The ECB may raise capital requirements in those countries, including the countercyclical capital buffer and buffers designed to mitigate systemic risks in specific sectors or asset classes. However, the ECB shares this authority with the national competent authorities of member states. It may raise requirements above the level set by national authorities, but it cannot require a national authority to remove or lower any macroprudential instruments it has implemented of its own volition.

More generally, financial stability remains a national competence in the EU even for member states participating in the Banking Union and the euro area. Reflecting this, the ESRB has issued recommendations to all member states to establish their own national macroprudential authorities at the domestic level (ESRB Recommendations 2011/3, 2013/1). In practice, these new national bodies have primary responsibility for taking action to mitigate systemic risks to financial stability that may arise within individual countries.

4.2.3 CRISIS MANAGEMENT

As with macroprudential policy, the formal authority of the three central banks differs significantly in respect of crisis management. In the United States, the DFA diminished the Federal Reserve's authority in this policy domain. The DFA amends Section 13(3) of the *Federal Reserve Act*, under which the Federal

Reserve had previously been able to extend liquidity assistance to financial entities other than deposit taking banks. This previously obscure and rarely used clause in the *Federal Reserve Act* was invoked on many occasions during the financial crisis as the legal justification for emergency lending to troubled financial institutions, including the highly controversial loans made to facilitate the rescues of Bear Stearns and American Insurance Group (AIG). Under the DFA, the Federal Reserve can no longer lend to non-bank institutions on a firm-specific basis. Rather, emergency lending to such firms must have 'broad-based eligibility' and must be designed to provide liquidity to the financial system as a whole. Furthermore, any future lending under this clause must be pre-approved by the Secretary of the Treasury (DFA Section 1104).

The DFA also introduced a new Orderly Liquidation Authority (OLA), which is designed to manage the resolution of systemically important financial institutions (DFA Title II). The authority to conduct resolutions was delegated to the Federal Deposit Insurance Corporation rather than the Federal Reserve. The role of the Federal Reserve in this process is limited to making the initial determination that a firm has reached the point of needing to be resolved. The Federal Reserve shares this determination authority with the FDIC and the SEC (for securities firms) and the Federal Insurance Office (for insurance companies).

In contrast to these arrangements, the Bank of England's formal authority in crisis management has been enhanced. Following the disorderly failure of banks such as Northern Rock and Bradford and Bingley, the Labour government introduced a number of reforms in the area of crisis management through the

Banking Act 2009. This legislation instituted a new 'Special Resolution Regime', which like the OLA, is designed to ensure the critical functions of failing banks and other financial firms can be transferred in an orderly fashion to a willing buyer or a publicly-owned entity, and that any losses are born in the first instance by the failed firms' shareholders and its unsecured creditors.

The *Banking Act 2009* established the Bank of England as the resolution authority for the United Kingdom. The Bank has the responsibility for resolving failing banks, building societies and investment firms incorporated in the UK. The only exception is cases where the Treasury determines that the failing firm needs to be taken into public ownership, in which case the Treasury takes the lead (Bank of England 2014a). It also falls to the Bank of England, in cooperation with firms' prudential supervisors (either the PRA or the FCA) to determine when firms have reached the point of needing to be resolved. This regime has recently been strengthened by the passage of the EU Bank Recovery and Resolution Directive, which also gives the Bank of England authority to resolve UK branches of failing non-European Economic Area banks, building societies and investment firms.

Like the Federal Reserve, and in contrast to the Bank of England, the ECB has only a limited role to play in new arrangements for resolving failing financial institutions. Within the 'Single Resolution Mechanism' (SRM) – the second pillar of the Banking Union along with the SSM – it falls to the ECB to determine when a bank has reached the point of resolution. However, an independent Single Resolution Board will be responsible for conducting the resolution and the

European Commission and the Council will have final right to approve or reject the resolution process.

One area in which the formal authority of the ECB as a crisis manager has been enhanced is in respect of EU member states facing balance of payments crises. Following a request from euro area heads of state and government in March 2010 (see Council of the European Union 2010), the ECB has worked alongside the European Commission and the International Monetary Fund in the so-called 'Troika' to provide financial assistance to crisis-struck EU member states including Ireland, Portugal, Cyprus, and Greece. The ECB's formal role in the Troika involved assessing the need for bilateral and IMF assistance and monitoring countries' compliance with the conditions attached. These functions were formalised in an intergovernmental treaty to establish a European Stability Mechanism (ESM), which is a publicly-financed fund for managing balance of payment crises in the EU. Under the treaty, the ECB will be involved in assessing systemic risks posed by individual member states, evaluating their financial needs, and agreeing the terms of any conditionality that will be attached to ESM assistance (Darvas and Merler 2013).

Beyond these formal dimensions of its crisis management authority, the ECB has played a substantial role as lender of last resort (LOLR) both to teetering financial institutions and crisis-struck governments. As discussed in Section 4.4, these discretionary actions have required the ECB to expand its own authority by creatively reinterpreting its mandate. At times, the ECB encountered considerable resistance. For example, in 2012 the ECB launched a programme dubbed 'Outright Monetary Transactions' (OMT). This programme, which

constituted a promise to buy potentially unlimited quantities of European countries' sovereign debt, was subject to a legal challenge in the German Constitutional Court. While the challenge was ultimately defeated after being referred to the European Court of Justice, this legal challenge could have led to a significant curtailment of the ECB's crisis management authority.

TABLE 3: DELEGATED AUTHORITY COMPARED

	United States	United Kingdom	EU
<i>Microprudential policy</i>	<ul style="list-style-type: none"> • Lead organisation: Federal Reserve • Regulates and supervises bank holding companies, state Federal Reserve System member banks and FSOC-designated SIFIs. 	<ul style="list-style-type: none"> • Lead organisation: Bank of England • Bank/PRA regulates and supervises banks, building societies, credit unions, insurance companies, and large investment firms. 	<ul style="list-style-type: none"> • Lead organisation: ECB • Supervises Banking Union area banks >€30 billion by assets; largest 3 banks per member state. Regulatory competence shared with EBA.
<i>Macroprudential policy</i>	<ul style="list-style-type: none"> • Lead organisation: FSOC • Chair participates in FSOC. <i>De facto</i> macroprudential authority arising from microprudential banking authority. 	<ul style="list-style-type: none"> • Lead organisation: Bank of England • FPC has exclusive cross-sectoral competence; can 'direct' PRA and FCA. 	<ul style="list-style-type: none"> • Lead organisation: ESRB • Leading role in ESRB. • In BU area, shared competence with national authorities over certain macroprudential instruments for the banking sector.
<i>Crisis management</i>	<ul style="list-style-type: none"> • Lead organisation: Federal Deposit Insurance Corporation • Fed LOLR authority restricted. 	<ul style="list-style-type: none"> • Lead organisation: Bank of England • Treasury conducts resolutions where public funds are used. 	<ul style="list-style-type: none"> • Lead organisation: Special Resolution Board • ECB's LOLR authority under challenge at ECJ. • ECB performs various functions in ESM.

4.3 FORMAL AUTONOMY

The ECB has traditionally been the most autonomous of the three central banks. As discussed in Chapter 3, its independence is enshrined in the Treaty on European Union, giving it quasi-constitutional status (Howarth and Loedel 2005). The ECB also has the authority to determine for itself the target rate for inflation. In the terminology of Debelle and Fischer (1994), this gives it both ‘instrument independence’ and a degree of ‘goal independence’. That is to say, the ECB is both free to choose the tools by which it meets its monetary policy objectives and it also has a role in setting those objectives in the first place.⁷ The Bank of England has historically been the least autonomous of the three central banks. The Bank gained formal independence in 1997, which was late relative to most other advanced economies. Even after 1997, its monetary policy target is written into statute and HM Treasury has retained strong controls over the appointment of key personnel. For example, members of the MPC and FPC are appointed for just three-year terms, which can be renewed only once. Neither the Bank of England nor the Federal Reserve has a constitutional guarantee of independence. However, since the late 1970s the Federal Reserve has enjoyed a relatively free hand (see Chapter 3). Members of the Board of Governors are appointed for 14-year terms, providing insulation from immediate political pressure. Moreover, the Fed has a multi-objective mandate to pursue price stability, maximum employment and moderate long-term interest rates.⁸ This provides it with a degree of goal independence, since it must determine for itself which objectives to prioritise at any given moment.

Post-crisis reforms have done little to alter these formal aspects of the central banks' autonomy in the monetary policy domain. Central banks continue to enjoy a high level of instrument independence in relation to monetary policy. Arguably, they have also demonstrated greater goal independence than in the past, creatively reinterpreting their statutory price stability objectives to pursue policies, such as quantitative easing, that appear more obviously targeted at boosting economic growth than maintaining stable prices. Yet post-crisis reforms have led to a number of new formal constraints being placed on central banks. Such constraints are present in the *ex ante* 'delegation contracts' between politicians and central banks (see Chapter 2), which define how much discretion central banks have in exercising their mandates. Likewise, certain new *ex post* mechanisms have also made it somewhat easier for politicians to censure or otherwise seek to alter the behaviour of central banks where they are dissatisfied. This section considers these two dimensions of central banks' formal authority (findings are summarised in Table 4).

4.3.1 *EX ANTE* CONSTRAINTS

Central banks are inherently more constrained in the financial stability policy domain than they are in regards to monetary policy. While there have been periods in which monetary policy has been guided by ostensibly fixed rules, such as the era of the international gold standard⁹ (see Chapter 3), as discussed, central banks have generally enjoyed a high level of discretion in determining how to meet their particular monetary policy objectives. By contrast, the detail of central banks' activities in relation to microprudential policy and

macroprudential policy is to a significant extent pre-specified in international agreements and national or supranational legislation. To be sure, each of the central banks considered in this thesis plays a leading role in transgovernmental networks such as the BCBS and the FSB. Yet no single member institution can dictate their outputs (cf. Drezner 2007). More importantly, central banks do not have a free hand when it comes to implementing the outputs of the BCBS or the FSB in their respective jurisdictions. This is because informal agreements of international standard setting bodies are often written into national (or, in the EU, supranational) legislation, which closely defines how much discretion a central bank has in implementing the rules.

There are, however, certain differences between the three cases. The Federal Reserve has fewer formal *ex ante* constraints than either the Bank of England or the ECB. In the United States, Congress grants the Federal Reserve the authority to make rules, meaning that it falls mainly to the central bank to implement the internationally agreed standards of the BCBS and the FSB. Yet the Federal Reserve's policymaking discretion is limited by the densely populated regulatory landscape within which it operates. The DFA did little to alter this situation. While the reforms abolished one banking regulator, the Office for Thrift Supervision, it remains the case that the Federal Reserve must collaborate with an array of federal regulatory agencies when writing new rules. For the banking sector, the most important of these organisations are the Office of the Comptroller of the Currency and the Federal Deposit Insurance Company (see Chapter 6 for a discussion of the challenges of policy coordination). The fragmented nature of the US regulatory architecture acts as a check on the

Federal Reserve's authority because it cannot act unilaterally in making prudential regulations.

The discretion of both the ECB and the Bank of England is limited by the fact that both must implement a voluminous body of European financial legislation. This legislation comprises high-level ('framework') legislation in the form of directives and regulations agreed by the European Parliament and the European Council. It also includes more detailed binding technical standards and non-binding guidance produced by the three microprudential ESAs (the European Banking Authority (EBA), the European Securities and Markets Authority (ESMA) and the European Insurance and Occupational Pensions Authority (EIOPA)). Furthermore, one of the earlier regulatory initiatives to emerge from the financial crisis in the EU was the decision to press ahead with the creation of a 'single rulebook' for the banking sector. In practice, this meant that most EU-level prudential rules were rewritten into a new 'Capital Requirements Regulation' (CRR) that applies directly to firms throughout the EU without needing to be written into national legislation or rules. Naturally, this greatly limits the ability of national central banks (and the ECB as the competent authority for large euro area banks) to make prudential regulations in line with their own preferences.

This is not to say that the Bank of England and the ECB lack any rulemaking discretion. The CRR is, in fact, replete with options and areas of ambiguity, giving national authorities considerable scope to define how the rules should be interpreted in their respective jurisdictions (McPhilemy 2014). For example, the Bank of England has considerable latitude to implement and enforce the CRR in

line with its own preferred interpretations and it frequently issues 'Supervisory Statements' and other guidance to firms, setting out its expectations regarding how they should comply with the European legislation.¹⁰ The ECB operates under similar constraints. It implements the CRR in accordance with the options and discretions exercised by individual member states. However, the ECB does have some powers to make rules and guidance, both for the large banks that it is directly responsible for supervising and the smaller banks that continue to be supervised at the national level. As the ECB matures as a supervisory authority, it is expected that it will play a more prominent role in issuing rules and guidance for banks in countries participating in the Banking Union.

4.3.2 *EX POST* CONTROL MECHANISMS

Central banks' formal autonomy is limited by *ex post* control mechanisms. Such mechanisms provide a means by which legislative and executive politicians can hold central banks to account for their actions. *Ex post* control mechanisms also provide avenues by which politicians could force a central bank to change course over a given issue (although open conflict between central banks and executive authorities is generally rare). The main formal accountability mechanism for each of the three central banks considered in this thesis consists of monitoring and reporting requirements. All three central banks face broadly similar constraints in this regard. Their governors must appear before various legislative committees (usually quarterly) to explain their monetary policy and financial stability decisions and to face questions on whichever topics lawmakers choose to ask them about. In each case, the legislative committee(s)

tasked with holding the central bank to account have few if any formal means of sanctioning the central bank or intervening in its activities, should it be unsatisfied with central bankers' testimony.

In the United States, the *DFA* marginally increased the level of *ex post* constraint operating on the Federal Reserve. The requirement for the Secretary of the Treasury to approve future liquidity assistance to non-bank financial firms provides the administration with an unprecedented veto over one element of the Federal Reserve's LOLR functionality. This is a clear diminution of the Federal Reserve's autonomy, even if conflict between the central bank and the administration in this area proves to be rare. The creation of the FSOC provides a further channel by which the Treasury (if supported by other regulatory agencies) could intervene in the Federal Reserve's operations. This is because the FSOC, which is chaired by the Secretary of the Treasury, can issue recommendations to the Federal Reserve (or any other agency) on a 'comply-or-explain' basis. There are, however, no existing statutory means of sanctioning the Federal Reserve. While Congress could legislate to curtail the Federal Reserve's power, or to subject it to greater Congressional oversight via the Government Accountability Office (a Congressional body established to 'audit' public agencies), legislative action to curtail the Federal Reserve's power is unlikely to succeed absent the support of the President.

In the UK, the possibilities for government intervention in the Central Bank's activities are more clearly articulated. The *Financial Services Act 2012* sets out circumstances in which the Treasury can, in extremis, issue directions to the Bank, suspending its independence in respect of monetary policy. For these

powers to become active, the Bank must have first notified the Treasury that a 'material risk' to public funds is likely to arise. The *Financial Services Act 2012* also requires the Treasury to make recommendations to the Bank in respect of aspects of financial stability and wider government economic policy on a more regular basis (*Bank of England Act 1998* Clause (9E), as amended). Such recommendations relate to how the FPC should interpret the Bank's statutory financial stability objective and any other issues the Treasury is concerned about. This power of recommendation has been used on a yearly basis since 2012 (see for example Osborne 2013).

In the EU, the formal options for politicians to intervene in the ECB's operational activities are few. According to the Treaty on the Functioning of the European Union, the President of the Council may attend meetings of the ECB Governing Council and submit motions for deliberation (TFEU Article 284). However, the Council President may not vote in the meetings. Under current legislation, the ESRB may not issue warnings and recommendations to the ECB, as the FSOC can to the Federal Reserve. As in the United Kingdom and the United States, the European Parliament has no formal sanctions over the ECB. Any alteration to the ECB's remit would require new legislation. Any reduction in its formal autonomy would require treaty change. Given the universal support for the institution of central bank independence amongst European centrist parties, such an eventuality is, to say the least, unlikely.

TABLE 4: FORMAL AUTONOMY COMPARED

	United States	United Kingdom	EU
<i>Ex ante constraints</i>	<ul style="list-style-type: none"> • Financial stability policy inherently less instrument independent. • Federal Reserve has broad authority to implement international agreements. • Must cooperate in rule making with other federal regulatory agencies. 	<ul style="list-style-type: none"> • Financial stability policy inherently less instrument independent. • Implements detailed European and UK secondary legislation. • Loopholes and ambiguity in EU law provides discretion, even amid ‘maximum harmonisation’. 	<ul style="list-style-type: none"> • Financial stability policy inherently less instrument independent. • Implements detailed European and member state secondary legislation and rules. • Expected to develop common rules and guidance in due course.
<i>Ex post control mechanisms</i>	<ul style="list-style-type: none"> • Monitoring by and reporting to Congress. • Government Accountability Office oversight (excluding monetary policy) (see Chapter 3). • Treasury Secretary approval required for certain LOLR actions. 	<ul style="list-style-type: none"> • Monitoring by and reporting to Parliament. • New mechanism for executive suspension of independence in extremis. • Annual HM Treasury recommendations on interpretation of financial stability objective. 	<ul style="list-style-type: none"> • Monitoring by and reporting to European Parliament and European Council. • ECB president reports to EP as Chair of ESRB. • No other substantive control mechanisms.

4.4 DE FACTO AUTHORITY

Important as they are, statutory control mechanisms are only the most visible channels through which politicians – and the interest groups they represent – transmit their preferences to central banks. When commentators worry about the politicisation of central banking after the financial crisis (Kohn 2014a; L. Goodhart 2014; Baker 2015b) their concern is not primarily that new legal mechanisms have been devised to limit central banks’ independence. Rather, it is that central banks have strayed into areas that are more controversial and

politically contested than monetary policy and that societal resistance to central banks' decisions will ultimately undermine central banks' *de facto* authority.

In the monetary policy domain, central banks' *de facto* authority is generally strong in part because there is broad normative support in society at large for the objective of price stability. Support for low and stable inflation is a bedrock of the so-called 'stability culture' that is most associated with Germany, but which also influences popular discourse over economic policy in many countries (see Tognato 2012; Howarth and Rommerskirchen 2013). Against the backdrop of such stability cultures, the increasingly singular focus of central banks on maintaining a low and steady rate of inflation in the three decades prior to the financial crisis led to central banking being seen as a largely technical activity. During that period, central banks became increasingly 'scientised' (Marcussen 2006); they forged links with academic economists and presented their decisions as impartial and evidence-based. Central banks projected an image of themselves as apolitical; their sole uncontroversial focus was to maintain the rate of inflation at the most socially desirable level. The effects of monetary policy are, of course, anything but apolitical. Anti-inflationary policies have distributional consequences that other things being equal benefit savers and penalise borrowers. For this reason, some authors view the 'apoliticisation' of monetary policy as merely an outgrowth of deliberate governing strategies of 'depoliticisation' (cf. Burnham 2001: 128; 2014). Depoliticisation involves obfuscating the distributional character of political decisions by delegating responsibility for decision-making to autonomous, ostensibly neutral, public agencies.

The broadening of central bank mandates calls their autonomy into question. The three key areas of financial stability policy focused upon in this thesis – microprudential policy, macroprudential policy and crisis management – are more controversial than monetary policy. This is not because Western publics are somehow in favour of financial instability. Rather it is because the distributional consequences of financial stability policies are easier to discern. A frequently discussed concern in relation to both prudential policies (whether micro- or macro-) is that their short-term costs fall narrowly on a relatively small number of actors, while the benefits are diffuse and emerge only over the long run (Watson, C.M. and Kincaid 2013). Hence, prudential policies are subject to a ‘collective action’ dynamic (Olsen 1963): those who stand to suffer will be highly motivated to mobilise in opposition to the central bank, while those who stand to benefit will be disorganised and largely unaware of the stakes involved. Whether the adversely affected groups are banks complaining about the imposition of more stringent prudential regulations, or politicians upset at their constituents’ inability to access credit to buy homes or invest in their businesses, the ‘danger’ for central banks is that political pressure will be brought to bear, causing them reputational damage and requiring them to change course.

Crisis management is perhaps the most controversial area of financial stability policy since it involves actions that have direct material consequences for the wealth and property rights of private firms and individuals. Discussed further in the next chapter, central banks have in recent years provided vast loans to troubled financial institutions. Many commentators have accused them

of effectively acting at the behest of the beneficiaries of such interventions (see, for example, Warren et al. 2014; Bair 2012). Central banks' supporters retort that providing liquidity in exchange for collateral does not constitute a bailout, and that such actions are consistent with the statutory objectives of maintaining price stability and financial stability (see, for example, Blinder 2013; Geithner 2014). At issue in such debates are difficult technical judgements regarding the solvency of the firms in receipt of liquidity assistance, the size of any implicit subsidies provided to financial institutions and the motivations of central bankers in coming to their aid.

In these more contested areas, agenda-setting and behind-the-scenes negotiations may be as (or more) important for central banks' ability to determine policy outcomes than the formal structure of their delegated authority. Thus, to understand central banks' *de facto* authority after the crisis, it is also necessary to explore the informal dimensions of their relationships with other actors and how battles over policy play out in practice. This section evaluates the post-crisis evolution of the three central banks' informal relationships with three key sets of interlocutors, namely, financial market participants, legislatures and executive politicians.

4.4.1 RELATIONS WITH FINANCIAL MARKETS

Despite much commentary to the contrary (see, for example, Johnson and Kwak 2009), the Federal Reserve's implementation of its enhanced microprudential mandate in the DFA provides little evidence that it is 'captured' by Wall Street interests. To be sure, lobbying by banks and their political supporters has at

times been fierce. For example, banks fought a sustained campaign against the implementation of the so-called 'Volcker Rule', a ban on banks trading in financial markets purely for their own gain that was named after the former Chairman of the Federal Reserve, Paul Volcker. However, while banks did secure a number of loopholes and exemptions (see Chon 2014a; Chon 2014b), the Volcker Rule may also be viewed as an example of the Federal Reserve's autonomy from financial interests. Many of the Federal Reserve's harshest critics conceded that banks ultimately lost the argument on the merits of restrictions on proprietary trading by banks (Johnson 2013) and that the final Volcker Rule was tougher than they had expected it to be (see for example Neil Barofsky 2014, quoted in Vigna 2014).

Discussed at length in Chapter 6, the Federal Reserve has exhibited a preference for prudential policies focused on the resilience of systemically important firms, rather than countering cyclical fluctuations in credit conditions or asset prices. This approach is by no means a soft option for systemically important banks. The Federal Reserve has implemented a stress-testing regime and a programme of 'Comprehensive Capital Analysis and Reviews' that has greatly strengthened the capitalisation of the largest banks. According to Federal Reserve officials, by 2014 the 18 largest banks had increased their Tier 1 common equity by more than \$500 billion since 2008, more than doubling their buffers of loss absorbing capital (Alvarez 2014). Moreover, the Federal Reserve has been willing to go beyond internationally agreed standards. Its leverage ratio of five per cent for systemically important banks and six per cent for their deposit taking subsidiaries exceeds the Basel III minimum of three per cent. The

Federal Reserve has also taken a more hawkish stance than some other US authorities in negotiations over bank capital regulation at the international level. For example, during the negotiations over the Basel III capital ratio, the Fed advocated a three per cent capital 'surcharge' for systemically important financial institutions. This was higher than the one per cent advocated by other US banking regulators and, indeed, higher than the two-and-a-half per cent that was finally agreed (Bair 2012).

In the past, firms considered 'too-big-to-fail' enjoyed an implicit subsidy because their cost of borrowing reflected the widespread perception that the government would guarantee their debts in the event of their failure (IMF 2014). There is evidence to suggest that this implicit subsidy is now substantially reduced in the United States (GAO 2014), both because of explicit prohibitions in the DFA on future public bailouts and because of the Federal Reserve's ongoing efforts to strengthen resilience and resolvability of systemically important firms. Elliot (2014) estimates that the cumulative impact of new prudential regulations on systemically important firms raises their costs of funding by at least 24 basis points, more than offsetting any residual competitive advantages of being seen as too-big-to-fail. While this may be an overly optimistic view – few regulators have claimed victory in the battle to end 'too-big-to-fail' – this suggests the Federal Reserve's ability to set policies that run counter to the preferences of the largest financial institutions has indeed increased since the financial crisis.

While the Federal Reserve has acted with a much heavier regulatory touch after the financial crisis, perceptions of regulatory capture can be expected to

persist. In 2014, the Federal Reserve faced a wave of criticism that its supervisors were too deferential and insufficiently challenging of the systemically important banks they are responsible for overseeing. The criticism followed the publication of secretly recorded audiotapes of Federal Reserve Bank of New York (FRBNY) officials discussing the supervision of Goldman Sachs (Bernstein, J. 2014) and a report by the Federal Reserve's internal Office of Inspector General criticising the FRBNY's supervision of JP Morgan Chase (OIG 2014). These criticisms prompted the Federal Reserve Board to announce a review of its procedures for reconciling divergent views amongst its supervisors and methods for ensuring supervisors at all levels of seniority receive the information they need. In light of the Federal Reserve's more robust overall regulatory stance, this episode should not be regarded as exemplifying the perpetuation of the sorts of macro-level regulatory capture present prior to the financial crisis (see Baker 2010). Rather, it reflects the inherent challenges that financial supervisors face in striking a balance between acting as both 'doctor' and 'cop' to the financial markets (Davies 1996); that is, supervisors need to be close enough to firms to be able to elicit relevant information on the potential business risks that firms face, whilst also taking an adequately challenging stance to ensure that rule breaches are promptly addressed.

If anything, the relationship between the UK authorities and market participants has been through an even greater transformation. Following the criticism levelled at the FSA for its supervision of failed banks such as Northern Rock and RBS (see FSA 2013), the trust and collegiality between firms and supervisors that was characteristic of the FSA's pre-crisis supervisory approach

has been largely eroded (see McPhilemy 2013). After an internal audit into the supervisory failures surrounding Northern Rock, the FSA in 2008 launched a 'Supervisory Enhancement Programme', which among other things involved hiring more staff, requiring senior management to become more involved in day-to-day supervisory decisions and redirecting resources from its conduct of business operations towards its prudential tasks. In the transition to the PRA, senior supervisors promised a more intensive and judgement-based approach and they abandoned some of the elements of their pre-crisis approach to firms (Bailey 2013). Notably, the practice of rewarding well-run firms with less intensive and more infrequent supervision (a 'regulatory dividend') has been scrapped. One PRA supervisor interviewed for this thesis took the view that prudential supervision had now been highly formalised, with officials careful to ensure that any firm-level decisions are backed-up with a clear and defensible evidence trail (author interview, London, December 12 2014).

Other elements of the pre-crisis supervisory approach have lived on, albeit in modified form. One example is the pre-crisis innovation of 'principles-based regulation' (see Black et al. 2007; Black 2008), whereby firms were required to adhere to the spirit of high-level principles in addition to the letter of detailed rules (see Chapter 6). The concept of principles based regulation has been largely preserved under the new organisational arrangements, albeit renamed as a 'judgement-based approach' (see Bank of England 2014b). This should not be regarded as evidence of a continuing 'light touch', even if before the financial crisis the principles-based regime became intertwined with the light touch approach. In theory, at least, requirements for firms to adhere to high-

level principles provide scope for supervisors to intervene, even where firms are obeying the letter of detailed regulations (author interview, London, 6 September 2014). More generally, principles-based approaches give supervisors a greater degree of discretion to enforce rules in line with their overall 'risk-appetite'. Since the Bank of England has generally adopted a risk-averse stance since the crisis, its judgement-based approach has been a source of strength vis-à-vis markets, rather than weakness.

Like the Federal Reserve, the Bank of England has adopted a much heavier touch in its implementation of new prudential rules, whether for risk-based capital, leverage or liquidity. However, despite this – and the enhancements in its supervisory practices – its authority vis-à-vis financial market participants remains unproven (cf. PCBS 2013). The UK financial services industry, and its regulatory authorities, have been damaged by a series of scandals in the years since the crisis. These included the industrial-scale mis-selling of payment protection insurance, collusion by banks in the setting of the so-called 'LIBOR' interbank interest rate and manipulation of foreign exchange markets. The behaviour that gave rise to these scandals in some instances took place before the creation of the new regulatory architecture and much of the challenge of tackling abusive practices within financial markets lies with the FCA, not the Bank. Nevertheless, as long as scandals such as these continue to emerge, the Bank will face continued criticism for failing to 'rein in' the bankers.

As a prudential supervisor, the ECB lacks the historic linkages with commercial banks that national central banks and supervisory authorities have. This, of course, was part of the rationale for establishing the SSM in the first

place. That is to say, one reason why policymakers chose to create the SSM was as a means of overcoming the tendencies towards regulatory capture, national bias and economic patriotism in European banking supervision, which were amply revealed during the financial crisis (Veron 2013; Clift and Woll 2012). In an attempt to commence its new supervisory responsibilities with a 'clean slate', the ECB in 2013 undertook an unprecedented effort to understand the extent of the risks on banks' balances sheets. This 'Asset Quality Review' (AQR) was part of a wider 'Comprehensive Assessment' that also included a set of stress tests conducted in close cooperation with the European Banking Authority.

Some insiders have expressed scepticism over the extent to which the AQR process was truly able to eliminate national variation and home bias (author interview, London, December 12 2014). National competent authorities, rather than the ECB, were responsible for contracting and training external consultants. The ECB has also been criticised for proposing a relatively benign stress scenario for the stress test component of the Comprehensive Assessment (Steil and Walker 2014). Overall, however, it remains too early to determine how robust the ECB will be in its supervisory approach to the banking sector. A more significant test of the ECB's authority vis-à-vis banks would be the failure of a 'national champion' of a large euro area member state such as BNP Paribas of France or Deutsche Bank of Germany. Were such a bank to fail, the ECB could find itself under strong pressure from executive politicians of the bank's home country to find an alternative to resolution.

4.4.2 RELATIONS WITH LEGISLATURES

In the United States, Congressional debates concerning the Federal Reserve have become more polarised and partisan since the financial crisis (see Kaiser 2013; Blinder 2013). This is reflected in the increasingly fractious confirmation hearings for nominees for the Board of Governors. While historically Federal Reserve Chairmen have been confirmed with near unanimity in the Senate, the most recent two confirmations (Ben Bernanke in 2010 and Janet Yellen in 2014) featured sizeable opposition minorities. The heightened politicisation of the Federal Reserve in Congress is also reflected in an ever-increasing number of legislative initiatives mentioning the Fed (see L. Goodhart 2014). A longstanding Republican-led initiative to ‘audit the Fed’ by increasing the oversight of the Government Accountability Office over its operations was, at the time of writing, close to being passed in both houses of Congress (see Paul 2009).

It is difficult to identify specific instances of Congressional influence over Federal Reserve policies. Congress is by no means the only source of political pressure acting on the Federal Reserve. Moreover, as mentioned above, Fed’s multi-objective mandate means that many different policies can appear compatible with its objectives. Added to this fungibility of policy objectives is the absence of an explicit statutory financial stability objective (although the Federal Reserve, like most central banks, has a *de facto* financial stability objective arising from its role as lender of last resort). In general terms, Congress is a poor check on the Federal Reserve’s authority because the relevant committees lack both the expertise and the incentives to challenge meaningfully the substance and complex detail of its work (Wooley 1984; Cheryl

Schonhardt-Bailey 2013). Members of Congress tend to ‘sound tough’ in hearings. However, as one former FRB governor interviewed for this thesis observed, the standard of questioning is often poor and members of Congress prefer grandstanding for the media to engaging in well-informed debate (author interview, Washington DC, July 17 2014).

On the other hand, Congressional debates over Federal Reserve do help define the broad parameters of what is politically feasible for the Federal Reserve to pursue. As mentioned, the Federal Reserve’s initial implementation of its enhanced mandate in the prudential domain has been skewed to ensuring the resilience and resolvability of systemically important financial institutions, rather than the more statist objective of controlling credit growth and asset prices through the use of discretionary countercyclical policies (see Chapter 6). This preference for resilience-focused policies is at least partly attributable to a form of self-censorship of Federal Reserve policymakers, whose policy choices are inevitably conditioned by the public opinions and popular sentiments expressed within Congress and beyond. Commenting on the historic use of countercyclical policies in the in the United States in the 1940s and 1950s, one senior Federal Reserve official interviewed for this thesis remarked ‘I shudder to think what the equivalent political reaction would be today’ (author interview, Washington DC, 11th July 2014).

In the United Kingdom, the Treasury Select Committee (TSC) provides a high profile forum for the Governor of the Bank of England to account for the Bank’s actions. As in the United States, it is not uncommon for appearances of the Governor and Deputy Governors to feature on the nightly news. Questions to

the governor tend to be less aggressive than the questioning faced by the Federal Reserve Chairman, although also more penetrating (author interview, Washington DC, 17th July 2014). For most of the post crisis period, relations between the TSC and the Bank were frosty. In 2011 and 2012, the TSC called repeatedly for the Bank of England to adopt enhanced oversight procedures, in particular by replacing its Court of Directors with a new 'supervisory board' to be composed of non-executive directors with power to review both procedural aspects of the Bank's operations and its decisions in respect of monetary policy and financial stability (TSC 2011a). Under the Governorship of Mervyn King, the Bank rebuffed these calls, opting instead to create a less powerful 'Oversight Committee' as a sub-committee of the Court of Directors. Under the governorship of Mark Carney, relations between the Bank and the TSC improved. To the gratification of the TSC, the Bank announced in 2014 that it would enhance the transparency arrangements around its monetary policy deliberations and make further governance reforms (Bank of England 2014c). As the Chair of the TSC, Andrew Tyrie, has stated, these reforms mean that the Court of Directors will become a supervisory board 'in all but name' (quoted in Giles 2014).

Relative to the US Congress, and to a lesser extent the UK Parliament, the European Parliament has little ability to constrain the scope of action of the ECB. While the power of the European Parliament to initiate and formulate policy has been enhanced in recent years, it lacks the visibility and direct linkages to electorates that national legislatures enjoy. Appearances of the ECB President before the Economic and Monetary Affairs (ECON) Committee of the

European Parliament rarely attract media attention. This is partly attributable to the ECB President, who tends not to impart any new information in his prepared statements. The low profile of these events diminishes the MEP's ability to stimulate public debate of the ECB's operations. By extension, it inhibits the extent to which MEPs can place meaningful constraint on the ECB's scope for action.

The ability of the European Parliament to hold the ECB to account is made more difficult by the ECB's relatively restrictive communication policies. The ECB does not publish the minutes or the voting records of the meetings of its Governing Council. This can make it difficult for MEPs to ask pertinent or probing questions relating to the ECB's core monetary policy tasks (Amttenbrink and Van Duin 2009; Claeys et al. 2014). The same is true of the ECB President's appearances before the European Parliament as Chair of the ESRB. The ESRB does not publish a prioritised assessment of financial stability risks, which makes it more challenging for MEPs to effectively challenge its analysis (McPhilemy and Roche 2013). This is not to say that greater transparency would necessarily be sufficient to improve the quality of questioning. As in the US Congress, the incentives for Members of the European Parliament to engage in the technical detail of monetary or financial stability policies are few. Conversely, there is a relatively high risk that a misjudged effort to engage in matters of substance would reveal an embarrassing lack of knowledge.

4.4.3 RELATIONS WITH EXECUTIVES

In the United States, the relationship between Federal Reserve and executive politicians has been extremely close during the post-crisis period (author interview, Washington DC July 16 2015). Ever since the onset of the financial crisis in 2007, there has been minimal observable conflict between the Administration and the Federal Reserve. Fed and Treasury officials worked hand-in-glove in the design of the TARP bailouts of Wall Street firms and in the Federal Reserve's provision of emergency liquidity assistance. Tim Geithner, who served as Treasury Secretary from 2009 to 2013 has remarked of his relationship with Ben Bernanke, 'I doubt there has ever been a closer relationship between a Treasury Secretary and a Fed Chairman' (Geithner 2014). The Administration supported the Federal Reserve's ultra-accommodative monetary policies (quantitative easing). In return, the Federal Reserve Chairman has at times appeared to support the administration's fiscal policies (see Bernanke 2009).

This unity between the administration and the Fed over monetary policy has caused some to question the Federal Reserve's independence (Meltzer 2013). Yet the real test of Federal Reserve's post-crisis independence has yet to take place. Exiting from quantitative easing and eventually raising interest rates could unsettle the unity between the Federal Reserve and the Administration. The political constituencies in favour of a dovish stance over monetary policy are large. This includes homeowners and small and medium sized enterprises, which have benefited in recent years from lower interest rates on their mortgages and other debts. It also includes higher income groups and financial

market actors, which have benefited from the upward pressure on asset prices. Likewise, the Federal Reserve's relatively hawkish stance in financial stability policies may ultimately generate tensions with the administration which can be expected to be more sensitive to industry lobbying and calls to facilitate the flow of credit from the banking system to the real economy.

In the United Kingdom, the relationship between the Bank of England and the executive has also been close, albeit from a poor starting point. In 2007 differences between the Governor of the Bank, Mervyn King, and the Chancellor of the Exchequer, Alistair Darling, emerged over how the failure of the mortgage lender Northern Rock should be handled. The row escalated to the point where the Chancellor consulted Treasury staff over the possibility of overruling the Bank. He was advised that while it would be legally possible, using a general power of direction contained in the *Bank of England Act 1946*, such a move would send a negative signal to the markets at an already precarious moment (TSC 2011a: Chapter 6). As the Chancellor later reflected, 'the Bank was independent and the Governor knew it... The fact that we had given the Bank independence had a downside as well as an upside' (Darling 2011: 23). Relations between the Bank and the Treasury were also damaged in 2010 when Governor King appeared overstep his mandate by offering tacit support to the fiscal policy proposals of the opposition Conservative Party.

Following the election of the Conservative government, and the appointment of Mark Carney as Mervyn King's successor, relations between the government and the Bank of England have improved. This is not to say that tensions between the Bank and the Government have been entirely absent. One area of

conflict arose over the Treasury's announcement in 2013 that it would be expanding its so-called 'Help-To-Buy' scheme. Launched during a period of double-digit house price inflation in much of the South East of the country, this policy involved guaranteeing a proportion of new mortgages on residential properties to help new buyers into the market. It coincided with deliberations in the FPC over options to dampen the housing market. While any hint of conflict between the Treasury and the Bank was played down, the government's policy clearly restricted the range of macroprudential tools the Bank of England could contemplate employing. It would be acutely embarrassing for the Bank to impose loan-to-value limits on mortgages at a time when the government was explicitly helping people with smaller deposits to buy houses (Fleming 2014).

A further area of conflict between the Bank of England and the Government has been the Bank's approach to its microprudential supervisory responsibilities (discussed further in Chapter 6). The Bank has taken a stringent line on bank capital adequacy regulations after the financial crisis, drawing the ire of many in government who feel that such policies have acted to constrain bank lending to the real economy and thus held back economic growth. These concerns were shot into the open in mid-2013, when the Liberal Democrat business minister, Vince Cable, lambasted the Bank as behaving like a 'capital Taliban'. There is, however, little indication that the Bank of England has responded with a lighter regulatory touch. On the contrary, its approach to banking supervision has been consistently more exacting for banks than the equivalent supervisory processes in the euro area. This was exemplified by the severity of the stress scenario it employed for its stress tests in 2014 (Bank of England 2014d). Notwithstanding

these skirmishes, the most significant post-crisis test of Bank of England's authority vis-à-vis the executive authorities remains prospective. The Bank of England has maintained 'Bank Rate', as the UK policy interest rate is known, at 0.5% since March 2009. As in the United States, raising interest rates is likely to pitch the central bank against the government of the day, which could suffer electorally from a slowdown in output and the wealth effects on homeowners whose mortgage interest payments will rise.

In contrast to the Federal Reserve and the Bank of England, the ECB's authority vis-à-vis executive politicians has been on show for all the world to see. Of the three central banks considered in this thesis, the relationship between ECB and executive politicians is the most complex for the simple reason that the ECB conducts monetary policy (and now prudential policy) for 18 different countries. To some extent, the ECB's authority vis-à-vis heads of government is supported by its ability to play divergent national preferences against one another. While support for structural reform and fiscal austerity in Southern European debtor countries has attracted the support of Northern European political leaders, its various bond buying programmes – a lifeline for Southern European countries – have been deeply unpopular in Northern countries, above all in Germany.

Beginning in 2010, the ECB embarked upon a series of highly controversial actions in which it linked support for embattled sovereigns and their respective banking sectors to explicit economic and fiscal conditions, including major reductions in public spending, tax increases and numerous 'neo-liberal' structural reforms such as labour market reform and large-scale privatisations.

For example, in 2010, the ECB Governing Council refused to allow the Central Bank of Ireland to continue providing Emergency Liquidity Assistance to Irish banks, unless the Irish government requested an international bailout from the IMF, the European Commission and the ECB (the 'Troika') and announced a package of reforms including 'fiscal consolidation, structural reform and financial sector restructuring' (ECB 2010).

In perhaps the most overt and dramatic display of its authority to date, the ECB President, Jean Claude Trichet, wrote to the prime ministers of Spain and Italy in the summer of 2011, setting out demands for those countries to adopt extensive fiscal and structural reforms. At the time, these countries were facing spiralling costs of borrowing in international bond markets. The implication was that the ECB would reward those countries by intervening in the markets for their sovereign debt if they complied with its conditions. Leaked to the Italian press, the letter to Italian Prime Minister Silvio Berlusconi demanded a comprehensive package of reforms including 'full liberalisation of public services', 'large scale privatisations' and 'a thorough review of hiring and dismissal practices' (*Corriere Della Sera* 2011). It also called for a frontloaded austerity drive, backed up with constitutional change to tighten fiscal rules. When both countries agreed to the terms, the ECB duly bought their government bonds and their costs of borrowing declined. When Italy later reneged on its commitments, the ECB diminished its purchases of Italian debt, causing Italian bond yields to rise (Irwin 2013: 322). Ultimately, a spike in Italian bond yields in November 2011 precipitated Prime Minister Berlusconi's resignation and his replacement by Mario Monti, a consummate EU insider.

Caught between debtor and creditor countries, the ECB's relations with the German government have also been severely strained in recent years. Chancellor Angela Merkel has clashed with the ECB on several occasions, from her public criticism of the ECB's purchases of covered bonds in 2009 (Atkins 2009) to a major struggle over the extent of private sector involvement in the restructuring of Greek debt (Spiegel et al. 2011). Merkel supported the ECB purchases of peripheral European countries' debt in 2011 and 2012, even as the Bundesbank President, Axel Weber, and Germany's most senior ECB official, Jürgen Stark, resigned in protest. More recently, relations with the German Chancellery have again deteriorated. Initially credited with working collaboratively with Merkel (Spiegel 2014), the current ECB President, Mario Draghi, alienated the German Chancellor when he called for more fiscal stimulus in Germany (Barkin et al. 2014). The ECB's announcement of full-scale quantitative easing in 2015 further strained relations with its most powerful backer.

TABLE 5: DE FACTO AUTHORITY COMPARED

	United States	United Kingdom	EU
<i>Legislatures</i>	<ul style="list-style-type: none"> • Partisan Congress defines parameters of acceptable regulatory policy. 	<ul style="list-style-type: none"> • Parliament poses some constraint on Bank of England, but no legislative threat. 	<ul style="list-style-type: none"> • European Parliament largely ineffective at holding ECB to account.
<i>Executive politicians</i>	<ul style="list-style-type: none"> • Few public differences since 2008. • Major test of relationship yet to come. 	<ul style="list-style-type: none"> • Public demonstration of independence in 2007, but government legislated to restrict it. • Occasional public disagreements. • Major test of relationship yet to come. 	<ul style="list-style-type: none"> • ECB authority clear and visible vis-à-vis Southern and Northern European countries alike. • Difficult ECB-Germany relations limit scope for unconventional monetary policy.
<i>Market actors</i>	<ul style="list-style-type: none"> • Fed criticised for supervisory failings. ‘Tough’ prudential policy implementation. 	<ul style="list-style-type: none"> • Supervisory enhancements following Northern Rock/RBS failures. ‘Tough’ prudential policy implementation. 	<ul style="list-style-type: none"> • SSM supervision designed to overcome national bias, regulatory capture, and financial repression.

4.5 CONCLUSION

This chapter has evaluated authority of the Federal Reserve, the Bank of England and the European Central Bank. It has demonstrated that all three central banks have been delegated new formal authority. Of the three organisations, the reformed mandate of the Bank of England is by far the broadest. In addition to its monetary policy functions, the Bank has operational control over all aspects of financial stability policy including microprudential policy, macroprudential policy and crisis management. In contrast, neither the Federal Reserve nor the ECB has been assigned responsibility for conducting

bank resolutions, although both will be responsible for determining when a bank has reached the point of failure. Furthermore, the formal authority of the Fed and the ECB in macroprudential policy is not as encompassing as that of the Bank of England, although in this domain the ECB has a somewhat greater role than the Federal Reserve.

In formal terms, the ECB remains the most autonomous of the three central banks after the financial crisis. This derives, first and foremost, from the explicit provisions setting out its independence in the TEU and similar safeguards contained in the legislation establishing the SSM and the ESRB. By contrast, the Bank of England stands out as the central bank with the least formal autonomy. The Treasury retains strong control over the appointments process and new legislation provides new mechanisms by which the government can intervene in the Bank's operations. The combination of a broad financial stability mandate and relatively little formal autonomy suggests that the Bank of England could be the most vulnerable to political intrusion in its operations in years to come.

Finally the chapter considered how central banks' informal relationships with key interlocutors had changed after the financial crisis. Both the Federal Reserve and the Bank of England have adopted a stringent approach in their implementation of prudential policies after the crisis. The ECB-SSM is a new institution, but there are grounds to believe it will adopt a similarly robust stance in its new supervisory functions. In all three cases, legislatures remain relatively powerless to constrain the activity of their central banks, although the increased level of partisanship in the US Congress suggests it exerts a greater overall influence than its UK and EU counterparts.

Where the three central banks show greater differentiation is in their relationships with executive politicians. The ECB has already proved its mettle. It has openly intervened in the fiscal and macroeconomic affairs of member states and it has been unafraid to wage open battle with the EU's most powerful member state, Germany. The Bank of England has been involved in some skirmishes with the government, partly on account of clashes between the previous Governor, Mervyn King, and the Labour Chancellor, Alastair Darling, and partly on account of the Bank's conservative stance in microprudential and macroprudential policy. Overall, however, both the Bank of England and the Federal Reserve currently enjoy good relations with their respective treasury departments. Only as they begin to exit from their extraordinarily accommodative monetary policy stance will these central banks' authority vis-à-vis executive politicians be truly tested.

¹ The DFA also enhanced the role of the Federal Reserve in relation to systemically important payment, clearing and settlement systems. This includes financial market utilities, and the payment, clearing and settlement activities of large banks and non-bank institutions.

² Bear Stearns and Merrill Lynch merged with banks already supervised by the Federal Reserve. Goldman Sachs and Morgan Stanley converted into bank holding companies.

³ The FCA also carries out prudential supervision of firms not authorised by the PRA. This includes smaller investment firms, such as personal investment companies, mortgage intermediaries and non-deposit taking lenders.

⁴ A 'non-objection' procedure is designed to ensure that the Supervisory Board will be the *de facto* decision-maker on most issues.

⁵ The voting members include the Secretary of the Treasury, the Chairman of Federal Reserve; the Comptroller of the Currency; the Director of the Bureau of Consumer Financial Protection; the Chairman of the Securities and Exchange Commission; the Chairman of the Federal Deposit Insurance Corporation; the Chairman of the Commodity Futures Trading Commission; the Director of the Federal Housing Finance Agency; the Chairman of the National Credit Union Administration Board; and a Presidentially-appointed independent member with insurance expertise. Non-voting members include the Director of the Office for Financial Research, the Director of the Federal Insurance Office and representatives from state-level banking, insurance and securities regulators.

⁶ The reforms that created the ESFS were the first major institutional overhaul of financial regulation and supervision introduced in response to the financial crisis. In addition to the ESRB, the ESFS is composed of three 'European Supervisory Authorities' (ESAs), which provide a venue for intergovernmental regulation and supervisory cooperation in the banking, securities, insurance and pensions sectors.

⁷ In the monetary policy domain, all three central banks enjoy ‘instrument’ independence in the sense that their policy decisions do not need to be approved by executive politicians.

⁸ This is often referred to as the ‘dual mandate’ with price stability and moderate long-term interest rates considered as essentially the same.

⁹ As many authors have argued, even during the time of the gold standard, monetary policy rules were honoured more in their breach than in their observation (see Eichengreen 2008, Hall, R. 2008, Knafo 2013).

¹⁰ It should be noted, however, where competent authorities creatively interpret European rules for reasons of economic nationalism, they may provoke a response from the one or more of the ESAs, which can issue guidance to ensure uniform standards are applied across the EU.

5 MECHANISMS OF CHANGE IN CENTRAL BANKING

5.1 INTRODUCTION

In the aftermath of the financial crisis, American, British and European Union (EU) policymakers delegated new formal authority to their central banks. The Federal Reserve, the Bank of England and the European Central Bank (ECB) find themselves with expanded mandates and a high level of formal autonomy, even if the new policy areas they have entered into threaten to expose them to greater politicisation and scrutiny. Although there are some variations between them, each has been implementing prudential policies that are substantially more costly for the large systemically important financial institutions they are responsible for overseeing. Moreover, none of them has refrained from intervening in policy debates that lie beyond their immediate monetary policy and financial stability mandates. The ECB, in particular, has demonstrated a high degree of authority in its relations with national executive politicians. It has pursued monetary policies that have met with significant opposition in Germany. At the same time, it has taken the unprecedented step of making its interventions in euro area sovereign bond markets explicitly conditional on fiscal austerity and neoliberal structural reforms.

This chapter sets out to explain how these changes came to pass. Commentators on financial regulation often insist that there exists a 'regulatory cycle' (Braithwaite 2008; see also Bernstein, M. 1955). In the aftermath of a scandal or crisis, a spasm of public anger and the feeling that 'something ought to be done about it' compels politicians to react (Clarke 2000: 25). They impose

new regulations, which in retrospect appear excessively stringent (Green 2012; Persaud 2015). Over time, regulations are gradually loosened, until some other scandal or crisis starts the cycle over again. This view suggests that a tightening of prudential regulation and an enhanced focus on systemic financial risks were only to be expected after the financial crisis. However, there was nothing inevitable about the particular organisational arrangements that have emerged over the last eight years. Having failed to identify financial stability risks prior to the financial crisis, still less to take action to mitigate them, it is puzzling that central banks should have emerged as the main beneficiaries of the post-crisis reorganisation of financial services regulation in each of the three jurisdictions under discussion.

The first part of this chapter argues that the proximate cause of these transformations was the policy advocacy of central bankers themselves (cf. Baker 2013a; Mackintosh 2014; De Rynck 2015; Epstein and Rhodes 2016). Central bankers played a key role in diagnosing the inadequacies of existing financial regulations and supervisory frameworks. They also promoted themselves as the only organisations with the expertise, specialist knowledge and political independence necessary to implement new and improved policies for financial stability. The advocacy of central bankers resembled that of an 'epistemic community' (Haas 1992). Working within and through transgovernmental regulatory forums centred on the Bank for International Settlements (BIS), central bankers were guided by a broadly cohesive set of normative beliefs about the role that central banks should play in prudential regulation and supervision. At the same time, central bankers and financial

experts promoted and popularised new macroprudential ideas without entirely repudiating orthodox 'efficient markets' assumptions or regulatory tropes. The precise mix of 'new' and 'old' thinking has differed in each jurisdiction and is reflected in the different policy objectives and styles of implementation that each central bank is choosing to pursue (see Chapter 6).

As the previous chapter documented, the institutional arrangements in the United States exhibited much more continuity than in the other two jurisdictions. The Federal Reserve was empowered to carry out the lion's share of day-to-day systemic risk regulation, but it was not entrusted with the task of identifying or mitigating systemic risks. Nor was the fragmented regulatory architecture in the United States reformed. The transformation of the formal authority of both the Bank of England and the ECB has been more dramatic. The United Kingdom undertook a wholesale reorganisation of the architecture of financial supervision, scrapping the Financial Services Authority (FSA) just 15 years after its creation. In the EU, the creation of the Banking Union represents a giant leap towards integrated financial services governance and has even been described as a greater pooling of sovereignty than the creation of the euro (Buti 2013; Bowles 2013). To explain these divergent outcomes, this chapter draws upon the agent-centred historical institutionalist analytical framework discussed in Chapter 2. Central bankers did not write their new ideas onto a *tabula rasa*. Central bankers' policy entrepreneurship played out within existing institutional terrains and existing stratifications of interests in favour of, and against, reform. These local constraints are the primary explanatory factor for the differentiated outcomes in each case.

Existing cultural, political and institutional contexts help explain variations in post-crisis delegation to central banks. However, domestic variables do not explain why market participants and some executive politicians have been so acquiescent to central banks' demands and policy preferences in contests over prudential regulation or wider macroeconomic policies. To explain this acquiescence, the second part of this chapter turns to a more indirect and oblique face of central bank power. It argues that central banks' authority in their relations with market participants and governmental actors has been underpinned by the heightened dependency of those actors on the core functions central banks perform. Most importantly, central banks are endowed with the unique capability of creating and destroying new 'base money' (cash and bank reserves). This is the basis of central banks 'structural power'; it gives central banks leverage over market participants and incumbent politicians because both sets of actors' fortunes hinge on how central banks choose to exercise this unique capability.

The chapter argues that the structural power of central banks reached new heights during the financial crisis. Transformations in the nature of credit intermediation in Europe and the United States in the three decades leading up to the financial crisis created the illusion that financial markets and institutions had broken free of their traditional dependence on central bank support in the form of liquidity insurance. In fact, indirect and implicit dependence on central bank liquidity had *increased*. This became apparent during the financial crisis, when central banks extended vast loans to banks and 'shadow bank' entities that had previously been regarded as outside the purview of public safety nets.

Central banks transformed themselves into ‘lender of only resort’ for cash-starved financial institutions (Giles 2008). They also became ‘market maker of last resort’, buying and selling private sector securities that private investors had shunned (Buitert and Sibert 2007). In this environment, the structural power of the financial industry was diminished (cf. Johal et al. 2014; see also Chapter 2). The threat that financial firms would ‘exit’ jurisdictions imposing unfavourable policies lacked credibility and the generalised bias towards financial industry preferences in policymaking circles was reduced.

Executive politicians also became more dependent on central banks during the financial crisis. Unwilling or unable to use fiscal policy as a means of countercyclical adjustment, monetary policy became ‘the only game in town’ when it came to stimulating the demand for goods and services (Bini Smaghi 2014; Buitert 2014). The nature of the dependence of politicians on their central banks has, however, differed between the three jurisdictions. While governments in all three jurisdictions have relied on their central banks to provide monetary stimulus to their respective economies, in the euro area some governments came to depend on the ECB to help restore market confidence in their sovereign credit; this placed the ECB at an unusual structural advantage and explains why it has been able to exercise such a high level of influence over economic policies in those countries.

The remainder of this chapter proceeds as follows. The next section examines the role that central bankers have played as policy entrepreneurs in transgovernmental networks, exploring some of the ideational contradictions apparent in the so-called macroprudential turn in financial regulation. Next it

discusses the policy entrepreneurship of central banks in the three specific jurisdictions considered in this thesis. Section 5.4 explores the structural dimension of central bank power. It attributes the unusual degree of acquiescence of market participants and governments to central banks' preferences to the changed dependencies of those actors on central bank liquidity before and during the financial crisis. The final section concludes.

5.2 A TRANSGOVERNMENTAL EPISTEMIC COMMUNITY

The international central banking community is highly networked even in benign economic times. Central bank governors meet several times a year as part of the G7 and G20 groupings of leading finance ministries and central banks (see Baker 2006). In addition, central bank governors meet every two months in Switzerland at the BIS, the 'central bankers' central bank'. International cooperation between central banks in specific issue areas is organised through several BIS-hosted organisations. The most important of these organisations are the Basel Committee on Banking Supervision (BCBS) and the Financial Stability Board (FSB) (which was known as the Financial Stability Forum before 2009).

From the latter half of 2007, international cooperation between central banks stepped up even further. As Mackintosh (2014) has argued, an elite, close-knit, group of central bankers and some non-central bank financial supervisors from a small number of Western economies acted as an 'epistemic community' (Haas 1992) in providing political leaders of the G20 countries with diagnoses of the regulatory failings that had contributed to the financial crisis and prescriptions for remedial institutional and regulatory reforms. At the

international level, one of the early achievements of this epistemic community was to persuade G20 political leaders to transform the Financial Stability Forum – a somewhat neglected transgovernmental network of central bank governors that had been created in 1999 – into the FSB, with a mandate to identify risks, find solutions and promote national compliance with international financial standards. One of the principal architects of this reform was Tim Geithner, the President of the Federal Reserve Bank of New York (FRBNY) who became US Treasury Secretary in 2009. Geithner (2009a) billed the FSB as a ‘fourth pillar’ of the global financial architecture, alongside the International Monetary Fund (IMF), the World Bank and the World Trade Organisation. The FSB in fact has few formal powers beyond those of its predecessor organisation (Helleiner 2014). Still, its creation represented an early triumph for the central banking community as it cemented the position of central banks as the leading actors in designing international rules and standards for financial stability. Notably, some commentators viewed the creation of the FSB as a defeat for the International Monetary Fund (IMF), which might have been expected to take the lead in global financial governance after the financial crisis (author interview, June 11 2014, by phone).

The elite central banking community very publicly embraced the call for new macro-prudential approaches to financial stability. Building on Peter Hall’s much cited research on policy paradigms (Hall, P. 1993), Andrew Baker (2013a: 17) characterised this embrace as an example of ‘third order’ policy change; that is, ‘a radical change in the overarching terms of policy discourse, in the hierarchy of goals behind policy and in causal assumptions or accounts of how the world

facing policymakers actually works'. Prior to the crisis, efficient markets thinking had informed common sense assumptions and economic rationales underpinning regulatory policies. Markets were assumed to clear, asset prices were assumed to be objective reflections of all available information and financial innovation was assumed to disperse risk to those who were best able to bear it (cf. Turner 2009a, 2011).

Baker identifies four key concepts at the heart of what he regards as a dominant new 'interpretative frame' in the elite central banking community: these are 'fallacies of composition', 'pro-cyclicality', 'herding', and 'complex interconnectedness'. Each of these concepts implies a reorientation of financial regulation and supervision. Recognition that markets are characterised by fallacies of composition suggests the need to refocus regulation away from the behaviour of individual firms towards the risks emerging from the behaviour of collectivities. Recognition that markets are subject to pro-cyclical dynamics suggests the need for time-varying policies to 'lean against' the build-up of risks over a financial cycle. Recognition that investors are prone to herding suggests that firms should become more resilient to periods of exceptional market stress, when normally liquid markets suddenly dry up. Finally, recognition of complexity and interconnectedness suggests that in addition to dynamic countercyclical policies, time-invariant structural reforms are needed to address the distribution of risk within the financial system. The aim of such policies is to ensure that financial losses in one firm or market segment do not propagate throughout the global financial system as a whole (see Chapter 6).

Baker (2013a) and Baker and Widmaier (2014) view macroprudential ideas as a repudiation of the old 'efficient markets' interpretive frame (see also Tucker 2011). Similarly, Mackintosh (2014: 27) views the transformation in central bankers' ideas as nothing less than a 'paradigm shift in the global regulatory approach to financial markets'. However, there is considerable continuity between the pre- and post-crisis dominant intellectual frameworks guiding financial regulation. New macroprudential ideas have not entirely displaced the old orthodoxy. Instead, new ideas have come to rest alongside existing assumptions and accounts of how markets operate. Arguably, the notion of 'ideational layering' is a more accurate description of the intellectual transformation that has occurred than 'paradigm shifts' or 'third order' policy change. To paraphrase Carstensen (2011) central bankers and associated financial policymakers have been more like 'bricoleurs' than 'paradigm men'. That is to say, they have pragmatically and creatively combined old ideas with new ones in a manner that respects political and cultural logics, rather than logical coherence.

Incoherency and bricolage is clearly evident in one of the most important areas of post-crisis reregulation, namely, bank capital adequacy requirements. In 2010, the BCBS agreed a new iteration of its international framework for bank capital regulation. 'Basel III', as the agreement is known, contains an ostensibly countercyclical macroprudential instrument in the form of the 'countercyclical capital buffer' (CCB). Despite its name, the CCB is based on orthodox economic analysis and an essentially microprudential logic of strengthening banks' resilience, rather than 'leaning against' the build up of

risks before they crystallise. The BCBS guidance on the CCB makes clear that the CCB is intended to ensure that banks build up an additional cushion of loss absorbing capital during periods of credit growth so that the banking system as a whole will have sufficient capital on hand to withstand a subsequent period of financial stress, without banks' solvency being questioned. The CCB is explicitly not intended as a means of dampening the growth of credit during boom periods, still less as a means of stabilising asset prices. That its use could play a role in curbing the credit cycle is to be considered a fortuitous side benefit only (BCBS 2010).

The reluctance to justify the CCB as anything other than a means of boosting banks' resilience in the face of financial cycles is attributable to the enduring resonance of rational expectations finance theory within the transgovernmental community of central bankers and associated financial policymakers involved in crafting post-crisis capital regulations. Many members of this elite central banking community, as well as some highly influential academic economists, base their thinking on bank capital regulation on applications of the 1958 Modigliani-Miller (MM) theorem to the banking sector (Miles et al. 2011, Admati et al. 2011, Admati and Hellwig 2013, Tucker 2013). The MM theorem states that *ceteris paribus*, the particular mix of debt and equity in a firm's funding structure is irrelevant for its overall funding costs. This is because investors will 'reward' better capitalised firms by charging less to lend to them (see Modigliani and Miller 1958). Applied to banks, the MM theorem suggests that requiring a bank to have more capital will not affect its overall cost of funding, nor, in turn, its propensity to lend. Significantly, the Modigliani-Miller

theorem augurs against using capital requirements as a means of leaning against credit cycles since it suggests that varying capital will not – of itself – vary the cost of funding for banks or affect their propensity to lend (see also Miles et al. 2011).¹ At the same time, because the MM theorem views capital as inherently costless for a bank, it also justifies requiring banks to have significantly more capital at all times as a buffer against losses. Thus, adherence to the MM view plays into re-regulatory anti-bank sentiment of the post-crisis era, in which there is broad political and public support for imposing tougher prudential standards on individual firms.

As a central plank of the old efficient markets orthodoxy, the Modigliani-Miller starts from the basic assumption that the aggregation of individually rational decisions will lead to collectively rational outcomes: markets will recognise how much safer a better capitalised bank has become and reward it with just the right offset in the form of lower borrowing costs. Such an assumption is clearly at odds with the thrust of much macro-prudential thinking, in which investors are viewed as perpetually myopic and prone to herding (Persaud 2000, Gennaioli et al. 2012), and markets as a whole pass through gyrations of excessive credit expansion and periodic crises (Minsky 1986, Kindleberger 2011[1978]). Recognising that the macroprudential ideational shift has in fact involved a splicing together of elements of old and new thinking about the operation of markets is important for understanding the differential policy directions that each central bank has taken in the financial stability arena after the crisis (see Chapter 6). Suffice it here to say that the embrace of new ideas has differed across the three cases. This differential

embrace has also been reflected in the actions of central bankers as policy entrepreneurs in their respective domestic jurisdictions, to which we now turn.

5.3 CENTRAL BANKS AS DOMESTIC POLICY ENTREPRENEURS

5.3.1 REFORMING US FINANCIAL REGULATION

The strengthening of the Federal Reserve's delegated authority after the financial crisis is mainly attributable to the actions and preferences of senior officials in the US administration and representatives of the Federal Reserve. When the Obama Administration took office in 2009, it quickly began working on a white paper that would provide a blueprint for the regulatory overhaul. The key figure responsible for the reforms was Treasury Secretary Geithner. Geithner would ensure that Federal Reserve officials played a central role in drafting the reforms, inviting a number of his former colleagues from the Fed to the Treasury to work on the proposals. This included Patrick Parkinson, a senior Federal Reserve economist who would go on to become the head of the Fed's Division for Banking Supervision and Regulation later in 2009. Another influential figure in the administration was Larry Summers, Chairman of the Council of Economic Advisors. It was public knowledge that Summers harboured ambitions of succeeding Ben Bernanke as Chairman of the Federal Reserve and, indeed, he narrowly failed to do so when Bernanke stepped down in 2014.

Many Congressional lawmakers were instinctively opposed to delegating more authority to the Federal Reserve. As discussed in Chapter 3, the United States has a long tradition of populist antipathy towards central banks (see also Lavelle 2013). In early 2009, distrust of the Federal Reserve had spread beyond

the libertarian wing of the Republican Party to include moderate Republicans and many Democrats. Congressman Barney Frank, Chair of the House Financial Services Committee and a key ally of the Administration in Congress, initially supported making the central bank the systemic risk regulator (Guha and Van Duyn 2009) but he changed his mind in March 2009 following revelations that Fed officials had known about, but declined to prevent, the payment of bonuses to executives at the bailed-out insurance giant AIG (Kaiser 2013). Lawmakers' opposition reflected public opinion at the time: one poll conducted in June 2009 placed the Fed last in a list of nine government departments and agencies in terms of levels of public approval (Saad 2009).

Officials from other regulatory authorities joined Dodd, Frank and other Congressional figures in their opposition to an expanded role for the Fed. Prominent among this group was the Chair of the Federal Deposit Insurance Corporation (FDIC), Sheila Bair. Under Bair's leadership, the FDIC had guaranteed vast quantities of bank debt as part of the package of measures introduced alongside the Bush Administration's \$700 billion Troubled Asset Relief Programme (TARP). Even so, she was a vociferous critic of 'bailouts', including both government capital injections and the Federal Reserve's emergency lending schemes. Bair opposed greater delegation to the Fed on the grounds that it had already overstepped its mandate and had not been held to account for what she saw as overly generous treatment of failing banks (Bair 2012). She was also vigorous in defending the FDIC's bureaucratic prerogatives, especially its potential role in new mechanisms for resolving systemically important financial institutions.

Notwithstanding the Fed's manifold opponents, the administration's subsequent white paper, released in June 2009, was highly favourable to the central bank (see US Department of the Treasury 2009). It proposed to establish the Federal Reserve as the supervisor of a new category of systemically important financial holding companies (which it termed 'Tier 1 FHCs') and it would be down to the central bank to decide which firms classified as such. The Fed would then have the authority to subject these firms to higher capital and liquidity requirements, commensurate with the systemic risks they posed. As a concession to the Federal Reserve's opponents (especially Bair), the white paper also proposed to establish a Financial Services Oversight Council (FSOC)² to help existing agencies to work together on systemic issues. However, the white paper envisaged the FSOC would have a limited mandate: it would serve advisory and coordinative functions only, with no powers to compel compliance with its advice.

During the yearlong legislative battle that took place in Congress following the publication of the white paper, the Federal Reserve and its allies in the administration fought a concerted battle to protect and potentially strengthen the central bank's formal authority in respect of financial stability. In speeches and official testimony, Federal Reserve officials strenuously defended their expertise and they emphasised the complementarities between financial stability policy and monetary policy. For example, Daniel Tarullo, the Board of Governors member with responsibility for supervisory issues, told a hearing of the Senate Banking Committee in 2009:

There are some important synergies between systemic risk regulation and monetary policy, as insights garnered from each of those functions informs the performance of the other. Close familiarity with private credit relationships, particularly among the largest financial institutions and through critical payment and settlement systems, makes monetary policy makers better able to anticipate how their actions will affect the economy. Conversely, the substantial economic analysis that accompanies monetary policy decisions can reveal potential vulnerabilities of financial institutions (Tarullo 2009).

Geithner pointed to an emerging international consensus over the role of central banks in financial stability policy. Testifying in Congress, he alluded to the unhappy record of the UK FSA as evidence against the case for stripping the Federal Reserve of its supervisory authority:

If you look at the experience of countries in this financial crisis who have taken [supervision] away from their central bank... I think they found themselves in a substantially worse position than we did as a country, with in many ways a worse crisis, with more leverage in their banking systems, with less capacity to act when the crisis unfolded... The model where you take those responsibilities away from the central bank and vest them somewhere is not an encouraging model, in our judgment. I think you see those countries, if you listen carefully, moving in the other direction (Geithner 2009b).

Ultimately, these appeals were successful and the basic design for systemic risk regulation put forward in the administration's white paper became law in the form of the *Dodd-Frank Consumer Protection and Wall Street Reform Act (DFA)*. While the terminology of 'Tier 1 FHCs' was dropped, the central bank did become the regulator of systemically important firms. However, more authority was handed to the FSOC than either the Federal Reserve or the administration would have preferred. Most notably, the FSOC, rather than the Fed, ended up with the authority to designate firms as systemically important. This has proven to be a major impediment to effective macroprudential regulation.

While the DFA strengthened the Federal Reserve's authority, it was, overall, an incremental reform of the US regulatory system. It did not tackle the issue of fragmentation: one agency (the Office of Thrift Supervision) was abolished, but two more (the FSOC and the Consumer Financial Protection Bureau) were created. Moreover, regulation in the United States continues to be institution-focused. Firms are regulated according to the legal category they fall into, rather than according to the functions they perform. The system remains geared towards a microprudential approach to financial stability policy. The broad continuity between the pre- and post-crisis regulatory landscapes is in part a reflection of the half-hearted embrace of macroprudential policy in the United States (Baker 2014: 177). Whether in the Federal Reserve or in the administration, financial policymakers in the United States have consistently exhibited a preference for building resilience of financial institutions rather than 'leaning against' the emergence of credit bubbles or other imbalances in

particular markets (see Chapter 6). Writing after leaving office, Geithner (2014) noted

I didn't think there was much we could do about manias and beliefs. We couldn't ban fads or mandate judicious thinking [...] I always thought our top reform priority should be more conservative rules requiring financial institutions to hold more capital.

The incremental nature of the US reforms is, however, also attributable to the inertia generated by the highly institutionalised and fragmented nature of power in the US regulatory system. Early on in the reform process, the Administration decided not to pursue an ambitious overhaul of the regulatory architecture. Officials reasoned that any such proposal would engender a power struggle between the existing regulatory agencies and between the Congressional committees responsible for overseeing them. This would slow the progress of the reforms and use up valuable political capital. Commenting on the possibility of merging the Securities and Exchange Commission (SEC) and the Commodities Futures Trading Commission (CFTC), Barney Frank allegedly told Tim Geithner, 'Sure, you can merge the SEC and the CFTC. You just can't do it in the United States' (Geithner 2014: 401). Likewise, when the Chair of the influential Senate Banking Committee, Senator Chris Dodd, proposed to transform the Office of the Comptroller of the Currency into a new 'super-regulator' along similar lines to the FSA in the United Kingdom, the proposal was attacked from all angles. According to Bair (2012) the Federal Reserve

‘pulled out all the stops’ to defend its supervisory powers. At the same time, community banks and thrifts lobbied against the reforms, fearing they would be required to submit to overly burdensome regulations designed with large global banks in mind. Geithner (2014: 402) later wrote of the proposal: ‘it was dead on arrival’.

5.3.2 REFORMING UK FINANCIAL REGULATION

In the United States an alliance between central bankers and a recently installed administration resulted in a strengthened central bank mandate within the context of incremental change in the overall regulatory architecture. In the United Kingdom, a similar alliance between the central bank and a recently installed government resulted in a fundamental redesign of the system of financial supervision in the UK and a major expansion in the formal authority of the central bank.

Party politics played an important role in the UK case (cf. Johal et al. 2012). Over the course of 2009, the Labour administration had resolved to institute a set of incremental reforms to the architecture for financial supervision that it had put in place when it entered office in 1997. As discussed in Chapter 3, this consisted of a tripartite arrangement in which responsibility for financial stability was shared between the Treasury, the Bank of England, and the FSA, the latter organisation being a universal ‘one-stop-shop’ regulator and supervisor for the entire financial services industry. The Labour administration’s post-crisis reforms involved altering the statutory basis of both the FSA and the Bank of England so that both organisations would have a legal objective to

maintain financial stability. It also involved creating a new 'Financial Stability Committee' within the Bank of England to give strategic direction on how the Bank should meet its new financial stability objective and to consider issues relating to the Bank's powers to resolve individual institutions.

During this period, the Governor of the Bank, Mervyn King, began to make public his view that the Bank should be delegated additional powers in relation to prudential regulation and supervision. At the annual Mansion House dinner in June 2009, he offered the following metaphor to describe the Bank's existing financial stability capabilities:

The Bank finds itself in a position rather like that of a church whose congregation attends weddings and burials but ignores the sermons in between. Like the church, we cannot promise that bad things won't happen to our flock – the prevention of all financial crises is in neither our nor anyone else's power, as a study of history or human nature would reveal. And experience suggests that attempts to encourage a better life through the power of voice is not enough. Warnings are unlikely to be effective when people are being asked to change behaviour that seems to them highly profitable. So it is not entirely clear how the Bank will be able to discharge its new statutory responsibility if we can do no more than issue sermons or organise burials (King 2009).

Sitting beside the Governor as he delivered those remarks was a deeply unimpressed Chancellor of the Exchequer, Alistair Darling. In his subsequent

memoir, Darling recalled that King's speech 'was a naked attempt to wrest powers from the FSA. As such – and all those present knew it – it was a direct challenge to government policy, and therefore to me' (Darling 2011: 254).

The governor's desire to recapture the Bank's lost supervisory powers found a more favourable reception with the opposition Conservative Party. In the autumn of 2008, the Conservatives had employed Sir James Sassoon, previously a senior official in the Treasury and a former investment banker, to conduct a review of the regulatory architecture in the UK. Published the following spring, Sassoon's *Tripartite Review* argued that macroprudential policy should be at the heart of any new regime and that the Bank of England was the organisation best placed for the job (*Tripartite Review* 2009). The review also mooted the idea of moving to a 'twin peaks' regulatory structure (discussed in Chapter 4), which would involve abolishing the FSA and replacing it with two new regulatory agencies, one responsible for conduct-of-business issues and one responsible for micro-prudential regulation and supervision under the control of the Bank of England. Shortly after the publication of this review, the Conservative Party adopted the twin peaks proposal as its official policy, setting out in a white paper the basic outline of the regulatory regime that would be created after the 2010 General Election (Conservatives 2009).

Critics of the Conservatives' proposed reforms argued it was merely a smokescreen for a lack of action on issues of substance, particularly their refusal to back an outright prohibition on banks performing both retail and investment banking functions (Gapper 2009). It is certainly the case that the proposals represented an opportune means for the opposition Conservative Party to

differentiate itself from the Labour government (cf. Johal et al. 2012). Embarrassingly for the Conservatives, this interpretation of their motivations was lent credence when leaked diplomatic cables revealed that Governor King had told the US ambassador that the then leader of the opposition David Cameron and his then Shadow Chancellor George Osborne ‘had a tendency to think about issues only in terms of politics, and how they might affect Tory electorability’ (Leigh and Wintour 2010)

Yet the Conservative’s proposals were also in line with the policy prescriptions of the transgovernmental community of central bankers and financial policy experts. Lord Sassoon defended his proposals by pointing to supportive statements on the role of central banks in macroprudential policy from the Financial Stability Forum and the US Treasury (Armitstead and Aldrick 2009). He also expressed his strong support for the work of the Chairman of the FSA, Adair Turner, who was simultaneously carrying out a more detailed review of the underlying causes of the financial crisis. Turner was an enthusiastic advocate for macroprudential policy, including policies to ‘lean against’ the build up of credit bubbles such as countercyclical capital requirements and loan-to-value ratios on mortgage lending. Neither the *Tripartite Review* nor the Conservative’s white paper delved deeply into the instruments for macroprudential policy, but neither did either of them demur from the need to establish countercyclical macroprudential policies. Indeed, Sassoon’s review even contained an approving description of Spain’s experience with ‘dynamic provisioning’, which was a rare example of a Western central bank employing countercyclical macroprudential policy in the run-up to the financial crisis. In

short, the substance of the reforms involved establishing a countercyclical macroprudential policy framework operated by the central bank. While this represented a winning electoral strategy for the Conservative party, it was also a triumph for the central banking community.

The post-crisis reorganisation of financial services regulation and supervision involved considerably more discontinuity in the United Kingdom than in the United States. While this is partly a reflection of the UK authorities' enthusiasm for macroprudential policy, it was also a product of the centralised nature of power in the United Kingdom's system of government. With a working majority in Parliament, the Conservative-Liberal Democrat government faced few major impediments in implementing its chosen policies. UK parliamentarians did succeed in persuading the government to make some changes to the 2012 Financial Services Bill that would establish the new regime in law. For example, rules clarifying the right of the Chancellor to overrule the Bank of England in a crisis situation were included at the suggestion of the Treasury Select Committee (see Chapter 4). However, lawmakers made no high-level changes on a par with those introduced by the US Congress in the negotiations over the DFA.

The absence of a major turf war between different regulatory agencies also facilitated the more transformational reform that took place in the United Kingdom. As Chairman of the FSA, Adair Turner might have been expected to defend the FSA against the coalition government's proposals to abolish his agency. However, Turner was one of the United Kingdom's foremost advocates for a new macroprudential regime and he declared himself 'agnostic' regarding

the possibility of transferring microprudential supervisory powers from the FSA to the Bank of England (Turner 2009b). He also took the view that the Governor of the Bank of England should be delegated the task of chairing any committee set up to conduct macroprudential policy, whether it was inside or outside the central bank. Also in distinction to the United States, none of the main industry associations lobbied strongly against the proposals. Indeed, the British Bankers Association, which represents the majority of UK banks, and the Association for Financial Markets in Europe, which represents most of the London-based investment banking industry, both supported the proposed twin peaks model (TSC 2011b). Overall, the opponents to reform in the United Kingdom were fewer than in the United States and there were fewer avenues (or 'veto points') by which reform opponents could block the government from implementing its desired policies.

5.3.3 REFORMING EU FINANCIAL REGULATION

The ECB's trajectory towards greater formal authority in respect of financial stability was more convoluted. The centralisation of authority for banking supervision within the euro area took place against the backdrop of the incremental supranationalisation of European banking governance, which had been on-going for several decades (see Posner 2007; 2010; Mügge 2010; McPhilemy 2014; see also Chapter 3). Throughout this process, EU member states resisted pooling sovereignty for banking supervision at the EU level. This was for several reasons including the impulse to protect competitive advantages of domestic firms and the widely held contention that since the

burden of bailing out failed banks lay with domestic taxpayers, it would be politically unacceptable to hand responsibility for controlling prudential supervision to supranational authorities. In other words, 'he who pays the piper should call the tune'. Against this background, previous efforts by the ECB to encourage politicians to grant it greater authority for banking supervision had come to little. EU member states cooperated with one another over microprudential regulation and supervision, but they did so through transgovernmental networks of national financial supervisors, who retained responsibility for supervising firms at the national level.

Since the onset of the financial crisis, the architecture for financial governance in the EU has been through two major waves of reform. The first set of reforms emerged in response to the initial problems in European banks that arose during the 2007-09 global financial crisis. In November 2008, the European Commission (EC) convened a High Level Group under the chairmanship of former *Banque de France* Governor Jacques de Larosière 'to make proposals to strengthen European supervisory arrangements covering all financial sectors, with the objective to establish a more efficient, integrated and sustainable European system of supervision' (EC 2008). The High Level Group's subsequent report – the *De Larosière Report* – recommended that the ECB should be at the heart of the new macroprudential arrangements. However, the Group decided against recommending that the ECB should become responsible for microprudential supervision of financial institutions.

Accordingly, the *De Larosière Report* envisioned a new European System of Financial Supervision composed of two pillars. A microprudential pillar would

comprise three European Supervisory Authorities (ESAs). The ESAs would have a mandate to promote enhanced cooperation between the national authorities responsible for regulating and supervising banks, securities firms and insurance companies. This was an incremental reform that made relatively modest enhancements to existing arrangements for cross-border cooperation between national officials. The macroprudential pillar of the ESFS would comprise a new EU-level European Systemic Risk Council, with a mandate to identify and help mitigate or prevent systemic risks to financial stability. Subsequently renamed the European Systemic Risk *Board* (ESRB), this body was to be composed of the central bank governors of every member state as well as a number of key officials from various EU-level institutions. Its secretariat would be located within the ECB and the ECB President would be its first Chair.

The broad central banking community played an important role in shaping the High Level Group's recommendations. The original proposal for a macroprudential body at the EU-level came from a submission to the High Level Group from the former Chairman of the UK FSA, Howard Davies, and former senior FSA official, David Green. Their proposal called for a body that would be evenly balanced between central bankers and financial supervisors (proposal on file with author). The High Level Group agreed with the need for a Systemic Risk Council, but determined that it should be composed almost entirely of central bankers, with supervisors invited to participate in its deliberations on an *ad hoc* basis only. This stance reflected the publicly expressed view of many European central bankers, who gave speeches during the period of the High Level Group's deliberations stressing central banks' unique informational advantages in

relation to systemic risk analysis and the need for political independence in macroprudential decision-making (see, for example, Wellink 2008; Landau 2008, Thomopoulos 2009; Papademos 2009). Central bankers also expressed these views in private to the members of the High Level Group (author interview, 06 December 2014, London), six of eight of whom were themselves former central bankers.

The High Level Group's recommendation for only incremental changes to microprudential supervisory arrangements was also in line with the weight of central banker opinion at the time. Some central bankers, including at least one member of the ECB's six-person Executive Board, did press for the ECB to become the centralised microprudential banking supervisor for the whole EU (High Level Group 2009: 42; Bini Smaghi 2009). However, this was not the majority view of the ECB Governing Council, which comprises the Executive Board and the governors of every national central bank in the euro area. Many central bankers opposed handing prudential supervision to the ECB on functional grounds, reasoning that it would risk undermining the ECB's independence and its clarity of purpose in respect of monetary policy (De Rynke 2015: 4). The *De Larosière Report* highlighted these concerns, arguing that microprudential supervisory duties 'could impinge on [the ECB's] fundamental mandate' and that in the event of a crisis, the involvement of national treasuries in bank bailouts could 'could result in political pressure and interference, thereby jeopardising the ECB's independence' (High Level Group: 43). As Hodson (2012: 24) argues, the ECB's unwillingness to pursue centralization of microprudential supervisory authority at this time also

reflected bureaucratic politics. Several national central banks in the euro area are responsible for banking supervision within their respective jurisdictions. Thus, the central bank governors of those member states had a vested interest in opposing centralised supervision within the ECB.

The second great spurt of organisational reform in European financial governance began in 2012 in response to the emergence of the European sovereign debt crisis. At the heart of the crisis was a pernicious feedback loop between sovereign credit and banks' ability to attract funding (see Angeloni and Wolff 2012). Banks in recession-struck European countries owned large quantities of their 'home' countries' sovereign debt. At the same time, these governments had provided implicit or explicit guarantees to their banks, which had led to doubts over their sovereign creditworthiness. These doubts, in turn, redoubled markets' concerns over bank balance sheets. The ECB's own lender of last resort (LOLR) operations had reinforced this nexus. In late 2011, the ECB's 'Longer Term Refinancing Operations' (discussed below) provided banks with approximately €1 trillion in cheap loans. Banks used much of this cash to purchase sovereign debt (De Grauwe 2012), which had the intended effect of bringing down sovereign borrowing costs, but further increased the exposure of commercial banks to the weaknesses of their respective governments.

The ECB played a pivotal role in shaping the official response to this crisis. In contrast to its stance in 2008-09, it acted strongly to promote the centralisation of microprudential supervisory authority. Some central bankers became persuaded that the capacity to act effectively as LOLR required first-hand knowledge of the financial resources (capital and liquidity) of the banks in

receipt of emergency funds. During the financial crisis, the ECB lent to banks based on information provided by national supervisory authorities, which had an incentive to underestimate the solvency problems of their banks (Bini Smaghi 2014). This argument came to override more traditional concerns that integrating prudential supervision and monetary policy might undermine central banks' monetary policy independence (De Rynck 2015). From a more political perspective, the bureaucratic imperative for national central banks to retain their supervisory competencies also came to be outweighed by the widely perceived necessity of breaking the bank-sovereign 'doom-loop'. For many national central banks and competent authorities, centralised supervision became a price worth paying if their European partners would agree to share the burden of future bailouts (author interview, 31 October 2012, Madrid).

In February and March of 2012, two ECB Executive Board members gave speeches calling for the creation of EU-level resolution mechanisms to share the burden of bank bailouts and thus break the link between banks and sovereigns (Praet 2012; Cœuré 2012). This was followed by a call from the German ECB Executive Board member, Jörg Asmussen, for EU-level supervision (Barker and Spiegel 2012). Momentum for centralisation of banking supervision gathered pace with the first public intervention of ECB President Mario Draghi on the matter, who testified before the European Parliament that 'ensuring a well-functioning Economic and Monetary Union implies strengthening banking supervision and resolution at European level' (Draghi 2012). In advocating centralised banking supervision, Draghi and Asmussen also worked closely with the President of the European Council, Herman van Rompuy (De Rynck 2015),

who published a report ahead of the June 2012 European Council Summit calling for ‘an integrated financial framework [that] elevates responsibility for supervision to the European level’ (Rompuy 2012).

The success of this ECB-led supranational policy entrepreneurship was, however, conditional upon the willingness of key member states to go along with the proposals (cf. Veron 2014). By mid-2012, the UK government had ditched its longstanding opposition to deeper integration in European banking governance in favour of a two-track strategy: it actively encouraged euro area countries to pool sovereignty, but sought safeguards for its own interests as a non-euro area country in the Single Market. The UK position reflected the material interest of the UK in seeing stability return to the euro area, its largest trading partner. It also reflected the UK authorities’ view that Economic and Monetary Union had created functional spillovers – or a ‘remorseless logic’ as Osborne put it – for banking and ultimately fiscal union. French policymakers’ dropped their longstanding objections to integrated supervision when the solvency of their own banks – and even the French government – began to be questioned in late 2011. French banks found themselves unable to attract US dollar funding in wholesale funding markets, and they became highly reliant on access to ECB emergency liquidity support. In this respect, France found itself in a similar position to Southern European member states; its structural power vis-à-vis the central bank was diminished (see below). Most surprisingly, the German government also supported centralised supervision. In mid-2012, the German Chancellor Angela Merkel resolved to defend the integrity of the euro area at virtually any cost (Spiegel 2014). As part of this resolve, Merkel signalled

her willingness to support centralised supervision, albeit only of the largest systemically important banks. Subsequently, Germany partially reversed its support for the SSM, becoming the primary veto player in the negotiations over the enabling legislation (see Epstein and Rhodes 2016). Notably, it was at Germany's insistence that the ECB was afforded only indirect responsibility for supervising smaller banks in the euro area.

The SSM represents a major step forward for the project of European integration and a triumph for the ECB. Nevertheless, its final form reflects the complex institutional terrain into which it has been inserted. For example, despite successive attempts to close loopholes and eliminate national regulatory divergences, the latest iteration of the European capital regulations – the Capital Requirements Directive IV (CRD-IV) and the Capital Requirements Regulation (CRR) – contain areas of ambiguity and national discretion (discussed further in Chapter 6). This means that the ECB/SSM will be required to supervise banks that are subject to different rules depending on the member states they are located in. Furthermore, the SSM has been established to supervise banks in 18 member states, each of which remains ultimately responsible for maintaining financial stability within its borders. Accordingly, the ECB has been afforded limited authority in respect of macroprudential policy. It can apply macroprudential measures only within the scope of the CRD-IV/CRR. While this gives it some authority over macroprudential capital buffers for banks, other measures, such as loan-to-value ratios on residential mortgage lending, are beyond its control. Moreover, the ECB has no authority to apply macroprudential policies relating to the insurance or securities markets. To be

sure, the ECB plays a dominant role in the ESRB, which has a broad mandate to look at risks across the EU and across all financial sectors. However, the ESRB has no authority to direct national authorities to take action. In practice, it has appeared unable to tackle systemic risks that arising from matters that are sensitive for some member states, such as the regulatory treatment of banks' sovereign exposures (see McPhilemy and Roche 2013).

5.3.4 SUMMARY

So far, this chapter has focused on the role that central bankers have played as policy entrepreneurs, shaping the initial post-crisis reforms in each jurisdiction. It has argued that the advocacy and changed policy ideas of central bankers themselves have been the proximate cause of the transformations witnessed in each case. In each jurisdiction, however, central bankers' policy entrepreneurship played out in distinct political and institutional settings, which has conditioned the types of reforms that were ultimately put in place.

This account explains the variation in the delegation of formal authority to central banks in the aftermath of the crisis. However, it does not explain why central banks have been capable of exerting greater *de facto* authority over their key interlocutors in the post-crisis era. As the previous chapter highlighted, all three central banks have adopted a relatively hawkish approach to the implementation of their new prudential mandates. Moreover, the ECB in particular has demonstrated a high level of authority in its relations with sovereign governments, pressuring crisis-struck debtor countries into unpopular fiscal austerity and structural reforms and pursuing expansionary monetary

policies in the face of at times entrenched German opposition. Explaining the expansion of central banks' *de facto* authority requires attention to the less visible aspects of central bank power. In particular, it is necessary to explore changes in the interdependencies between central banks, market participants and incumbent politicians that shape their interactions with one another. In short, it is necessary to examine how central banks' 'structural power' has changed since the onset of the financial crisis.

5.4 THE ROOTS OF CENTRAL BANKS' AUTHORITY: STRUCTURAL POWER

The concept of 'structural power' has been discussed extensively in international relations and international political economy scholarship (Strange 1988; Gill and Law 1989; Barnett and Duval 2005). One insight common to these discussions is the notion that actors' ability to influence others does not only stem from their ability to marshal material resources – such as wealth, military might, or hierarchical authority – in their direct interactions with one another. Rather, power also stems from what Barnett and Duval (2005: 43) describe as 'the constitution of subjects' capacities in direct structural relation to one another'. In other words, these scholars suggest that the source of actors' power is their differential endowment of capabilities and how dependent other actors are upon them. As Woll (2014a: 46) suggests, structural power is not about 'influence peddling' or persuasion, but rather the degree to which actors need each other. Cohen (2013: 6) captures the spirit of this understanding of structural power succinctly when he writes: 'the basic question, in simplest terms... [is]: 'Who needs whom more?'

Such an understanding of power underpinned Marxist and radical pluralist discussions of the 'structural power of business' (Block 1978; Lindblom 1978; Gill and Law 1989). It has also underpinned more recent scholarship on the structural power of finance after the financial crisis (Bell 2012; Bell and Hindmoor 2014, 2015). According to this view, incumbent political elites rely on businesses to create growth and provide employment. In turn, businesses' ability to 'exit' – or to threaten to exit – any jurisdiction imposing policies distasteful to their preferences gives them bargaining power to extract concessions from policymakers. More broadly, the dependence of politicians on the private investment decisions of businesses is said to engender a generalised bias towards business-friendly policies, even where firms and lobby groups do not actively engage in policy debates (Hall, P. 1986).

If structural power derives from the stratification of interdependencies between actors, then the power of central banks should have reached its zenith in recent years. Just as societies need businesses, so too do they need central banks. Commercial banks and other financial institutions rely on central banks to supply them with cash and other highly liquid securities when they need it. In normal times, the knowledge that firms have recourse to central bank liquidity enhances their creditworthiness and lowers their costs of doing business. In crisis periods, access to central bank liquidity becomes an essential lifeline keeping markets open and firms afloat. Politicians rely upon central banks to help stimulate economic growth and employment, and to keep inflation in check. In times of war or economic crisis, governments may rely on central banks to help finance public deficits (even if 'monetary financing' of public debt

is a taboo subject in many countries; see Tognato 2012). Politicians also rely on central banks to act as what (Dyson 2009: 10) describes as 'gate keepers' to complex, volatile, interconnected, and opaque markets'. By acting as LOLR, and by controlling risk taking through prudential policies, central banks can help maintain financial stability.

The dependency of both market participants and incumbent politicians on central banks derives from central banks' particular endowment of capabilities, the most important of which is the unique ability to create and destroy money at the stroke of a pen (or keyboard).³ In order to understand why politicians have been so acquiescent to central bankers' policy entrepreneurship during the post-crisis reforms, and why central banks have been able to exert greater authority over both financial market participants and, in some instances, national executives since the financial crisis, it is necessary to examine how the dependency of these actors on central banks has changed in recent years.

5.4.1 DEPENDENCY OF MARKET PARTICIPANTS ON CENTRAL BANKS

Central banks have long played a role in stabilising the inherently unstable business of banking (see Chapter 3). One of the key functions commercial banks perform is so-called 'maturity transformation': they fund long-term assets, such as mortgage contracts to be repaid over 30 years, with short-term liabilities, such as customer deposits that can be redeemed a moment's notice. Banks maintain only a small fraction of their liabilities in the form of liquid reserves (such as cash). This means they are susceptible to runs. If for any reason depositors lose confidence in a bank, they will scramble to withdraw their funds

before the bank runs out of cash. The susceptibility of banks to runs is well understood. One of the principal mechanisms by which governments prevent runs from occurring is by establishing central banks to act as LOLR to banks that find themselves in need of liquidity. As discussed in Chapter 3, the need to equip the chronically crisis-prone US banking system with a LOLR was the primary motivation behind the creation of the Federal Reserve in 1913.

THE ILLUSION OF LIQUIDITY

Transformations in the nature of banking and in wider processes of credit intermediation in the three decades preceding the financial crisis heightened the dependency of financial market participants on the liquidity insurance that central banks provide through their LOLR functionality. The banking sectors of the United States, the United Kingdom and most euro area countries came to be dominated by large international banks. Few such banks rely mainly on customer deposits as their main source of funding. Rather, most funded themselves mainly by issuing various short- and long-term debt instruments in wholesale funding markets.⁴ These forms of funding are generally more ‘flighty’ than customer deposits, because unlike the latter, they are not covered by public deposit insurance schemes (Feldman and Schmidt 2001). Institutional investors in wholesale funding markets also have greater expertise and knowledge about the financial condition of the banks to which they are lending, meaning that they are more likely to withdraw their funding (or refuse to rollover short-term loans) if adverse news about a bank comes to light.

The increasing reliance on more unstable sources of funding was part of the wider rise of so-called 'market based' banking in Europe and the United States (Hardie and Howarth 2013). The characteristics of this transformation differed in different jurisdictions. On the whole, banks incorporated in the UK and the euro area became relatively *more* dependent on wholesale funding than banks in other regions (Le Leslé 2012). One simple measure for assessing the stability of bank funding is the loan-to-deposit ratio: if a bank has fewer deposits than loans, it must fill the gap with wholesale funding. On the eve of the banking crisis, the loan-to-deposit ratios for the UK and the euro area were 132 and 130 per cent respectively (ECB 2012; Bank of England 2014e). By contrast, the United States entered the crisis with a loan-to-deposit ratio of little over 100%. Large UK and euro area banks also tended (and tend) to be relatively more reliant on shorter-term forms of wholesale funding than other globally significant banks (see ECB 2014a: S14). Thus, on the whole, UK and euro area banks were particularly dependent on central bank liquidity insurance on entering the crisis.⁵

The United States' low loan-to-deposit ratio flatters the stability of the US financial system, suggesting it was less dependent on central bank liquidity than it actually was. A large proportion of credit intermediation in the United States takes place through non-bank intermediaries, or 'shadow banks' (see Adrian and Shin 2010; Adrian and Ashcraft 2012). Such entities are involved in *securitisation*, the practice of packaging individual loans into investment products bearing different levels of risk. Shadow banks are generally reliant on very short-term wholesale funding, such as overnight 'repurchase agreements'

(repos). Like traditional banks, shadow banks are involved in maturity transformation – borrowing short and lending long – meaning that they are susceptible to runs. Unlike traditional banks, shadow banks do not have official recourse to public backstops in the form of central bank liquidity insurance or public deposit insurance. However, this is not to say, that the shadow banking sector was completely outside the government safety net prior to the financial crisis (Pozsar et al. 2012). Many shadow banks were in fact merely off-balance sheet vehicles of regulated banks. These entities often benefited from contractual credit and liquidity guarantees from their regulated ‘parent’ banks, meaning they were indirect beneficiaries of the central bank liquidity insurance available to the banks that sponsored them. Other shadow banks had no contractual guarantees, but were nevertheless bailed out by their parent banks during the financial crisis for reputational or other reasons. These entities also benefited from (implicit) central bank support. Still others were established outside of the regulated industry altogether. This ‘external’ shadow-banking sector had neither indirect nor implicit recourse to government backstops prior to the crisis. However, in the event, even many of these entities benefited from the Federal Reserve’s largesse, as they were able to participate directly in special liquidity operations established by the central bank (Pozsar et al. 2012).

As financial systems became increasingly reliant on less stable sources of funding, the private dependence on public liquidity insurance increased. Paradoxically, however, the great abundance of cheap wholesale funding in the period immediately prior to the financial crisis gave precisely the opposite impression. Between 2002 and 2007, a boom in wholesale funding markets

produced the illusion of infinite private liquidity (Nesvetailova 2010: 4). While commercial banks could access central bank funds through various 'standing facilities', they very rarely chose to do so because it was cheaper to raise funds in private markets. Indeed, accessing central bank liquidity became so rare that any firm doing so risked signalling to the market that it was in dire financial distress. During this period, central banks' transactions in financial markets were confined to setting short-term interest rates through 'open market operations', trading relatively small quantities of high-quality assets (mainly government bonds) with select groups of counterparties in regular weekly and monthly liquidity auctions. Lending as a last resort to financial institutions was exceptionally rare. All this began to change from the summer of 2007 as private sources of funding suddenly became unavailable.

THE ILLUSION DISPELLED

The US securitisation markets ceased operating in the summer of 2007 as grave doubts emerged about the true value of sub-prime mortgage-backed securities that banks and shadow banks used as collateral in short-term funding markets. The providers of that funding – institutional investors such as asset managers and money market funds – suddenly became unwilling to continue rolling over their loans. Unable to attract new funding, banks and shadow banks were forced to sell their illiquid assets at fire sale prices, causing the value of those assets to plummet. As asset prices fell, other institutions were sucked into the quagmire. The evaporation of wholesale liquidity and the sudden breakdown of the securitisation industry claimed some of the financial crisis's most high-

profile early victims. This included two hedge funds owned by the US investment bank Bear Stearns, IKB Bank in Germany and the UK mortgage lender Northern Rock. Notoriously, the failure of Northern Rock involved long queues of retail depositors forming outside its branches. It was the first run on a UK bank in over a century.

In the United States, the spiral of self-destruction continued for another year, reaching a crescendo in September 2008 with the bankruptcy of Lehman Brothers, a seismic event for global markets. The Federal Reserve responded to the unfolding crisis with increasingly large liquidity operations. In August 2007, it lowered the rate at which it lent to banks at its 'discount window' and later that year it launched the 'Term Auction Facility', whereby it auctioned loans to banks to encourage them to borrow without being stigmatised as financially weak. Relying on a little known provision of the Federal Reserve Act – 'Section 13(3)' – that allowed it to lend to non-banks in 'unusual and exigent circumstances', the Fed enabled Wall Street investment banks to access its 'discount window' for the first time since the Great Depression. When Bear Stearns reached the point of failure in March 2008, it used the same legal basis to provide a \$30 billion loan to help JP Morgan acquire the moribund bank. Exposing the Federal Reserve to significant credit risk, this loan demonstrated that the central bank was willing to gamble it could warehouse the financial industry's dubious assets on its own balance sheet for the duration of the crisis without suffering catastrophic losses. In late September 2008, the Fed provided an even larger loan - \$85 billion - to the insurance giant AIG, saving it from the consequences of its disastrous investments in sub-prime credit default swaps. It

also established a suite of other liquidity facilities, massively expanding its balance sheet and accepting collateral of increasingly dubious quality (see Wessels 2010; Blinder 2013). Altogether, the total stock of credit extended to the financial system through the Federal Reserve's various liquidity facilities peaked at \$1.5 trillion in December 2008.

The Bank of England was initially more hesitant. In autumn 2007, it launched additional liquidity auctions, but following longstanding convention, it chose to charge a penalty rate of interest. Banks refused the offer, fearing that they would be stigmatised as financially weak. Later in 2007 the Bank more fully embraced the need to pump liquidity into the system. Amongst the largest of the Bank's emergency liquidity measures was its 'extended collateral long-term repos', which involved lending for three-month durations against a broad range of assets including mortgage-backed securities and corporate debt. The stock of loans outstanding under this scheme peaked in January 2009 at £180 billion (Fisher 2009). Another important emergency measure was the Bank's Special Liquidity Scheme. Launched in April 2008, this enabled banks to swap their temporarily illiquid but ostensibly high-quality asset-backed securities for highly liquid Treasury bills, which could be swapped for cash in private markets. Use of the Special Liquidity Scheme peaked at £185 billion. In October 2008, the Bank also made secret loans to two of the United Kingdom's largest banks, RBS and HBOS. Assistance to these two institutions peaked at £61.5 billion (Plenderleith 2012). Like the Federal Reserve, the Bank of England effectively absorbed the credit risks of the financial system, storing them on its own balance sheet until more normal conditions resumed.

The ECB likewise expanded its liquidity provision during the financial crisis. In the summer of 2007, the ECB stole a march on other central banks when it offered an unlimited quantity of euros to European banks in reaction to news that the French bank BNP Paribas had suspended withdrawals from three of its investment funds. Offered at a fixed rate of four per cent, banks immediately borrowed €95 billion. Under the banner of ‘enhanced credit support’ (Trichet 2009), other liquidity schemes included the provision of Long Term Refinancing Operations consisting of loans to banks with six-month durations, the provision of US dollars through a currency swap line with the Federal Reserve and, in 2009, purchases of longer-term ‘covered bonds’ (a common form of debt issued by euro-area banks). With the emergence of the sovereign debt and banking crisis in 2010, the ECB undertook a series of further initiatives to ease the pressure on European banks. The largest of these was the 2011 extended Long-Term Refinancing Operations, under which the ECB lent approximately €1 trillion to banks at a fixed rate for up to three-years. As this programme involved lending to banks with questionable solvency, it involved the ECB assuming large-scale credit risk (Gros et al. 2012). Ultimately, much of this funding remained on the ECB’s balance sheet: Southern European banks borrowed large sums from the ECB, while northern European banks deposited equally large sums in their ECB accounts. As Gros et al. (2012) argue, through these programmes, the ECB effectively became the central counterparty for the entire euro area-banking sector.

As central banks replaced wholesale funding markets with a public alternative, their authority over financial market participants in respect of

prudential regulation and supervision was enhanced. Although liquidity operations did not involve explicit conditionality, they nevertheless weakened the bargaining position of market participants in their relations with central banks. Systemically important financial institutions were revealed to be highly reliant on official liquidity insurance and other forms of public sector support (see below). Moreover, the three central banks were revealed to have enormous financial strength. Prior to the financial crisis, central bank balance sheets were small relative to the largest commercial banks. During the financial crisis, the three central banks transformed themselves into major players in their own right. Indeed, measured by assets, the Federal Reserve had become the world's largest bank by 2014.

It should be noted that such a remarkable transformation would not have been possible for the central banks of smaller economies. The ability of the Federal Reserve, the Bank of England and the ECB to mutate into truly *central* banks rested on the implicit (and occasionally explicit) backing of their respective governments. In extremis, the fiscal authorities of their respective jurisdictions could recapitalise their central banks, should they suffer large losses on the assets they purchased (see Stella 2005; Archer and Moser-Boehm 2013).⁶ Central banks could ride to the rescue only because of the deep pockets of the taxpayers standing behind them. As these central banks intervened aggressively in financial markets in late 2008 and 2009, the prospect of teetering global banks relocating to Luxembourg, Singapore or Switzerland was exposed as an empty threat.

At the same time, the power of the financial industry was being assailed on other fronts. In all three cases, central banks' liquidity support took place alongside taxpayer bailouts that often involved explicit conditionality. In the United States, the fiscal bailout of the US financial system took the form of the 'Troubled Asset Relief Programme' (TARP), under which the federal government forcibly injected \$250 billion of new capital into the nation's largest banks. While the conditions attached to this support were arguably quite lax (Bair 2012: 313; Woll 2014a), banks were highly reluctant to accept the funds and repaid them as soon as possible, fearing government intervention in their day-to-day operations. In the United Kingdom, the Labour government announced a £50 billion 'Recapitalisation Fund' in October 2008, alongside a £250 billion guarantee scheme, under which new debts issued by eligible UK banks would be guaranteed for a limited period (see HM Treasury 2008). The largest banks, RBS, HBOS and Lloyds TSB, were nationalised. Senior managers of RBS and HBOS were fired while the banks' shareholders lost most of the value of their investments. In the EU, fiscal bailouts were provided on a country-by-country basis before member states began to agree burden-sharing arrangements in 2012. In France, government support for the financial industry came with explicit requirements for banks to reach domestic lending targets; in Germany, support from the Federal Agency for Financial Market Stabilisation Fund, established in 2008, entailed restrictions on executive pay and dividend payments among other conditions (Woll 2014b).

Both taxpayer bailouts and central bank liquidity assistance were highly unpopular with the general public and they helped raise the salience of financial

regulation in the media and political discourse. In both Europe and the United States, these actions provided the motivation for the major legislative initiatives to strengthen financial regulation. Moreover, as Johal et al. (2014) suggest, the crash of 2008 helped discredit elite and popular cultures that had sustained untrammelled financial innovation and light-touch supervision prior to the crisis. In this climate, it became more difficult for financial industry lobbyists to speak out against prescriptive regulations (cf. Young 2013). The post-crisis climate was also one in which central bankers' incentives to act stringently in their implementation of new regulations were magnified, lest they be held accountable for further failures 'on their watch'.

A note of caution is in order. Central bank liquidity support and taxpayer-funded bailout schemes may have strengthened the hand of public authorities vis-à-vis market participants in subsequent regulatory and supervisory processes. However, the very fact that these interventions became necessary may also be taken as evidence of the continuing structural power of the financial industry itself. Central banks and governments found themselves with little choice but to intervene to alleviate the acute liquidity and solvency problems facing banks and wider financial markets. Failure to prevent a more widespread collapse would have had calamitous consequences for the real economy. It would almost certainly also have prompted governments to revoke or otherwise curtail central banks' hallowed independence. While the senior managers of many bailed out firms were fired, and some firms' shareholders were wiped out, public interventions *did* spare the rescued firms' unsecured creditors (bondholders) from the consequences of their bad investments. This

suggests that although the structural power of the financial industry may have been diminished during the financial crisis, it was certainly not eliminated.

5.4.2 DEPENDENCY OF INCUMBENT POLITICIANS ON CENTRAL BANKS

Incumbent politicians in the executive branches of national governments also became more dependent on their central banks' during the financial crisis. In all three jurisdictions, executive politicians have been either unwilling, or unable, to use the main macroeconomic stabilisation tool over which they have direct control – fiscal policy – to stimulate demand and boost growth. In the United States, the Obama administration introduced tax cuts and spending increases in 2009, but the measures were short-lived and began to unwind in 2010 (see Stiglitz 2010). Subsequently, gridlock in Congress prevented further discretionary fiscal stimulus. Moreover, recurrent episodes of high-stakes brinkmanship between Republicans and Democrats over budgetary negotiations have occasionally threatened to drastically curtail US government spending. In the United Kingdom, the Conservative-Liberal Democrat coalition government shifted the country from stimulus to austerity in 2010, promising to eliminate the budget deficit over the course of its five-year term in office. This helped shut-off the recovery in the UK economy, which slipped into a 'double dip' recession in early 2012.

In the euro area, debt sustainability posed a major constraint on fiscal policy. Deep recessions in Greece, Ireland, Portugal, Italy, Spain and Cyprus led to declining tax revenues and greater expenditure in the form of unemployment benefits and other so-called 'automatic stabilisers'. As interest rates on these

countries' debt ballooned, four of them - Greece, Ireland, Portugal and Cyprus - were forced to seek international assistance in the form of bailouts from the so-called 'Troika' (comprising the IMF, the European Commission and the ECB). Thus, in these countries a combination of bond-market pressure and international creditor constraint precluded the adoption of discretionary fiscal stimulus measures. Even in the euro area's relatively prosperous northern creditor countries, politicians have been reluctant to use fiscal policy to stimulate demand. For example, after implementing a small stimulus package in 2009, Germany had achieved a fiscal surplus by 2013.

The unwillingness and inability of politicians to use fiscal policy as a countercyclical stabilisation instrument has left monetary policy as 'the only game in town' (Bini Smaghi 2014). Governments have relied on their central banks to creatively reinterpret their mandates in order to give greater emphasis to stimulating aggregate demand as opposed to focusing predominantly on price stability. Unconventional monetary policies in the United States and the United Kingdom followed similar paths. The Fed cut interest rates early and aggressively, reducing the target for the Federal Funds Rate from 5.25 per cent in mid 2007 to less than 0.5 per cent – effectively the so-called 'Zero Lower Bound' – in September 2008. It then looked for additional means of stimulating the economy. In November 2008, it announced the first of three programmes of 'Large-Scale Asset Purchases', otherwise known as 'quantitative easing' (QE). This involved using newly created central bank money to purchase long-dated Treasury bills as well as bonds and mortgage-backed securities issued by Fannie Mae and Freddy Mac, the giant government-sponsored mortgage finance

companies. As a result of QE, the assets on the Federal Reserve's balance sheet swelled from \$800 billion in 2008 to more than \$4.3 trillion in 2014. In the UK, the Bank of England cut its main policy interest rate to the Zero Lower Bound in March 2009. Like the Federal Reserve it then undertook three episodes of QE. By November 2012, the Bank's purchases reached £375 billion, composed almost exclusively of government bonds (or 'gilts'). In both the US and the UK, the main intention of QE was the equivalent of lowering interest rates. That is to say, central banks aimed to stimulate spending by raising asset prices and lowering the cost of borrowing throughout the economy.

Although it was not the primary motivation, one consequence of QE in the United States and the United Kingdom has been to lower the cost of borrowing for their respective governments. The Federal Reserve transformed itself into the largest single holder of US government securities anywhere in the world, surpassing even the Chinese government (as of January 2015, the Fed held \$2.5 trillion while the Chinese government held \$1.3 trillion). Likewise, the Bank of England came to own more than a third of the stock of outstanding UK government bonds. Central banks purchased government securities in secondary markets – i.e. from banks and other private institutions – rather than from their respective national treasuries. They could therefore justifiably claim not to have been engaged in the dreaded 'monetary financing' of government deficits (printing money to finance public deficits). Even so, their purchases brought the cost of borrowing down for their governments, which needed to pay less to issue new debts.

Estimating of the impact of QE on government bond prices and yields is complicated because prices reflect market participants' expectations regarding future monetary policy. Thus, a simple comparison of asset prices before and after central banks' various announcements of new purchases do not reveal the full impact of QE (see McLaren et al. 2014). Notwithstanding these difficulties, several studies of the impact of the first rounds of QE in the United Kingdom and the United States suggest that the average yields on long-dated US and UK government securities (such as 10 year bonds and longer) were reduced by around 20 to 40 basis points (see Joyce et al. 2011 for the UK; Gagnon et al. 2011 for the US; Meaning and Zhu 2011; Williams 2011).

Some commentators fret that these actions have diminished the pressure on politicians to agree measures to reduce their fiscal deficits (see, for example, Shultz et al. 2012). Yet it is important not to overstate the influence of US and UK government bond purchases on politicians' spending decisions. Many factors, other than central bank policies, affect the yields on US and UK government debt. Notably, US government debt enjoys special status as a 'risk-free' asset for financial markets. As a safe haven, demand for US debt increases at times of crisis. Thus, in 2008 and again in 2011, yields on longer-dated US debt plummeted as investors scrambled to invest in safe US Treasury bills. After each of these episodes, the yield on US government bonds gradually recovered as global risk appetite returned. These recoveries were only partially offset by the Federal Reserve's purchases. Similar dynamics were at play in the UK government debt market, where some announcements of QE were followed by rising prices and declining yields (as the central bank intended), but others had

little effect and still others saw government securities' prices move in the opposite direction (Meaning and Zhu 2011).

More importantly, neither the Federal Reserve nor the Bank of England have deliberately used their ability to influence government borrowing costs as a means of forcing politicians to take particular decisions in respect of fiscal policy. This is not to say that the governors of these central banks have refrained from expressing their views in relation to fiscal policy. Ben Bernanke, Chairman of the Federal Reserve from 2006-2012, frequently exhorted policymakers to take action to improve long-term debt sustainability (see Bernanke 2009 for one of many examples). While he supported the need for a fiscal stimulus package in 2008, he argued that such measures should be temporary and consistent with long-term fiscal consolidation (Bernanke 2008; cf. Buiters 2014). In the UK, the Governor of the Bank of England, Mervyn King, went even further. During the election campaign of 2010, King caused great consternation in the Labour administration when he gave his apparent backing to the fiscal austerity programme being offered by the Conservative opposition. These examples demonstrate that neither the Bank of England nor the Federal Reserve have been afraid to step beyond their mandates. However, neither central bank actively sought to deliberately force politicians' hands by threatening to hold back on purchases of government securities. In any case, such a move would likely have been ineffectual. As discussed, central bank asset purchases are by no means the only factor weighing on US or UK government borrowing costs. Furthermore, any such action would risk collateral damage in

the form of lower consumption and investment, which could ultimately damage the central banks' credibility and independence.

The path of monetary policy in the euro area has been different. In May 2010, the ECB launched an initial set of large-scale asset purchases under its so-called 'Securities Markets Programme' (SMP). Officially justified as a means of restoring the normal functioning of the monetary policy transmission mechanism (ECB 2010), the SMP was mainly a means of lowering the cost of borrowing for countries facing sovereign debt crises. Initially, it involved the ECB intervening in the secondary markets for Greek, Irish and Portuguese bonds although from August 2011 it was extended to Italian and Spanish government bond markets as well (Ghysels et al. 2014). The implications of this action for the ECB's relationship with the governments of these countries were considerable. Unlike the United States and the United Kingdom, each of these countries was facing ballooning borrowing costs as markets rapidly lost confidence in their ability to repay their debts. This threatened to create a vicious circle – with rising sovereign borrowing costs heaping pressure on already strained public finances – leading towards default. Under these circumstances, the governments of these countries became highly dependent on the ECB's ability to intervene. In contrast to the Federal Reserve and the Bank of England, the ECB's structural power was magnified. Its ability to effectively determine whether or not these countries would default on their debts gave it leverage in policy debates beyond its immediate mandate. As discussed in the previous chapter, the ECB made its purchases of these countries' debt conditional on swingeing fiscal austerity and sweeping supply-

side reforms, including large-scale privatisations and changes to employment laws to make it easier to hire and fire workers.

The ECB's conditionality was initially kept secret, although a leaked 2012 letter from ECB President Mario Draghi to the then Italian Prime Minister Silvio Berlusconi revealed how the ECB had demanded stringent austerity, structural reforms and constitutional change to lock-in a balanced budget rule (*Corriere della Sera* 2011). Subsequently, the ECB has made its conditionality explicit. In 2012, it announced a successor programme to the SMP, the so-called Outright Monetary Transactions. This constituted a promise to buy potentially unlimited quantities of euro area countries' sovereign debt. However, any purchases would be conditional on the country in question seeking loans from the recently created EU-level bailout funds, the European Financial Stability Facility (EFSF) and its permanent successor the European Stability Mechanism (ESM). Any such loans would require governments to adhere to strict conditionality involving macroeconomic adjustment programmes based on fiscal austerity and neoliberal supply side reforms. Such reforms have large and highly visible distributional consequences for the citizenry of the countries in which they are implemented and they have been the source of deep political ructions in Southern Europe. Their effective imposition by a supranational organisation acting at – and arguably beyond – the outer reaches of its mandate is clearly problematic from the perspective of democratic legitimacy and political accountability.

5.5 CONCLUSION

The previous chapter of this thesis demonstrated how the authority of each central bank had increased after the financial crisis. Politicians in each of the three jurisdictions under consideration had delegated new formal powers to their central banks. At the same time, central banks have demonstrated heightened ability to induce deference on the part of their key interlocutors in financial markets and in the case of the ECB in particular, in respect of national executive politicians.

This chapter sought to identify the mechanisms through which these changes were effected. It argued that the proximate explanation for politicians' choice to delegate new powers to their central banks was the policy entrepreneurship of central bankers' themselves. The transnationally networked community of central bankers provided policymakers with diagnoses of the pre-crisis regulatory failures and blueprints for how to respond. In making their case, central bankers' seized upon previously marginalised and somewhat disparate ideas about the operation of financial markets. Bundling these ideas together under the heading of 'macroprudential' policy, some central bankers and academic commentators have proclaimed a transformational shift has taken place in the ideas and assumptions underpinning financial regulation and supervision. However, as the next chapter of this thesis demonstrates, the disparate nature of these ideas, their differing acceptance in different parts of the transgovernmental central banking community and their cohabitation with older, more orthodox, theories and assumptions about how markets operate

has influenced the types of regulatory policies that central banks are pursuing in each jurisdiction.

The differentiated 'bricolage' of new and old thinking within different parts of the central banking community also provides part of the explanation for the differential delegation of formal powers to central banks after the crisis. In the United States, key officials' limited embrace of macroprudential ideas helps explain why they never gave serious consideration to abolishing the institution-focused and fragmented regulatory architecture, which is inherently geared towards a more microprudential approach. By contrast, the more wholesale reorganisations in the United Kingdom and the European Union were in part a reflection of European central bankers' desire to place (countercyclical) macroprudential policy at the heart of an expanded conception of central banking.

Though significant, the differentiated embrace of new macroprudential ideas was less important for determining the outcome of reforms than the existing political and institutional terrains that central bankers and their allies had to navigate. In the United States, opposition to an expanded Federal Reserve mandate was strong because existing regulatory agencies, which were eager to protect their bureaucratic turf, formed coalitions with financial market participants bent on avoiding stricter regulation by the Fed. The Federal Reserve and its allies also had to reckon with the historic current of anti-federal Reserve sentiment in Congress, which flared up during the financial crisis as centrist politicians found political advantage in criticising the Federal Reserve for its role in bailing out Wall Street. In the United Kingdom, the strength of the core

executive in the UK parliamentary system of government meant that once an administration convinced of the benefits of expanding central bank authority had been elected to office, there were few hurdles to expanding the power of the central bank. In the EU, the modest De Larosière reforms of 2010-11 were the product of two factors: first, the absence of expert consensus over the wisdom and desirability of assigning supervisory functions to the ECB; second, the persistent reluctance of member states to cede sovereignty over banking supervision to supranational policymakers. Both calculations changed following the severe deterioration of financial conditions that took place in late 2011. The weight of opinion within the central banking community shifted such that those who favoured an expansion of the ECB's supervisory functions outnumbered those who feared conflicts between monetary and prudential objectives. At the same time, governments' resistance to ceding greater authority over supervision was eroded as crisis-struck Southern European countries pushed for burden-sharing arrangements for future bank bailouts and accepted supranational banking supervision as the *quid pro quo*.

The second part of this chapter sought to explain the differential power of the three central banks in their post-delegation relations with financial market participants and national executive politicians (or their *de facto* authority). It suggested that changes in the nature of banking and credit intermediation in the three decades preceding the financial crisis had increased the reliance of banks and other financial firms on central banks' unique ability to create and destroy money by fiat. This dependency grew as banks came to rely on increasingly unstable forms of wholesale funding rather than customer

deposits. In the United States, complex chains of shadow banks – which were highly dependent on wholesale funding – displaced traditional banks as the principal mechanism for intermediating between borrowers and savers, thereby disguising the extent to which the US financial system was likewise centred on unstable wholesale funding. During the financial crisis, this dependency was revealed as central banks transformed themselves from bit-part players in their respective financial markets into major players with balance sheets to rival even the largest global banks. They warehoused commercial banks' risky assets on their balance sheets and made markets for securities that private investors were unwilling to purchase. In this context, the structural power of financial market participants was diminished. On the one hand, systemically important financial institutions could no longer credibly threaten to relocate their businesses to more favourable territories, as they were revealed to be highly dependent on access to the liquidity insurance of central banks backed by fiscal authorities with deep pockets. On the other hand, the very fact that financial firms were in receipt of public support – in the form of both central bank liquidity and public bailouts – altered the wider political climate in which bank lobbyists operate, such that opposing more stringent financial regulations became more difficult than it was prior to the financial crisis.

Structural power also helps explain the differential relations between central banks and their respective political authorities after the financial crisis. Notably, the ECB has been particularly capable of shaping policy debates beyond its immediate monetary policy and financial stability remit because of the heightened dependency of debt-laden national executives on its sovereign bond

purchase programmes. The ECB was able to cajole Southern European governments into accepting deep structural reforms and spending restrictions because it had the ability to determine whether those countries would default on their debts.⁷ The weakness of these countries' sovereign finances helps reveal why the ECB has been able to induce deference on the part of their national governments. This marks a clear difference between the ECB and the other two central banks considered in this thesis. While both the Federal Reserve and the Bank of England have had some influence in fiscal policy debates, neither has had the leverage to compel politicians to act in line with its preferences.

In explaining why the *de facto* authority of central banks has increased after the financial crisis, this chapter has explored central banks' structural power, which is rooted in the interdependencies between actors that govern their interactions with one another. Structural power is a more indirect and hidden form of power than authority, which involves direct interactions with actors inducing deference others. However, both structural power and authority employ a conception of power that is negative: power is conceived in terms of actors' ability to influence the behaviour of others. Both structural power and authority are 'power over' concepts. In the next chapter, the focus shifts from explaining how central banks' relationships with their key interlocutors have changed to a consideration of how these changes have affected the capacity of central banks to achieve the objectives that politicians have assigned to them. In examining this more forward looking question, the next chapter employs a different conception of central bank power: one in which power is understood

positively, as an ability to achieve ones' goals, rather than as an ability to get others to do what they would not otherwise do.

¹ Those who invoke MM in the current debate over bank capital adequacy freely admit that the mix between capital and debt in a banks' funding structure is not irrelevant in practice (see for instance Pflleiderer 2010; Admati and Hellwig 2013, 2014). Most notably, interest payments on debt are tax deductible, but dividends to shareholders are not, meaning that the tax code effectively encourages banks to fund themselves with debt rather than equity. Modigliani and Miller themselves readily accepted that their irrelevancy result would only hold under highly restrictive assumptions and they spent much of their careers refining their theory in light of real world 'frictions' (See MacKenzie 2006). Still, for these authors, the supposed absence of a direct link between capital and bank lending augurs against using capital as the main instrument for controlling the supply of credit.

² The name was eventually changed to Financial *Stability* Oversight Council.

³ Hall, R. (2008) makes a similar case. He refers to central banks' unique capabilities as 'deontic powers' in order to emphasise how they arise from intersubjectively shared understandings.

⁴ Short-term debt instruments include commercial paper, certificates of deposit, and repurchase agreements ('repos'); long-term instruments include senior and subordinated 'term debt' and covered bonds (Le Leslé 2012)

⁵ This is not to deny the great heterogeneity of funding structures within the euro area. Notably, German banks have tended to rely on longer-term sources of wholesale funding, while French banks have been the most heavily reliant on short-term debt instruments (Hardie and Howarth 2013; Howarth 2013). In the UK, the funding gap underestimates how dependent UK banks became on central bank liquidity insurance because customer loans accounted for only about 50% of UK banks' assets (Bush et al. 2014).

⁶ Since central banks can always print more money to meet their obligations, they cannot go bankrupt like commercial banks (Archer and Moser-Bohem 2013). However, because central banks pay their profits to national treasuries, any losses they suffer will ultimately be passed on to taxpayers in the form of lower redemptions. Were a central bank to enter negative equity, market participants and politicians may conclude that there was a need to recapitalise the central bank, even if there is nothing inherently preventing a central bank from operating with negative equity. Under such circumstances, central bank policy credibility and independence would be in doubt. For these reasons, central banks generally strive to operate with positive equity and to avoid losses at all costs (see Caruana 2013; Stella 2005).

⁷ The ECB has also employed a strategy of behind-the-scenes conditionality in its provision of emergency liquidity assistance to the troubled banking sectors of Ireland and later Greece (see, for example, ECB 2014f).

6 CONTEMPORARY DYNAMICS OF CENTRAL BANKING

6.1 INTRODUCTION

So far, this thesis has examined the power of central banks in *relational* terms. Our concern has been the ability of central banks to exert ‘power over’ politicians and financial market participants, including their ability to win policy debates and set the parameters within which other actors perceive and frame their preferences. This chapter examines central bank power in terms of *empowerment*, focusing specifically the concept of ‘capacity’. Central bank capacity is a more positive understanding of central bank power that concerns their ‘power to’ do things. For the purposes of this thesis, capacity is defined as *the ability to attain specified outcomes* (Morriss 2002: 33). The rationale for discussing central bank capacity derives from the intuition that while central banks’ actions necessarily affect other actors, an array of factors, other than their ‘power over’ those actors, shape how successful they are in achieving their objectives. Put another way, central banks’ authority and their structural power are important factors determining central banks’ ability to attain their objectives, but they are not the only factors. This chapter evaluates the merits and drawbacks of the different policy objectives and tools that each central bank is developing, their particular ‘styles’ of policy implementation and the coordinative challenges they face with respect to making and implementing policy in their particular jurisdictions. The purpose is to assess how these different aspects of central banks’ activities and environments condition their

chances for ‘success’ in terms of protecting consumers of financial services and maintaining financial stability.

The chapter identifies three sets of conditions – other than authority and structural power – that affect central banks’ capacity in the financial stability domain. First, it examines the ‘fitness for purpose’ (Dyson 2009) of the particular policy instruments that each central bank is adopting in order to further its objectives. There is a significant divergence between the three central banks in terms of their ‘intermediate objectives’, that is, the objectives they have set for themselves in pursuit of their higher-level (statutory) financial stability objectives. In particular, the central banks differ in respect of the degrees of emphasis that each places on time-invariant ‘structural’ reforms that aim to increase the resilience of the financial system and time-varying ‘countercyclical’ policies that aim to dampen cyclical fluctuations in credit conditions and asset prices. As discussed below, resilience-focused policies exhibit important continuities with pre-crisis forms of financial regulation, both in theory and in practice. Countercyclical policies recall modes of financial regulation that have been out of favour in most Western economies since the 1970s. As such, they represent more of a fundamental discontinuity from the pre-crisis *status quo ante*.

The second set of conditions shaping central banks’ capacity is their ‘styles’ of policy implementation, in particular a preference for rules over discretion, or *vice versa*. Prior to the financial crisis, central banks and financial supervisory authorities were often categorised as adopting either ‘principles-based’ or ‘rules-based’ regimes. This distinction was sometimes overdrawn, obscuring the

convergence on more formalised and programmatic approaches to financial regulation that took place in many countries from the 1970s onwards (see Chapter 3). Yet the distinction did highlight certain enduring differences in respect of national styles of policy implementation, in particular the extent of discretion exercised by policymakers in different jurisdictions in executing their mandates. Such differences persist after the financial crisis. Preferences for rules-versus-discretion are embedded within the organisational cultures of central banks and financial authorities and the wider national (or regional) institutional contexts within which they operate. The rules-versus-discretion dichotomy is apparent in central banks' implementation of both macroprudential and microprudential policies. The chapter argues in favour of more discretionary approaches to implementing financial stability policy. It suggests policymakers should be willing to intervene even in conditions of fundamental uncertainty, where they do not have the luxury of perfectly reliable measures of systemic risk or policy effectiveness. By extension, it suggests central banks need to accept higher levels of reputational risk, recognising that their broadened mandates bring with them a greater probability of making mistakes.

The third set of conditions relevant to central bank capacity concerns the extent to which policy is coordinated with other authorities involved in financial regulation and wider macroeconomic policymaking. Central banks do not operate in a vacuum. In all three cases, central banks coexist with regulatory authorities that have an impact on financial stability both domestically and at the international level. At the international level, forums such as the Basel

Committee on Banking Supervision (BCBS) and the Financial Stability Board (FSB) are the ultimate source of most of the financial stability policies that central banks implement. To the extent that international standards limit central banks' ability to tailor rules or supervisory approaches to their national financial systems, they may diminish the capacity of central banks to maintain financial stability within their borders. At the national level, central banks must also share power with non-central bank financial supervisors, which can lead to bureaucratic infighting and other operational challenges.

Central banks' capacity in regards to financial stability also depends on wider macroeconomic conditions. While central banks are generally responsible for setting monetary policy, as discussed in the previous two chapters, they have limited (albeit varying) influence over fiscal policy. The overall mix of fiscal and monetary policies at any given moment will profoundly influence financial conditions and the capacity of central banks to achieve their financial stability objectives. The chapter evaluates how interconnections and conflicts between fiscal policy, monetary policy and financial stability policy have influenced central banks' policy choices and their overall capacities in relation to financial stability.

Before proceeding, one qualifier is in order. The analysis that follows confines itself to discussing central bank capacity in relation to financial stability policy. It is not the intention to discuss capacity in relation to monetary policy, although aspects of monetary policy are discussed where relevant (for useful discussions of post-crisis developments in monetary policy see Bean et al. 2010;

Eichengreen et al. 2011; Blinder 2013; Issing 2013; Reichlin and Baldwin et al. 2013; Fernández-Albertos 2015).

6.2 INTERMEDIATE OBJECTIVES AND POLICY CHOICES

6.2.1 RESILIENCE VERSUS COUNTERCYCLICALITY?

As noted, the three central banks place different degrees of emphasis on the objective of enhancing the resilience of the financial system to shocks and the objective of containing systemic risks by dampening cyclical fluctuations in credit conditions and asset prices. The primary objectives of ‘resilience-focused’ approaches are twofold: diminishing the likelihood that a systemically important firm will fail and reducing the impact that such a failure would have on the financial system were it to occur. The resilience approach involves imposing time-invariant measures that alter the distribution of risk within the financial system at a given moment in time, making financial institutions less likely to fail. It also requires banks to fund themselves in such a way that the costs of their potential failure would fall on shareholders and unsecured creditors, rather than taxpayers.

The calibration of time-invariant prudential standards has been greatly strengthened since the financial crisis. The Basel Committee on Banking Supervision (BCBS) has agreed measures to increase banks’ ability to absorb losses by requiring them to fund themselves with greater quantities of capital, especially the purest form of capital, so-called Common Equity Tier 1 (see BCBS 2011). Furthermore, several new prudential metrics have been added to the pre-crisis framework, which relied only on the ratio of capital to risk-weighted

assets. This includes the ‘leverage ratio’, which sets minimum capital requirements against banks’ total, non-risk-weighted, assets; and two new liquidity regimes, the liquidity coverage ratio and the net stable funding ratio. Alongside these innovations, the Financial Stability Board (FSB) has put in place new standards for bank resolution, which aim to end the phenomena of ‘too-big-to-fail’ by requiring systemically important banks to fund themselves with more capital and loss-absorbing forms of debt, and to ensure that the distribution of financial resources within their group structures facilitates orderly resolution (FSB 2011; 2014). Financial regulators are also implementing ‘structural’ reforms which prohibit certain types of financial entity from performing specified activities with the aim of insulating so-called ‘utility’ banking – such as taking deposits and making loans to individuals and small businesses – from ostensibly riskier ‘casino’ banking, such as proprietary trading.

It is fair to say there have been significant advancements in central banks’ thinking around the concept of financial resilience since the financial crisis. Regulators no longer look upon complexity and interconnectedness as signs of risk being dispersed to those best able to bear it, but rather as sources of uncertainty and vulnerability (see, for example, Haldane 2009). Furthermore, regulators have identified the problem of ‘too-big-to-fail’ to be both iniquitous, since systemically-important banks benefit from implicit public guarantees, and a source of moral hazard, driving irresponsible risk-taking in financial markets (see Dudley 2013).

However, resilience-focused approaches also exhibit strong continuities with pre-crisis microprudential financial regulation (cf. Mügge 2013). Much resilience-focused policy was present prior to the financial crisis. For example, regulatory limits on banks' large exposures to individual counterparties or to groups of connected counterparties have long been a feature of the microprudential toolkit. Such tools have the effect of limiting risks arising from interconnectedness in the financial system, which is now a key priority for post-crisis regulation. Indeed, prior to the financial crisis, regulators already imposed capital and liquidity requirements and complex standards for risk management and corporate governance. While the calibration of these policies was, with hindsight, wholly too liberal, they shared the same intermediate objective as post-crisis resilience-focused policies, namely that of requiring more prudent risk management of individual institutions. This is a broadly market-oriented objective; it takes systemic financial instability to be an exogenous constraint, which financial institutions must adapt to.

Countercyclical approaches involve time-varying measures, which aim to 'lean against' emerging imbalances in the supply of credit, fluctuations in asset prices or excessive growth of private sector indebtedness. The countercyclical toolkit includes measures such as limits on the maximum loan-to-income or loan-to-value ratios for residential mortgages; time-varying adjustments to the provisions banks make against losses; and variations in the level of required reserves banks hold at the central bank (see IMF 2013, Claessens et al. 2014; and Claessens 2014 for overviews). Countercyclical policies were common in Europe and the United States in the three decades after the Second World War,

when central banks were largely subordinate to government control (see Elliot et al. 2013 for the United States; Watson, C.M. and Herzberg 2014 for the United Kingdom; and Perez 1998 for France and Spain). While such policies were used extensively in East Asia and Central Eastern and Southeastern Europe in the 1990s and early 2000s (Zhang and Zoli 2014; Vandebussche et al. 2013), they fell out of use in the Western countries in the period of market orthodoxy that immediately preceded the financial crisis (see Chapter 3). To the extent that they have re-emerged after the financial crisis, they are indicative of a more fundamental discontinuity in the trajectory of change in financial regulation than the evolution and reinforcement of resilience-focused approaches.

6.2.2 OBSERVED APPROACHES

In the United States, the Federal Reserve's on-going regulatory agenda focuses overwhelmingly on ensuring the resilience of the largest firms (Tarullo 2013). The Fed has issued new capital standards for banks, implementing and in some areas going beyond the 'Basel III' international capital framework (see FRS, OCC and FDIC 2013a, 2014). It has also issued a raft of more stringent rules for the large banks and systemically important non-bank firms under its supervision. Key milestones include requirements for banks to submit 'resolution plans', which detail how they could be wound down safely (FRS and FDIC 2011), and rules in relation to various stress tests (FRS 2011, 2012a, 2012b). More recently, the Fed issued a set of rules to implement Sections 165 and 166 of the *Dodd-Frank Act*, which require it to set out prudential standards for large banking

firms that are more stringent than for smaller firms (FRS 2014). An additional milestone was the joint agreement between the Fed and other US regulators on the implementation of the so-called 'Volcker Rule' (FRS 2013; FRS, OCC, FDIC and SEC 2013). This restricts banks' ability to trade 'on their own account' and limits their relationships with hedge funds and other investment companies. The Volcker Rule is a resilience-focused measure since it focuses on the structure of the financial system and the distribution of risk amongst market participants at any given moment.

The Federal Reserve's use of countercyclical policies has been more limited. Regulators interviewed for this thesis identified only one such initiative: in 2013, the Fed and other Federal banking regulators issued supervisory guidance on 'leveraged lending', which may have some effect in constraining the build-up of debt in the commercial sector (FRS, OCC and FDIC 2013b; author interviews, 11 and 16 July 2014, Washington DC).¹ Arguably, the Fed's approach to stress testing (see below) also allows it to respond dynamically to the emergence of systemic risks, although here the main emphasis is on ensuring financial institutions are resilient in the face of cyclical fluctuations in credit conditions, rather than dampening those fluctuations in the first place.

Both the Bank of England and the ECB are pursuing a more balanced approach. On the resilience side, both have enhanced the rigour and stringency of microprudential supervision, including through stress-testing exercises (see below) and, in the case of the Bank of England, by establishing rules that hold firms to more stringent capital standards than the minimums laid down in EU legislation (see Bank of England 2013b). Both are also working to increase the

resolvability of banks. As the UK resolution authority, the Bank of England has developed proposals for ensuring operational continuity of failing banks' core business services and for apportioning losses amongst shareholders and creditors (see Bank of England 2014a). The ECB's role in resolution is more limited, but it recently established a Crisis Management Division to provide expertise in reviewing banks' resolution plans and to participate in international Crisis Management Groups², which have been established to manage the potential failure of globally significant banks (ECB 2014b). Like the Federal Reserve, both the Bank of England and the ECB are also helping to implement structural banking reforms. The Bank of England is implementing the 'ring fencing' of banks' retail activities from the activities of their wider groups. This was first proposed by the UK 'Independent Commission on Banking', Chaired by Sir John Vickers, which was established in 2010 to provide recommendations of a structural and non-structural nature (see, for instance, Bank of England 2014f). Legislation on structural reforms in the EU is yet to be agreed, but will follow the recommendations of a High Level Expert Group chaired by Erkki Liikanen, Governor of the Bank of Finland. The ECB has expressed its support for the recommendations, which would impose a ban on proprietary trading (ECB 2014c).

On the countercyclical side, both the Bank of England and the ECB have demonstrated commitment to pursuing macroprudential policies of a time-varying nature. In mid-2012, the Bank of England's Financial Policy Committee (FPC) recommended that liquidity requirements for banks should be lowered and that risk weights on certain new lending to small and medium sized

enterprises should be set to zero (Bank of England 2012). These were overtly countercyclical macroprudential policies designed to boost lending to the real economy during a slump. The Bank of England was also early to operationalise the so-called 'Countercyclical Capital Buffer' (CCB). This instrument, which is part of the 'Basel III' international framework of capital standards, requires banks to raise additional capital during periods of credit growth. Its primary aim is to improve banks' ability to continue lending in a downturn (i.e. banking sector resilience), but it may also dampen the magnitude of credit cycles in the first place (BCBS 2010). So far, the FPC has maintained the CCB at zero, reflecting the subdued volume of lending to the real economy after the financial crisis. Nevertheless, by actively deliberating its calibration each quarter, the Bank has demonstrated its readiness to intervene to contain excess credit growth. Furthermore, the Bank of England has signalled its desire to adjust the new leverage ratio over the course of the financial cycle, in tandem with adjustments in the countercyclical capital buffer; by the Bank's own analysis, it is the only major jurisdiction proposing to vary the leverage ratio in this way (Bank of England 2014g: 21).

The ECB's support for the use of containment-focused policies is manifest in the outputs of the European Systemic Risk Board (ESRB), which it dominates (see Chapter 4). In 2013, the ESRB issued a recommendation to the macroprudential authorities of member states setting out five intermediate objectives of macroprudential policy. The first of these objectives, 'to mitigate and prevent excessive credit growth and leverage', is overtly focused on countercyclicality (ESRB 2013). The recommendation also set out an indicative

list of countercyclical tools that member states should have at their disposal. This included the CCB; time-varying adjustments to sector-specific capital requirements; countercyclical use of leverage ratios; and loan-to-income or loan-to-value limits (ESRB 2013).

With the creation of the Single Supervisory Mechanism in November 2014, the ECB became jointly responsible with the national competent authorities (NCAs) of member states for some aspects of macroprudential policy. While the ECB had not taken any macroprudential actions by the endpoint of the timeframe considered in this thesis, early indications suggest it will retain an approach focused on countercyclicality. For instance, in 2014, ECB Vice-President Vítor Constâncio, who generally leads the ECB's work on macroprudential policy stated:

It is crucial to recognise that the financial cycle has an important endogenous component which arises because banks take too much solvency and liquidity risk. The aim of macro-prudential policy should be to temper the financial cycle rather than to merely enhance the resilience of the financial sector ahead of crises (Constâncio 2014).

These remarks contrast sharply with those of Constâncio's counterparts at the Federal Reserve. Senior Fed officials – including Governor Daniel Tarullo, who represents the Fed on most regulatory issues – express scepticism as to the reliability of measures of time-varying systemic risk, the possibilities of calibrating countercyclical tools effectively and the efficacy of measures that

may be easily circumvented through regulatory arbitrage (Tarullo 2013; author interview, 11 July 2013, Washington DC).

6.2.3 FIT FOR PURPOSE?

Prior to the financial crisis, most efforts to improve financial governance focused on increasing the quantity and quality of information available to market participants (transparency), improving market-sensitive risk-management and strengthening prudential standards for (individual) financial institutions (Persaud 2000, 2015; Best 2010; Walter 2008). These efforts were criticised as a manifestation of a ‘neo-liberal’ economic worldview that had come to dominate policymaking, professional and academic circles (Hall, P. 1993; Best 2005, Chapter 6; Baker 2006). It has been argued that during this period, financial regulation came to be based on ‘simplified versions of the dominant beliefs of economists’ (Turner 2011). In particular, officials took it as axiomatic that markets were ‘efficient’, both in the sense that the price of any given asset would accurately reflect all publicly available information (Fama 1970) and in the sense that the ‘self-interests of organizations, specifically banks and others, were such as that they were best capable of protecting their own shareholders and their equity in the firms’ (Greenspan 2008).

Scholars are divided as to whether the post-crisis shift to macroprudential policy represents a potential (but as yet unrealised) ‘paradigm shift’ in financial regulation (Baker 2013b) or incremental tweaking of existing market friendly approaches (Moschella and Tsingou 2013; Porter 2014; Helleiner 2014; Underhill 2014). Whichever side of this debate one comes down on, it is clear

that the Federal Reserve's resilience-focused approach adheres more closely to the pre-crisis orthodoxy than the more mixed approaches of the Bank of England and the ECB. The Federal Reserve's approach can be characterised as microprudential policy with a 'macroprudential overlay' (cf. Haldane 2013). The stringency of its microprudential regulations is tailored to the systemic risks that firms pose, while stress tests provide a mechanism for requiring banks to provision against emerging risks. The overriding purpose of such policies is to ensure that the financial system can withstand a major recession or financial shock, rather than to contain the likelihood of such shocks occurring in the first place. In contrast, the countercyclical policies being implemented or considered in the United Kingdom and the euro area are based on ideas that are ontologically incompatible with the pre-crisis efficient markets orthodoxy (Baker and Widmaier 2014). Such ideas include notions such as endogenous financial instability and the procyclicality of credit (Minsky 1986), herd-like investment behaviour (Persaud 2000) and neglected risks due to investor irrationality and collective myopia (Gennaioli et al. 2011).

One need not view countercyclical policy as the 'saviour of neoliberalism' (see Casey 2014) to believe that an approach that is balanced between resilience and countercyclicality is likely to prove superior to one that focuses almost solely on resilience. The experience of the financial crisis demonstrated that the scale of losses that emerge after a finance-led boom can greatly outweigh the loss-absorbing capacity of banks, even where additional provisions have been built up through the cycle. For example, the Bank of Spain required Spanish banks to make increasingly large provisions against losses

during the decade preceding the financial crisis. When the Spanish property bubble burst, Spanish banks quickly burnt through these additional buffers. Absent time-varying containment policies to dampen the financial cycle, bank capital requirements need to do all the heavy lifting. In such a scenario, they would probably need to be an order of magnitude greater than they currently are. Indeed, advocates of resilience-focused approaches have argued that capital requirements should be in the region of 20 per cent of risk-weighted assets (Miles et al. 2011; ICB 2011; Admati and Hellwig 2013). This is double the amount agreed in the Basel III international capital framework and more than any central bank currently requires.

6.3 STYLES OF POLICY IMPLEMENTATION

6.3.1 RULES VERSUS DISCRETION

A second area of divergence between the three central banks centres on the respective preferences for ‘rules’ and ‘discretion’ in the implementation of financial stability policies. The rules-versus discretion dichotomy has a long pedigree in discussions of central bank governance and policy implementation. For example, prior to the financial crisis, there was a longstanding debate amongst banking supervisors as to the merits of ‘rules-based’ versus ‘principles-based’ approaches to banking supervision (Black et al. 2007). Likewise, there is a long-running debate in relation to monetary policy as regards the impact of rules-based and discretion-based decision-making on price stability outcomes (see Kydland and Prescott 1977; Fischer 1990, among others).

The rules-versus-discretion dichotomy is much discussed amongst economists and financial technocrats in relation to the implementation of both macroprudential and microprudential policies. To their proponents, the main advantages of rules-based approaches is that they tie the hands of policymakers, reducing the likelihood that they will act arbitrary ways, whether in respect of decision-making around distressed financial institutions or in relation to measures to mitigate systemic risks to financial stability (Cecchetti and Schoenholtz 2014). For example, in the microprudential policy domain, a rule-based regime may prevent supervisors from engaging in so-called ‘supervisory forbearance’; that is, turning a blind eye to emerging problems at a supervised firm in the hope that the institution will recover of its own accord. In this example, a rules-based approach is a solution to the alleged ‘time-inconsistency’ problem in microprudential supervision, whereby supervisors promise to adopt a prudent stance in the long-run, but face incentives to act leniently in the short run (see Masciandaro et al. 2008; Cihak 2010; on ‘time inconsistency’ in monetary policy see Kydland and Prescott 1977; Barrow and Gordon 1983; Rogoff 1985). In relation to macroprudential-policy, proponents of rules-based approaches claim that rules increase transparency, providing greater predictability to the regulatory environment (Lim et al. 2011). This could ultimately cause banks to hold lower reserves of capital and liquidity as a precaution against regulatory uncertainty, ostensibly resulting in a more efficient allocation of financial resources (Bank of England 2009).

Discretion comes in a number of guises in central banking and financial stability policy. For example, ‘principles-based regulation’ involves requiring

financial market participants to adhere, first and foremost, to the spirit of high-level principles in addition to the letter of detailed rules. Principles-based regulation is said to afford supervisory authorities the flexibility necessary to maintain prudential standards even amid rapid financial innovation, wherein new products and activities emerge more quickly than rulebooks can be updated (Toniolo and White 2015). Discretion is also central to so-called ‘risk-based regulation’. Risk-based approaches involve implementing systematised mechanisms for prioritising risks and deploying supervisory time and resources to firms accordingly (Black and Baldwin 2010). Such approaches are discretionary since in practice they require supervisors to make a judgement about which firms and activities to concentrate on, and which elements of the rulebook will be actively monitored and enforced. Central banks and financial supervisory authorities often also refer to themselves as ‘judgement-based’ (see, for example, Bank of England 2014b). This is shorthand for describing situations in which decisions are not tied to particular indicators or trigger points, but instead are based on a holistic appraisal of multiple sources of information. In regards to microprudential supervision, a judgement-based approach would involve supervisors drawing on a wide range of indicators, both quantitative and qualitative, about the financial soundness of a firm and the nature of its risk management. Such an approach is said to guard against so-called ‘model risk’, wherein decisions are susceptible to the errors inherent in supervisors’ own risk-models and frameworks.

Balancing rules and discretion in financial policy involves trade-offs. Risk-based approaches are inherently less costly than rules-based approaches.

However, since policymakers do not have perfect foresight, they may decide to deprioritise particular firms or activities that subsequently turn out to be major sources of risk. Principles-based regulation theoretically provides flexibility for supervisors to keep-up with financial innovation. Yet prior to the financial crisis, principles-based regulation became a veil for excessively detached, ‘light-touch’, supervision (see McPhilemy 2013). Likewise, judgement-based decisions provide a means of acting even where firms are in compliance with the letter of detailed rules. However, critics suggest that suggest, ‘excessive reliance on supervisory discretion cannot replace a poor regulatory regime and often leads to inappropriate forbearance’ (Toniolo and White 2015).

6.3.2 OBSERVED APPROACHES

In light of these apparent trade-offs, it is unsurprising that the three central banks discussed in this thesis have exhibited a certain degree of convergence in their preferences for rules and discretion. Prior to the financial crisis, the US regulatory agencies and the Federal Reserve were widely regarded as exemplars for the rule-based approach. After the financial crisis, US regulators now refer to themselves as adopting a principles-based approach (see IMF 2015). Furthermore, as a consequence of the Dodd Frank Act, the regulatory regime in the United States has become more risk-based, since the most systemically important financial institutions have been singled out for more stringent regulation and more intensive supervision. In the United Kingdom, the reputation of principles-based regulation was dealt a severe blow, becoming associated with the ‘light touch’ epithet. However, while both the Financial

Services Authority and subsequently the Prudential Regulation Authority dropped the rhetoric of principles-based regulation, in practice the UK authorities continue to follow a principles-based approach. Moreover, the Bank of England routinely refers to itself as a 'judgement based' regulator (see below). The ECB Single Supervisory Mechanism (SSM) has stated that its processes for microprudential supervision will be 'built on a "constrained judgement" approach, so as to ensure consistency across the SSM, while allowing for expert judgement to consider the complexity and variety of situations within a clear and transparent framework' (ECB 2014b).

Notwithstanding this apparent convergence, the institutional legacies of pre-crisis styles of policy implementation have influenced how the central banks – particularly the Federal Reserve and the Bank of England – have set about implementing financial stability policies after the financial crisis. A key area of divergence in relation to rules and discretion concerns stress testing. The Federal Reserve has pioneered the use of rule-based stress tests. In 2011, the Federal Reserve issued a 'Capital Plan Rule' requiring large banks and designated systemically important financial institutions to submit detailed capital plans on an annual basis (FRS 2011). Capital plans set out banks' proposed capital actions (such as paying dividends, issuing shares or conducting share buybacks), and their projections for capital adequacy under various stress scenarios (FRS 2011). The Federal Reserve evaluates these plans qualitatively against a detailed set of criteria and it compares the firm-run stress tests against its own calculations. If a bank cannot demonstrate that its capital adequacy would remain above minimum required levels in stressed conditions, or if the

Federal Reserve is otherwise dissatisfied with its capital planning process, it 'objects' to the capital plan. Following such an objection, banks are generally prohibited from paying dividends or conducting share buybacks. As Hirtle and Lehnert (2014) argue, this 'pass-or-fail' characteristic of the US stress tests, combined with automaticity of the prohibitions on distributions for firms that fail the test, represents a shift from discretion to rules in the supervision of large banks.

By contrast, the Bank of England's approach to stress testing emphasises the importance of judgement (Bank of England 2013c). The Bank has indicated that its staff will synthesise the results of supervisor-led and company-led stress tests that use different models for projecting the various parameters that feed into the tests, such as net interest income or future operating costs (Bank of England 2013c). Moreover, it has stated that there will be no simple 'pass-or-fail' mechanism and that policy responses will not be 'mechanically' linked to test results. Whereas in the United States a bank that fails a stress test would face automatic restrictions on its ability to pay dividends or conduct share buybacks, the Bank of England reserves to itself a broader range of powers, including raising capital requirements for the firm or requiring senior managers to address specific issues relating to capital planning and bank governance (Bank of England 2013c: 30). Of course, the Bank of England, like other financial supervisory authorities, implements a vast rulebook of highly complex rules. In this regard, it would be fallacious to describe it as operating a purely discretion-based regime. Nevertheless, the Bank's emphasis on judgement can be

regarded as merely the latest incarnation of a characteristically British preference for discretion (see Clift and Tomlinson 2010).

As a new supervisory authority, the ECB Single Supervisory Mechanism is less constrained by the legacies of earlier supervisory approaches. While the ECB's stress testing capabilities remain at a nascent stage, early indications suggest that it will fall between the Bank of England and the Federal Reserve in respect of its use of rules and discretion. In 2014, the ECB coordinated a set of stress tests as part of its 'Comprehensive Assessment' of the 130 'significant' banks that it supervises directly within the SSM. The Comprehensive Assessment also comprised an Asset Quality Review (AQR), involving a detailed exposition of the risks on banks' balance sheets. The ECB placed great emphasis on ensuring the quality and consistency of the results across banks and jurisdictions. To that end, it cooperated closely with the European Banking Authority and national authorities to ensure standardised reporting and methodologies were used. It also devoted large numbers of its staff to a quality assurance process (see ECB 2014d). The ECB's methodology for conducting stress tests, and its interpretation of results appears closer to a rules-based approach, with banks publicly declared to have either passed or failed. As one of the ECB's main objectives is to ensure consistent supervision for all SSM-supervised banks, a relatively prescriptive rules-based approach is likely to persist. At the same time, the ECB has reserved to itself some discretion in how it deals with banks with insufficient capital. It has stated that it will use a range of quantitative and qualitative measures to address any shortcomings, with interventions not automatically tied to the results of its assessments (ECB 2014b: 25-26).

Central banks' preferences as regard rules-based versus discretion-based styles of policy implementation influence their intermediate objectives and their choice of macroprudential policy instruments. In theory, countercyclical macroprudential policy could be based on adherence to a set of strict rules, with measures 'triggered' whenever certain conditions arise. In practice, such policies require a great deal of judgement and discretion. Research into the identification of systemic risks and the calibration of macroprudential tools remains at an early stage. There is currently no single indicator, analogous to the rate of inflation, which can act as a target for countercyclical macroprudential policies, despite the efforts of policymakers to establish 'composite indicators of systemic stress' (see, for example, ESRB 2012a). In the United States, a preference for rules over discretion, combined with dissatisfaction regarding the uncertainty surrounding the current means of identifying asset price bubbles, has been an important factor shaping the Federal Reserve's preference for resilience-focused policies to date (author interview, 11 July 2014, Washington DC). Indeed, the preference for measurability and automaticity may explain why the United States has so far failed to elaborate how it intends to implement the countercyclical capital buffer, which is part of the internationally agreed Basel III framework (BCBS 2011). By contrast, the Bank of England's FPC has published its intention to draw on a wide range of potential inputs in reaching judgements about the setting of macroprudential policies. While it currently publishes a set of core indicators that it will consider in reaching judgements about the countercyclical capital buffer (Bank of England 2014e), it has stated that 'no single set of

indicators can ever provide a perfect guide to systemic risks’ and that ‘policy will not be mechanically tied to any specific set of indicators’ (Bank of England 2014h). Likewise, while the ESRB issued guidance to the EU member states regarding the quantitative indicators that should be taken into account in the implementation of the countercyclical capital buffer, it stressed the importance of judgement, particularly when it comes to releasing the buffer at the onset of a downturn or in a financial crisis (ESRB 2014a).

6.3.3 RULES, DISCRETION AND TRANSPARENCY

As discussed above, increasing transparency is often cited as a motivation for adopting a more rules-based approach to financial stability policy. The demand for transparency stems from the notion that increasing the amount of information available to financial markets about the likely path for financial regulations leads to improved efficiency and stability of financial market outcomes. This notion was a guiding principle behind much financial regulation and supervision prior to the financial crisis and it remains a highly influential factor in the design of new regulations even after the crisis. Under a rule-based approach, so the argument goes, financial market participants have greater certainty about future policy actions, so they will allocate their scarce resources more efficiently.

The rhetoric of transparency is intuitively appealing, evoking positive connotations with notions such as democratisation and open government. However, there are reasons to doubt that eliminating discretion in order to improve transparency truly reduces uncertainty or improves economic

outcomes (cf. Best 2005). The experience of the recent financial crisis – and, indeed, countless financial crises before it – is that neither individual market participants nor markets as a whole are capable of assimilating or processing information in the efficient manner assumed in orthodox economic theories (cf. Keynes 2036; Kindleberger 2011[1978]; Minsky 1986; Akerlof and Shiller 2009, among many others). Indeed, notwithstanding consistent and continuing efforts to improve the transparency of financial markets and market regulation, global markets have become increasingly unstable in recent decades.

If heightened transparency is unlikely to lead to more efficient market outcomes, the case for rules-based financial stability policy loses much of its force. By extension, central banks such as the Federal Reserve, which have striven to maintain a more rules-based approach to their implementation of microprudential and macroprudential policy, can be regarded as having inadvertently weakened their capacity to attain their financial stability objectives because they have constrained their own ability to respond to financial innovation and ‘creative compliance’ (whereby firms comply with the letter but not the spirit of the rules), which can render existing rulebooks obsolete. Conversely, the more discretion-based approach of the Bank of England, and to a lesser extent the ECB, provides greater agility to respond to new market developments. It is, however, important not to overstate the differences between the three central banks on this point. All claim to value transparency and both the Bank of England and the ECB have taken steps to enhance the level of transparency around monetary policy in recent years (see ECB 2014e; Bank of England 2014c). This suggests that the Bank’s adoption of a

more discretion-based approach to its financial regulation and supervision owes more to the institutional legacies of earlier discretionary approaches than to an ideational schism between British and American supervisors regarding the merits of transparency or the ability of financial markets to process and assimilate information rationally.

6.4 POLICY COORDINATION

So far this chapter has focused on factors largely internal to central banks: their self-defined intermediate objectives and their particular styles of policy implementation. Yet the capacity of a central bank to attain its objectives is also dependent on the wider macroeconomic and regulatory environments in which it operates. None of the central banks considered in this thesis has control over all aspects of macroeconomic policy or financial regulation. The policies and decisions of other public authorities may be supportive of central banks' actions and objectives, or they may make the central banks' tasks more difficult. This section focuses on three sets of policy coordination challenges (summarised in Table 6). First, it examines challenges arising from the domestic (or, in the case of the EU, regional) regulatory environments in which central banks are located. Second, it evaluates a number of salient challenges arising from the international regulatory environment. Finally, it examines issues arising from the absence of coordination between central banks and fiscal authorities.

6.4.1 DOMESTIC (AND REGIONAL) REGULATORY ENVIRONMENTS

Challenges associated with regulatory cooperation and coordination are particularly pronounced in the United States. Prior to the financial crisis, US financial conglomerates (such as bank holding companies and financial holding companies) had considerable latitude to choose which federal or state agency would be responsible for supervising them. ‘Cross-regulator regulatory arbitrage’, as Rethel (2014) terms it, led to some highly irregular supervisor-supervisee pairings. Notoriously, American Insurance Group (AIG) – the insurance giant that sold vast quantities of credit default swaps on sub-prime mortgage backed securities – owned a small savings and loans association (or ‘thrift’). This meant that the group as a whole was classified as a Thrift Holding Company and supervised by the Office for Thrift Supervision (OTS).³

The *Dodd Frank Act* partially addressed the problem of cross-regulator regulatory arbitrage by ensuring that the Federal Reserve will supervise the vast majority of financial conglomerates (see Chapter 4). However, it remains the case that most such conglomerates have multiple regulators. Under the 1999 *Gramm Leach Bliley Act*, the Federal Reserve acts as an ‘umbrella’ supervisor of bank holding companies and financial holding companies at the consolidated level. The operational subsidiaries within each conglomerate are supervised by an array of ‘primary regulators’, such as the Office of the Comptroller of the Currency (OCC) or state-level agencies. The Federal Reserve is required to rely ‘to the fullest extent possible’ on the examination reports that primary regulators make in the course of supervising individual operational subsidiaries.

This limits the capacity of the Federal Reserve to understand or control the risks being taken within those subsidiaries.

The challenges posed by the multi-regulator system were exemplified in 2012, when the London branch of JPMorgan Chase Bank lost approximately six billion dollars trading in complex derivatives. JPMorgan Chase Bank is a national bank supervised by the Office of the Comptroller of the Currency (OCC). This entity is a subsidiary of JPMorgan Chase & Company, a bank holding company supervised by the Federal Reserve Bank of New York (FRBNY). A subsequent internal investigation into the FRBNY's supervision of JPMorgan Chase & Company found that the Federal Reserve and the OCC lacked a common understanding of certain aspects of the Federal Reserve's expectations of firms, resulting in gaps in coverage and duplication of effort (OIG 2014).

A further difficulty for the Federal Reserve is its limited authority to control risk taking in the non-bank (or 'shadow bank') financial sector. This makes certain forms of macro-prudential policy more difficult. For example, one much discussed tool for addressing risks in wholesale funding markets is the imposition of minimum 'haircuts' on the collateral used in securities financing transactions such as securities lending and repurchase agreements ('repos').⁴ To address risks in these markets, the Federal Reserve would need to coordinate with the federal agencies primarily responsible for institutional investors, notably the SEC and the CFTC, to impose such rules. Relative to the UK and the euro area, the size of the non-bank financial sector in the United States is large. In 2012, the assets of non-bank financial intermediaries in the United States were equivalent to 174 per cent of the assets of US domiciled banks; the

equivalent figures for the United Kingdom and the Euro area are 42 per cent and 61 per cent, respectively (FSB 2013). This makes interagency cooperation and coordination particularly important. Yet the body established to facilitate this, the FSOC, has been beset by ‘turf wars’ amongst its various member agencies (see Stein, K. 2014; Dayen 2014). The clearest example of this occurred in 2012 when the FSOC proposed to make a recommendation to the SEC on measures to mitigate risks associated with money market funds. The proposal engendered fierce resistance from the affected industry, which allied with the SEC in arguing that only the latter had the necessary expertise to evaluate money market reforms (see, for example, ICI 2012).⁵ The FSOC has also found it difficult to designate ‘systemically important’ non-bank firms to be supervised by the Federal Reserve. At the end of 2014, it had designated only three such companies: AIG, Prudential Financial, and GE Capital Corp.

Relative to the United States, the challenges of domestic regulatory coordination in the United Kingdom are few. With the creation of the FSA in 1998, responsibility for banking, insurance and securities supervision was consolidated into a single entity (see Chapter 3). The FSA was responsible for both prudential regulation and ‘conduct-of-business’ regulation (such as consumer protection, fraud prevention and promoting competition). While supporters of the FSA model highlighted its efficiencies (Briault 1999, 2002), the financial crisis gave credence to the view that prudential regulation and conduct-of-business regulation entail different organisational cultures and do not sit well in a single agency (FSA 2009a, 2009b; House of Lords 2009: 33, Taylor 2014). This view was reflected in the *Financial Services Act 2012*, which

split the FSA into two separate agencies: the FCA to carry out conduct-of-business regulation and the PRA to focus on financial stability (see Chapter 4).

This so-called ‘twin peaks’ model has benefits and drawbacks. The PRA and the FCA dually supervise banks, building societies, insurance companies and large investment firms, with each agency pursuing distinct statutory objectives. The FCA also has responsibility for prudential supervision of smaller investment firms. This means that the FCA supervises some firms that are subsidiaries of PRA-supervised financial groups. As the principal securities regulator in the UK, the FCA is also central to any efforts to mitigate risks from shadow banking. An obvious drawback of these arrangements is that it increases the potential for duplicated work, neglected risks and contradictory decision-making (cf. Briault 1999). Indeed, the distinctions between the two bodies’ respective objectives are not always clear (Georgosouli 2012). For example, one of the FCA’s objectives is to maintain ‘market integrity’, including its soundness *stability* and resilience’ (*Financial Services Act 2012* Schedule 6 (1)(1D), emphasis added). While cooperation arrangements between the two authorities are established in a series of memoranda of understanding, it is perhaps inevitable that over time the organisations will grow apart.

In the euro area, the creation of the SSM was partly a response to regional coordination failures in respect of microprudential policy (Enria 2013; Council Regulation 1024/2013 Recital 12; McPhilemy 2014). In the 1990s and 2000s, European financial markets became increasingly integrated, but inconsistent regulation and supervision created opportunities for cross-border regulatory arbitrage and inhibited risk management (De Larosière et al. 2009). Moreover,

with the onset of the financial crisis, trust and cohesion between NCAs evaporated as officials became increasingly reluctant to talk frankly and openly with one another (De Larosière et al. 2009; author interviews, 2 October 2012, Madrid; 23 March 2013, London). The SSM resolves some of these problems by greatly enhancing the authority of the ECB (see Chapter 4). As the SSM develops operationally, a key factor determining ECB capacity will be the nature of intergovernmental cooperation between NCAs and the ECB within the SSM. Since NCA supervisors' first responsibility is a national one (cf. EC 2007b), it is possible that their incentives could diverge from those of their colleagues in Frankfurt. In turn, this raises the possibility of polarisation between national and supranational officials working in joint ECB-NCA supervisory teams. It also raises the possibility of delays and disagreements at the level of the new Supervisory Board, which is composed of NCA and ECB senior managers.

In the macroprudential policy domain, the challenges of cooperation and coordination are also considerable. Within the SSM, the ECB shares the authority to set certain macroprudential capital buffers for banks with the national macroprudential authorities of euro area member states, including the CCB and sectoral capital requirements. Financial intermediation in Europe is heavily bank based, compared to the United States, meaning that the ECB's (partial) control over these tools gives it an important handle on systemic risk in the region (see ESRB 2014b). However, beyond the regulated banking sector, the ECB's scope for action is limited. To address systemic risks arising in the securities and insurance sectors, or risks of a cross-sectoral nature, the ECB must work with a broad array of national and supranational authorities through

the ESRB. This includes national central banks and financial supervisory authorities, the ESAs, the European Commission and, indirectly, national finance ministries, which are represented in the ESRB by the President of the Economic and Financial Committee. The ESRB, in turn, has tended to focus on risks in the banking sector. Of the seven recommendations issued by the ESRB since 2011 only one – the 2012 recommendation on money market funds – addressed a non-banking sector risk (ESRB 2012b).

6.4.2 INTERNATIONAL REGULATORY ENVIRONMENT

Central banks' ability to attain their financial stability objectives depends on the content of the rules they are enforcing (see Section 6.2 above). In the context of highly globalised financial markets (Helleiner 1994; Cohen 1996), it is important to recognise that such rules are very frequently agreed at the international level and are, therefore, the product of transnational negotiations between central banks and finance ministry officials. Regulators enter into international agreements because they cannot unilaterally ensure financial stability whilst maintaining open and internationally competitive financial markets (Singer 2004, 2007). To the extent that international regulatory harmonisation constrains the flexibility of central banks to define regulations or supervisory approaches in ways that are well suited to their particular national financial systems, they can diminish the capacity of those organisations to maintain financial stability. Indeed, the worldwide convergence on Anglo-American financial standards, calibrated in a manner that was excessively accommodative of the preferences large financial institutions, was arguably the primary policy

failing contributing to the global financial crisis. In view of the comparative focus of this research, a detailed examination of international coordination and cooperation is not provided here. However, it is worth considering how some aspects of the international regulatory environment affect central banks' capacity to attain their intermediate financial stability objectives.

THE INTERNATIONAL REGULATORY FRAMEWORK FOR BANKS

Since the late 1980s, the basic structure for bank capital regulation around the world has been agreed internationally through the Basel Committee on Banking Supervision (BCBS) (see Kapstein 1992, 1994; Tsingou 2008, Lall 2012 among others). The latest iteration of these standards, Basel III, increases the minimum proportion of banks' risk-weighted assets (RWAs) that must be funded through capital, as opposed to debt. It also requires banks to have higher quality capital by, for example, excluding certain forms of debt-equity hybrid instruments from the definition of 'Tier 1' capital and eliminating the concept of 'Tier 3' capital (see Table 6).

Other aspects of the Basel III framework include the introduction of two new liquidity standards, the Liquidity Coverage Ratio and the Net Stable Funding Ratio. The former requires banks to have a sufficient stock of High Quality Liquid Assets on hand in order to be able to survive for a period of 30 days without access to wholesale funding markets. The latter requires banks to fund themselves on an on-going basis with more stable forms of debt and equity funding.

Outside of the Basel III framework, in 2014 the FSB issued for consultation a set of proposals for the resolution of global systemically important banks. Bank holding companies will be required to have 'Total Loss Absorbing Capital' (TLAC) of equivalent to 16-20 per cent of their RWAs (FSB 2014). TLAC is to be composed of capital – as defined in the Basel III framework – and a layer of debt that can be converted into equity (or 'bailed-in') should the bank enter resolution. The idea is that resolution will normally involve a 'single point of entry': losses suffered in an operating company will be passed up to the top-level holding company. Authorities will resolve that top-level holding company, bailing-in its creditors. Theoretically, this will allow the group's operational subsidiaries to remain solvent and free to continue providing essential banking services.

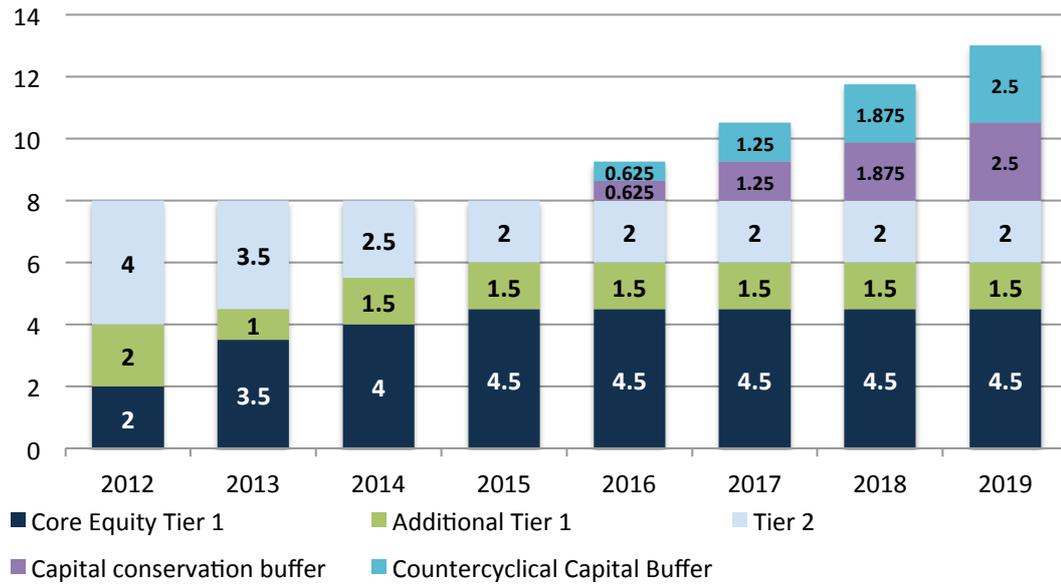
TABLE 6: BASEL II AND BASEL III CAPITAL REQUIREMENTS (% OF RWAs)

Basel II	Basel III
Tier 1 = 4% <ul style="list-style-type: none"> ▪ Innovative capital < 50% Tier 1 capital ▪ Debt-equity hybrid instruments < 15% Tier 1 Capital 	Total Tier 1 = 6% <ul style="list-style-type: none"> ▪ Core Equity Tier 1 = 4.5% ▪ Additional Tier 1 = 1.5%
Tier 2 < 100% Tier 1	Total Tier 1 and Tier 2 = 8%
Tier 3 (vs. market risk only) < 250% of Tier 1 Capital used for market risk.	Capital Conversion Buffer (Core Equity Tier 1) = 2.5%
	Countercyclical capital buffer (Core Equity Tier 1) = up to 2.5%
Total minimum capital = 8%	Total minimum capital = 10.5% (13% with maximum CCB)

Source: BCBS 2011

Critics of the Basel III framework argue that like its predecessor, it is based on a flawed methodology that involves calculating capital charges using banks' proprietary 'Value-At-Risk' models, which estimate future performance of banks' assets according to their performance in the recent past (Lall 2012; Blyth 2013a; Haldane and Madouros 2012; Taleb 2007). Moreover, while the leverage ratio provides some degree of protection against the 'model risk' inherent in banks' VAR models (BCBS 2014), its critics contend that this ratio is woefully inadequate at just 3% of total assets (Lall 2012; Admati and Hellwig 2013). Both Basel III and the FSB TLAC proposals have also been criticised for providing long transitional periods before the full extent of the requirements come into effect (see Figure 1).

FIGURE 2: RISK WEIGHTED CAPITAL REQUIREMENTS AND TRANSITIONAL PERIODS (% RWAs)



Source: BCBS 2011, Bank of England 2013b.

These criticisms aside, the central banks considered in this thesis are only loosely constrained by these international standards. In the United States, the minimum risk-weighted capital requirements of Basel III have become largely irrelevant (cf. KPMG 2013). On the one hand, the Federal Reserve has implemented its own standards – including capital requirements for systemically important firms and the leverage ratio – that exceed the minimum levels agreed in the BCBS. On the other hand, it has adopted an approach to stress testing that requires banks to meet minimum capital thresholds even in the event of a severe shock. This means that minimum capital in ‘normal’ times must be significantly higher than the Basel III framework suggests.

Even in the EU, where the Basel III framework is written into the legally binding Capital Requirements Regulation (CRR) and the Capital Requirements Directive (CRD IV), central banks have room for manoeuvre. This legislation

purports to cut down on the scope for national authorities to ‘gold plate’ or ‘tin plate’ European rules at the domestic level. Areas such as the definition of capital, capital requirements, large exposure limits, liquidity requirements and leverage are subject to the principle of ‘maximum harmonisation’ meaning that they apply directly to firms without the need for transposition into national rulebooks. Yet the detail of European regulations reveals a wealth of options and discretions that often enable national authorities (especially those of larger member states) to continue applying whichever techniques they have historically favoured. To take one example, under Articles 6 and 11 of the CRR, banks are required to comply with prudential regulations on both an individual basis and at the level of their consolidated banking group. In other words, both the individual operating companies within a banking group and the banking group as a whole must meet all prudential requirements. Yet under Article 7 of the CRR, national authorities have the option to ‘switch off’ prudential requirements for individual institutions, meaning that only the wider banking group need comply. The former approach has traditionally been adopted in the United Kingdom, while the latter has traditionally been adopted in France.

Another major deviation from the principle of maximum harmonisation was the decision to allow national authorities – and, since the creation of the SSM, the ECB – to determine the calibration of macroprudential requirements for the banks within their jurisdictions. This includes the CCB (CRD Article 130), various buffers relating to systemically important institutions (CRD Articles 131, 133-134), and discretionary use of capital and liquidity requirements tailored to individual firms (CRD Articles 103, 105). The European Commission and the

ESRB have some ability to constrain member states' discretion in these areas, but initial experience demonstrates that in practice national authorities have ample flexibility to determine the level of capital applying to banks in their jurisdictions (see ESRB 2015). In short, national authorities in the EU have ample discretion to set macroprudential policies in order to mitigate localised systemic risks should they arise.

INTERNATIONAL MACROPRUDENTIAL POLICY COORDINATION

One area where deficiencies in the international regulatory framework could impinge on the financial stability capacity of central banks is international macroprudential policy coordination. For nationally determined macroprudential policies to be effective, they need to be coordinated with those of other countries. Absent international coordination, macroprudential policies are susceptible to both 'leakages' and 'spill-overs'. Leakages occur when the desired effects of a policy are diminished due to international competition (Watson, C.M. and Kincaid 2013). For example, a central bank may determine to 'lean against' a localised property boom by imposing limits on the number of high loan-to-income or loan-to-value mortgages banks under its supervision can issue. The effect of this policy would be reduced if foreign banks moved in to meet the demand for such loans. 'Spill-overs' refer to the situation that arises when policies taken in one jurisdiction have adverse consequences for another jurisdiction. For example, an increase in capital requirements in banks' home jurisdictions may cause them to repatriate capital from their branches and

subsidiaries in host jurisdictions, which could lead to financial instability in the host jurisdiction.

The Basel III framework includes a requirement for national ('home' country) authorities to reciprocate when overseas ('host' country) authorities impose a CCB (BCBS 2010). This involves a home regulator requiring its banks to fund their operations in host countries in line with whatever capital standards the host jurisdiction has chosen to apply. This is the only example of such coordination at the international level. The central banks and financial regulatory authorities of G20 countries cooperate with one another in the Financial Stability Board (FSB). However, while the FSB provides a venue for defining new standards and conducting mutual monitoring through peer reviews, it has not yet developed mechanisms for coordinating the actual use of macroprudential policies across borders.

Macroprudential policy coordination within the EU is better developed. As discussed, the ECB shares with NCAs the ability to set macroprudential policies for banks within the SSM. In practice, it is likely that the ECB will coordinate the use of CCBs across the Banking Union. The ESRB meanwhile provides a venue for cooperation and coordination across the EU as a whole, and in relation to policies affecting non-bank financial sectors and matters of a cross-sectoral nature. The ESRB has already established a 'hub' for information exchange in relation to national usages of macroprudential policies and under the CRD-IV it has a formal obligation to issue opinions on the use of certain macro-prudential tools. Such opinions are intended to focus in particular on questions of cross-border spill-over and leakage (author interview, 7 February 2014, Brussels).

6.4.3 MACROECONOMIC ENVIRONMENT

Ultimately financial systems are interdependent with the real economies in which they are embedded, even if financial market conditions do not always reflect underlying macroeconomic fundamentals. A central bank's capacity to achieve financial stability will be diminished in the absence of economic growth or amid high levels of unemployment. While central banks have operational control over monetary policy, other aspects of macroeconomic policy lie beyond their remit, including fiscal policy, public debt management, and tax policies. To the extent that macroeconomic performance is affected by such policies, central banks' capacity in relation to financial stability is also a function of the supportiveness, or otherwise, of decisions taken in those domains.

FISCAL POLICY, MONETARY POLICY AND FINANCIAL STABILITY

Like 'a car with two drivers', monetary policy and fiscal policy can steer in different directions, each tending to overcompensate for the other (Greider 1987). This often dysfunctional interaction has profound implications for financial stability. Since the onset of the financial crisis, fiscal policy and monetary policy have followed roughly similar paths in each of the jurisdictions under discussion. Fiscal deficits increased markedly between 2008-10 as a result of automatic stabilisers (such as unemployment benefits) and discretionary fiscal stimulus measures. Discretionary stimulus measures were larger in the United States while automatic stabilisers were larger in the UK and the euro area (Schelkle 2012). Then in 2010, fiscal authorities in each jurisdiction pivoted from stimulus to austerity. The pace of consolidation was faster in the UK than

in the United States or the euro area as a whole, although some peripheral euro area governments were forced into harsh austerity measures as the condition of their bailouts by the IMF, the European Commission and ECB (the 'Troika'). The contractionary pressures created by these policies left central banks with little choice but to maintain interest rates at, or close to, zero and to pursue unconventional monetary policies to kick-start lending and stimulate demand (Stiglitz 2010; Koo 2011; Krugman 2013; Blyth 2013b; Wolf 2014 among others).

This mix of fiscal and monetary policies has produced a cocktail of financial stability risks, which central banks have, so far, been unable to address. The low interest rate environment, coupled with the availability of cheap funding for banks caused equity markets to soar, credit spreads to narrow and market volatility to reach historic lows, even as real macroeconomic performance remained depressed (BIS 2014). Some influential officials have argued that central banks should have responded by raising interest rates (see BIS 2014). In the United States, Jeremy Stein (2013, 2014), a member of the Federal Reserve Board until 2014, argued forcefully that monetary policy would be superior to macroprudential policy as a means of combating such risks because it 'gets in all the cracks'. That is, whereas the efficacy of macroprudential policies can be undermined by the migration of financial activity into unregulated products and markets (regulatory arbitrage), monetary policy affects the incentives for risk-taking by all market participants. This consideration is especially pertinent in the United States, which has an outsized non-bank financial sector.

The course of interest rates in recent years demonstrates that none of the central banks under consideration have been willing to use monetary policy in

this way (Carney 2014, Draghi 2013, Yellen 2014). These central banks' reluctance to raise rates was reinforced by the unfortunate experience of the Swedish *Riksbank*, which began raising interest rates in June 2010, in part to counteract perceived threats to financial stability. This episode was widely perceived to have been a dramatic failure, driving the Swedish economy into a period of deflation and undermining the central bank's credibility (Milne 2014). Indeed, it is precisely these adverse side effects of using monetary policy for financial stability purposes that provide the rationale for central banks to implement targeted macroprudential policies to 'lean against' imbalances in particular asset classes or economic sectors (Borio and Shim 2007; N'Diaye 2009). Having said that, it is far from clear that either resilience-focused or countercyclical macroprudential policies have the capacity to overcome the wild gyrations on global stock exchanges and massive international capital flows induced by the period of cheap money that has prevailed since early 2009.

PUBLIC DEBT MANAGEMENT

Another aspect of macroeconomic policy affecting the efficacy of monetary policy – and, in turn, central bank capacity in the financial stability domain – is public debt management. For many years, managing the volume and maturity of public sector debt was a central component of monetary policy (C. Goodhart 2012). From the late 1980s, as monetary policy came to focus solely on varying short-term interest rates and public debt management came to be regarded as separate from monetary policy. Public debt managers have tended to pursue

objectives similar to corporate treasurers: they focus on lowering overall borrowing costs and diminishing rollover and interest rate risk.

The advent of quantitative easing has brought public debt management and monetary policy back together (Chadha et al. 2013). Quantitative easing involves central bank purchases of longer-dated government securities in secondary bond markets. One of the main channels by which this policy provides stimulus to the economy is through the so-called 'portfolio rebalancing effect' (see Joyce et al. 2011). Central banks buy long-dated government securities from commercial banks, which causes the price of those securities to rise and their yields to fall. Banks, in turn, rebalance their portfolios by buying other assets to substitute for those they have sold. With the supply of government securities newly reduced, banks buy substitutes, such as assets linked to real estate. This raises prices and lowers yields in those asset classes as well. This is positive for firms and households because it raises the value of their assets and lowers the costs of servicing their debts. It is also positive from a financial stability perspective because wealthier firms and households are less likely to default (although, as discussed, cheap money can create destabilising imbalances in global financial markets).

The conflict between quantitative easing and public debt management arises because fiscal authorities may simultaneously sell new securities into the market, thereby directly offsetting the effects of the central bank's purchases. As a recent study by Greenwood et al. (2014) highlights, this is precisely what has happened in the United States. The Treasury Department has a longstanding policy of extending the maturity of US public debt, which involves

issuing greater quantities of long-dated government bonds. Greenwood et al. (2014: 12) estimate that the effect of the Treasury's maturity extension programme has been to offset the yield-lowering effects of quantitative easing by approximately one third.⁶ To the extent that public debt managers offset the effects of quantitative easing, they may have indirectly made the job of maintaining financial stability more difficult.

OTHER ECONOMIC POLICIES

Several other areas of government policy affect central banks' ability to maintain financial stability. Two, in particular, are worthy of comment. First, most national taxation regimes offer a tax advantage for corporations to finance themselves with debt, rather than equity (see De Mooij 2011; Fleischer 2011). This is because companies are generally permitted to deduct debt interest payments when determining taxable profits, but not returns on equity (such as dividends to shareholders). The tax bias to debt therefore encourages firms to become more leveraged, making them less resilient. This bias is present in all three of the jurisdictions considered in this thesis. However, its magnitude is greater in the United States, mainly because the United States has a higher rate of corporate income tax than most European countries (De Mooij 2011).

Second, policies affecting housing finance also have an impact on central banks' financial stability capacity. Government support for housing finance has been linked with amplified swings in house prices and mortgage credit growth in the run-up to the financial crisis (IMF 2011). Of the three jurisdictions considered in this thesis, government support for housing finance is by far the

most pronounced in the United States. Just as banks can deduct debt interest from corporation tax, so US households may deduct mortgage interest payments from their income tax. US households also benefit from tax breaks on property and capital gains at the state and local levels, all of which encourage higher levels of household leverage (IMF 2011). Uniquely, the United States also provides extensive public support to the mortgage market through the 'government sponsored enterprises' (GSEs), Fannie Mae and Freddie Mac. Nationalised in 2008, these agencies purchase and securitise mortgages that have been issued by banks and other finance companies. They are statutorily required to pursue 'affordable housing goals' which in practice involves buying mortgages that have been extended to lower income households. There is much disagreement over the extent to which the GSEs – and government participation in housing finance more generally – contributed to the sub-prime mortgage bubble in the United States (see Financial Crisis Inquiry Commission 2011; Pinto 2010 for opposing views; see also Seabrooke 2010). However, the GSEs clearly contribute to household leverage, which other things being equal, makes the task of maintaining financial stability more difficult.

In the United Kingdom, public support for housing finance is much less significant. There is no equivalent in the UK of GSE's and mortgage interest tax relief was abolished under the Labour Government in 2000. The most notable programme to support homeownership in recent years was the so-called 'Help to Buy' scheme, launched in 2013 (see Chapter 4). This scheme helps prospective homeowners access larger mortgages. Announced at a time of rapid house price inflation in the Southeast of the country, the Help-to-Buy

scheme coincided with deliberations in the Bank of England's FPC over measures to cool the housing market. While the quantity of loans made under the Help-to-Buy scheme was small and FPC did not judge it to constitute a systemic risk (Bank of England 2014i; author interview, 17 July 2014, Washington DC), such schemes clearly have the potential to undermine the central banks' efforts to contain unstable housing price inflation, which is perhaps the preeminent financial stability risk in the United Kingdom (see Turner 2014).

Within the euro area, government support for housing is also smaller than in the United States. However, the institutional features of housing finance regimes differ significantly reflecting different political calculations around spending, taxation and interest rates (cf. Schwartz and Seabrooke 2008). One feature common to many continental European housing finance systems is government subsidies via direct contributions into prospective homeowners' savings accounts. Many European governments also retain mortgage interest tax relief and other tax incentives for homeownership. While it is difficult to generalise across 18 countries, the level of public support for homeownership in the euro area as a whole exceeds the level in the UK, at least in terms of the range of policies that support housing finance (see IMF 2011: 128).

TABLE 7: POLICY COORDINATION COMPARED

	United States	United Kingdom	EU
<i>Domestic (regional) regulatory environment</i>	<ul style="list-style-type: none"> Fragmented architecture and dysfunctional FSOC diminishes capacity for effective non-bank macroprudential policymaking. 	<ul style="list-style-type: none"> Largely centralised but shift to ‘twin peaks’ creates potential overlaps, tensions and inefficiencies. 	<ul style="list-style-type: none"> SSM designed to diminish regional coordination failures. Potential for divergent national supranational incentives remains.
<i>International regulatory environment</i>	<ul style="list-style-type: none"> Minimally constrained by Basel III 	<ul style="list-style-type: none"> Minimally constrained by Basel III Absence of international coordination of macroprudential policy mitigated at EU level. 	<ul style="list-style-type: none"> Minimally constrained by Basel III Absence of international coordination of macroprudential policy mitigated at EU level.
<i>Economic policy coordination</i>	<ul style="list-style-type: none"> Fiscal consolidation + monetary expansion → financial stability risks. Public debt management at cross-purposes to monetary policy. Adverse tax and housing finance policies. 	<ul style="list-style-type: none"> Fiscal consolidation + monetary expansion → financial stability risks. 	<ul style="list-style-type: none"> Fiscal consolidation + monetary expansion → financial stability risks.

6.5 CONCLUSION

This chapter has examined capacity of the Federal Reserve, the Bank of England and the European Central Bank to maintain financial stability by evaluating their intermediate objectives and policy instruments; their styles of policy implementation; and the extent to which their policies are coordinated with other authorities involved in economic policymaking. It has demonstrated

divergences in the intermediate objectives and styles of policy that each central bank has been pursuing. It was argued that Federal Reserve's predominantly resilience-focused and rules-based approach is likely to prove inferior to the more containment-focused approaches being pursued in the United Kingdom and the euro-area. The resilience approach places a heavy emphasis on banks' *ex ante* capital and liquidity buffers as the main guarantor of financial stability. Were central banks willing to use monetary policy to address excess credit growth and asset price fluctuations, such an approach would stand a better chance of success. However, the experience of recent years has demonstrated that central bank interest rates are unlikely to be used in this way. Indeed, the difficulty of adjusting monetary policy to meet financial stability concerns provides the basic rationale for central banks to adopt discretionary countercyclical macroprudential policies to address localised or sector-specific systemic risks as they arise.

In examining policy coordination, the chapter highlighted the particular challenges faced by the Federal Reserve as a result of the fragmented nature of the US regulatory landscape. The size of the non-bank financial sector in the United States and the Federal Reserve's institution-focused regulatory authority makes interagency policy coordination particularly important. Yet the FSOC, which was established to help facilitate interagency coordination, has struggled to rise above turf battles between its various members. In the UK, domestic regulatory coordination poses fewer problems, although the new 'twin peaks' model inevitably risks leading to duplicated work and neglected risks. In the EU, the significant centralisation of power within the ECB is designed precisely to

overcome the coordination challenges of the past. However, it remains to be seen how cooperative and integrated the working relationships between ECB and NCA officials will prove to be within the SSM.

In all three jurisdictions, government fiscal policy and wider macroeconomic conditions have exerted a strong influence over financial conditions. Against a backdrop of fiscal consolidation, interest rates have been stuck at the Zero Lower Bound since early 2009. Combined with unconventional central bank liquidity schemes and asset purchases, this has been a major source of risk in financial markets, driving global asset prices higher and risk spreads narrower, even as underlying economic performance remained subdued. The fiscal policy stance in the United States has been marginally more accommodative than in the United Kingdom or the euro area and relatively strong US growth suggests that the 'normalisation' of monetary policy is likely to happen first in the United States. However, other areas of US economic policy present relatively greater challenges to financial stability. In particular challenges from tax biases towards debt and government participation in housing finance are particularly pronounced in the United States.

Looking across the three sets of conditions, the Federal Reserve emerges as the central bank with the least capacity in the financial stability arena, notwithstanding its ample human and analytical resources. Its ability to maintain financial stability is undermined by the nature of the regulatory architecture it operates in and the types of policy instruments it is choosing to develop. Those policies are, in turn, partly a consequence of its narrow institution-based formal authority discussed in Chapter 4. The Bank of England

emerges as the central bank with the greatest financial stability capacity. This is on account of its balanced set of intermediate objectives, the strong emphasis it places on judgement and discretion, and the absence of major domestic policy coordination challenges. As for the ECB, its financial stability capacity is only now emerging. Its strengths include its high level of formal autonomy (see Chapter 4), which ensures that it has the political insulation necessary to adopt discretionary countercyclical macroprudential policies and to implement its ‘constrained discretion’ approach to microprudential supervision. As noted, however, financial stability and macroeconomic performance are interdependent in the long run. On this account, the ECB’s capacity to maintain financial stability in future is clearly threatened by absence of recovery in the euro area and, no less importantly, the continued risk that one or more euro area countries could leave, or be forced out of, the single currency altogether.

¹ Leveraged lending refers to loans made to borrowers already heavily indebted.

² One of the key developments in cross-border banking supervision since the financial crisis is the establishment of Crisis Management Groups. This emerged from the Financial Stability Board’s ‘Key attributes of effective resolution regimes for financial institutions’, published in October 2011.

³ The OTS was roundly criticised as a ‘light touch’ regulator leading to its abolition in the DFA. There is some empirical research to suggest that it was not significantly more light touch than other agencies (see Donelson and Zaring 2011).

⁴ In securities financing transactions shadow-bank entities borrow funds from institutional investors such as money market funds, lending or temporarily transferring ownership of securities as collateral. A system of minimum haircuts could limit the extent to which banks and non-bank entities could use securities financing transactions to boost their leverage (FSB 2013).

⁵ Eventually the SEC did implement reforms, although this took more than two years and was on terms defined by the SEC rather than the FSOC (see SEC 2014).

⁶ This conflict between debt management operations and monetary policy did not arise in the same way in the United Kingdom because the UK Debt Management Office had no equivalent maturity extension programme. In the EU, the ECB had not launched a full-scale programme of quantitative easing by the end of the timeframe considered in this thesis (December 2014).

7 CONCLUSION

How has the power of the major Western central banks changed since the global financial crisis? The central argument of this thesis is that the reorientation of the Federal Reserve, the Bank of England and the European Central Bank (ECB) towards financial stability since the global financial crisis has left these central banks more powerful, both in terms of their relations with politicians and financial market participants and in their capacity to maintain financial stability over the medium term. However, the extent of the change in each case has varied reflecting different local political, cultural and institutional constraints and the differential dependence of societal actors – politicians and financial market participants – on the functions that these central banks perform.

To substantiate these claims, the thesis developed and applied a threefold typology of central bank power. This encompassed: (1) *authority*, defined as the ability of central banks to move policy in line with their own preferences; (2) *structural power*, defined as the ability to shape the contexts in which other actors perceive and frame their preferences; and (3) *capacity*, defined as the ability to attain specified objectives, whether statutorily defined or set by the central bank itself. This concluding chapter highlights the implications of the research for understanding mechanisms of change in central banking. It also discusses how the power of central banks can be expected to develop in coming years. Before turning to this final, more future oriented, question, it begins by summarising the key findings of the empirical analysis.

7.1 SUMMARY OF FINDINGS

The thesis set out to answer the three specific research questions specified in the introduction. These were:

1. *How has the ability of the major advanced economy central banks to determine policies in line with their own preferences changed since the onset of the financial crisis?*
2. *What has enabled these central banks to exert greater authority over their key interlocutors since the financial crisis?*
3. *How capable are these central banks of achieving their objectives, particularly those relating to financial stability?*

These questions were considered sequentially in Chapters 4-6 of the thesis. Chapter 4 argued that all three central banks have emerged from the crisis with an enhanced ability to determine policies in line with their own preferences, without yielding to the preferences of executive or legislative politicians or financial market participants. It explored the changing authority of each central bank, distinguishing in particular between the formal (or *de jure*) and informal (or *de facto*) elements of authority. However, it revealed that the extent of the disjuncture with the pre-crisis *status-quo ante* has varied considerably across the three cases.

Chapter 5 identified the mechanisms through which this variegated expansion of central bank authority had taken place. A two-step explanation was offered. First, transgovernmentally networked central bankers acted as policy entrepreneurs (Kingdon 2011 [1984]) in their respective jurisdictions,

making the case for reform and drawing for support on the rapidly formed technocratic consensus around macroprudential policy that emerged in 2008-09 (Baker 2013a). The variegated delegation of financial stability policy to central banks after the financial crisis was the product of policy differences within the epistemic community of central bankers and the differential 'translation' (Campbell 2004) of new macroprudential policy ideas into local institutional terrains. The second step in the explanation involved examining the underlying structural relations between these central banks and their key interlocutors in financial markets and governments. It was argued that central banks' structural power peaked as both market participants and politicians became highly dependent on the unique money-creating function that central banks perform.

In Chapter 6 the analysis turned away from central banks' 'power over' other actors (the *relational* view), towards their 'power to' achieve their objectives, especially as regards financial stability (the *empowerment* view). It highlighted three key categories of factors that have impacted central banks' capacity in relation to financial stability: their 'intermediate' policy objectives; their 'styles' of policy implementation; and their particular challenges with respect to policy coordination. It was argued that all three central banks have more capacity to maintain financial stability than they did prior to the financial crisis. Again, however, marked differences between the three central banks were identified. The remainder of this section summarises the key findings for each central bank and the differences between them.

7.1.1 THE FEDERAL RESERVE

The Federal Reserve emerged from the financial crisis having undergone the least overall change from the pre-crisis *status quo ante*. As the longstanding supervisor of bank holding companies and certain other state-chartered banks, the Federal Reserve was the only one of the three central banks to enter the crisis already playing a substantive role in prudential regulation and supervision. The scope of the Federal Reserve's supervisory umbrella was extended, in part because of the conversion of Wall Street investment banks into bank holding companies, and in part by provisions in the Dodd-Frank Act (DFA) to place other systemically important firms under its supervision. Yet the Fed gained few new formal powers in respect of macroprudential policy. Overall responsibility for this policy domain was delegated to the multi-agency Financial Stability Oversight Council, which is chaired by the Secretary of the Treasury. What formal authority the Fed does possess in the macroprudential domain derives from its responsibility for supervising systemically important firms. As regards crisis management, the Federal Reserve's formal authority was, in fact, slightly diminished. The DFA introduced new prohibitions on the Fed's liquidity provision to non-bank financial institutions and an unprecedented requirement for the Secretary of the Treasury to approve new emergency lending from the Fed to non-bank financial institutions. The Federal Reserve was also subject to new transparency requirements regarding its emergency lending facilities.

Notwithstanding the limited nature of the changes to its formal authority, it was revealed that the Federal Reserve has adopted a more authoritative stance in its relationships with financial market participants since the onset of the

financial crisis. Although it has faced public criticism for alleged supervisory failings and for the generosity of its emergency lending programmes, the Federal Reserve has adopted a tough stance in the negotiation and implementation of prudential policies, relative both to other US regulatory agencies and some European jurisdictions (Bair 2012). This suggests the Federal Reserve is not ‘captured’ by financial sector interests, as some have alleged (Bernstein 2014).

In other areas, the Federal Reserve’s *de facto* authority appeared unchanged. For example, it has exhibited no special influence over the course of fiscal policy since the crisis. The thesis noted that Federal Reserve and the Executive had worked hand in glove during and after the financial crisis with little evidence of policy divergences. In light of the prolonged period of ultra-low interest rates, this closeness has spurred some commentators to decry the end of the Fed’s independence (see, for example, Meltzer 2013). However, the thesis argued that the real test of the Federal Reserve’s *de facto* authority remains prospective. Should the Federal Reserve begin to raise interest rates and exit from quantitative easing before any significant uplift in inflation materialises, such claims will have proven unfounded.

The reforms in the United States were driven by an alliance between central bankers and the recently installed Obama administration. This coalition of actors sought to defend and promote the Federal Reserve’s interests in a political and institutional environment that was not propitious for radical reform. Populist suspicion of the Federal Reserve – a hardy perennial of US political culture – was in full bloom at the time of the negotiations over the DFA.

The fragmented and complex architecture of financial supervision in the United States also guaranteed ample bureaucratic opposition to a major expansion of Federal Reserve power. At the same time, key policymakers in the Federal Reserve and the administration played down the importance and viability of countercyclical policies – a stance reflective of the broad scepticism of ‘statist’ financial policies in the United States. The reluctance to break with the traditional institution-focused and rules-based approach to financial stability helped to ensure the relative continuity of regulatory and supervisory arrangements in the United States as compared to the changes implemented in the United Kingdom and the euro area.

This *relative* continuity should not overshadow the enhancement of the Federal Reserve’s authority in absolute terms. As discussed, the Federal Reserve adopted a considerably more prudent stance in its relations with firms after the crisis. The Fed’s heightened *de facto* authority was a product of its amplified structural power vis-à-vis financial markets. Long-term structural changes in the nature of financial intermediation in the United States led to increased dependence of banks and non-bank financial institutions on flighty wholesale sources of funding. While these transformations created an illusion of infinite liquidity (Nesvetailova 2010: 4), in fact they had increased the extent to which banks and connected shadow-bank entities relied implicitly on public safety nets, including the liquidity insurance provided by the Fed. The extent of this reliance became apparent during the financial crisis, when wholesale liquidity evaporated and the Federal Reserve extended vast loans to banks and non-bank financial institutions, warehousing their ‘toxic’ assets on its own balance sheet.

The Fed was able to do so mainly because it has the monopoly right to create new base money 'out of thin air'. Yet such an action was not within the capability of just any central bank. The Federal Reserve took on the liabilities of the financial sector only after the Federal government agreed to indemnify it for losses. Central banks cannot become bankrupt, since they can always print more money to meet their liabilities as they fall due (see Stella 2005; Archer and Moser-Boehm 2013; Caruana 2013). However, the pervasive misconception that they can meant that only a central bank backed by the deep pockets of a large advanced economy taxpayer base could perform this function without its credibility as a defender of 'sound money' principles being called into question.

Notwithstanding the absolute increase in the Federal Reserve's authority, the thesis cast doubt on its capacity to maintain financial stability in the medium term. The Federal Reserve has focused on enhancing the resilience of banks and other systemically important financial institutions. To this end, it has strengthened the quantity and quality of capital in the banking sector, taken steps to decrease banks' reliance on wholesale sources of funding and adopted measures to end the phenomena of too-big-to-fail. While these changes are an obvious improvement on the pre-crisis regulatory framework, the Federal Reserve has so far refrained from taking actions to mitigate time-varying systemic risks to financial stability. As such, the Federal Reserve's resilience-focused approach stands at odds with arguably the key regulatory lesson of the financial crisis, namely, that institution-specific policies need to be supplemented with systemic measures that curb the build-up of risk across the financial cycle.

In line with its longstanding preference, the Federal Reserve has also adopted a mainly 'rules-based' approach to the implementation of financial stability policy. The preference for rules over discretion is predicated on a belief that tying regulators to explicit rules leads to improved transparency, more efficient allocation of capital in financial markets and improved financial stability. This set of beliefs, which was characteristic of pre-crisis thinking on financial regulation, augurs against the adoption of countercyclical measures, which are inherently more discretionary.

The thesis suggested that the capacity of the Federal Reserve in relation to financial stability is also constrained by aspects of the macroeconomic policy environment in which it is embedded. Fiscal policy in the United States has been generally contractionary since 2010, albeit less so than in many European countries. In such circumstances, the Federal Reserve has been effectively forced to maintain interest rates at rock-bottom levels whilst aggressively pursuing other options – such as quantitative easing – aimed at stimulating the economy by increasing asset prices and making credit cheaper. Quite apart from its iniquitous distributional consequences, there are reasons to believe that this monetary policy stance has resulted in considerable financial stability risks, as investors have shifted into riskier assets in a 'search for yield' (BIS 2014). With some justification, the Federal Reserve has been unwilling to raise interest rates to tackle financial stability risks, given the potential for collateral damage to the wider US economy. However, this monetary policy stance makes the absence of countercyclical macroprudential policies in the United States all the more of an omission.

7.1.2 THE BANK OF ENGLAND

The Bank of England has been through a more transformative change than the Federal Reserve, gaining many new formal competencies. With the dissolution of the Financial Services Authority (FSA), the Bank of England became solely responsible for the microprudential supervision of banks, insurance companies and large investment firms headquartered in the United Kingdom. The Bank of England also gained sole responsibility for conducting macroprudential policy. Its new Financial Policy Committee was entrusted with making recommendations and binding directions to the FSA's successor organisations, one of which, the Prudential Regulation Authority (PRA), is in any case a subsidiary of the Bank.¹ As regards crisis management, the Bank of England faced no new restrictions on its ability to act as lender of last resort and it was delegated the authority to act as the UK resolution authority.

Partially offsetting this expansion of the Bank of England's authority were a number of governance reforms that aimed to increase its accountability. This included the innovation of annual letters from HM Treasury to the Bank, whereby the former provides guidance as to how the latter should interpret its financial stability mandate. The government also introduced a new mechanism whereby HM Treasury will be able to suspend the independence of the Bank of England in a future emergency situation. However, it is questionable whether this mechanism will prove to be a meaningful *ex post* constraint on the Bank of England's autonomy. As discussed in Chapter 3, existing legal mechanisms for intervening in the Bank's operations have tended to be used so rarely as to

become inoperable (since doing so would risk sending highly destabilising signals to the markets).

Like the Federal Reserve, the Bank of England has adopted a 'hawkish' approach in international and EU-level negotiations over prudential regulation and in its domestic implementation of international and European standards. This provides evidence of the Bank's heightened relational power vis-à-vis financial market participants. Also in common with the Federal Reserve, the Bank has not exhibited greatly enhanced influence over domestic macroeconomic debates or other areas of government economic policy, such as housing. While there have been occasional skirmishes between the Bank and the government – with the disagreements between Governor Mervyn King and Chancellor Alastair Darling in 2007-2010 being the most obvious examples – the Bank's ability to shape macroeconomic policies outside its immediate monetary policy and financial stability remit does not appear markedly greater than it did prior to the financial crisis.

The factors underlying the expansion of the Bank of England's authority were similar to those underlying the changes affecting the Federal Reserve. As in the United States, the Bank of England allied with a recently installed administration to promote its own role in financial stability. However, in contrast to the US case, the political and institutional terrain provided this coalition more space to exert its agency. The less fragmented nature of the UK regulatory architecture meant that the bureaucratic opponents to a major organisational overhaul were few. Moreover, the one agency that might have been expected to mount a vigorous defence of the organisational *status quo*, the FSA, declared itself

ambivalent to its fate (Turner 2009b: 18). Central bankers in the United Kingdom were able to point to the emerging technocratic consensus within the transgovernmental network of central bankers and related policy experts on the merits and necessity of operationalising macroprudential policy. At the same time, the recently installed Conservative-Liberal Democrat coalition, convinced of the case for reform, faced few substantive obstacles to the execution of a major organisational overhaul.

As in the United States, the *de facto* authority of the Bank of England in relation to banks and financial market participants was bolstered by the heightened dependence of those actors on its liquidity support. Credit intermediation in the United Kingdom is dominated by a small number of global banks, which were especially vulnerable to the disruptions in global financial markets. As the Bank of England stepped in to support these banks, their bargaining power was reduced; any notion that they would relocate their activities to more favourable jurisdictions was at least temporarily dispelled.

The thesis presented a cautiously optimistic view of the Bank of England's potential to maintain financial stability in the medium term. The Bank stands out from its US counterpart as having implemented a range of countercyclical macroprudential policies. This includes the early implementation of the Basel III countercyclical capital buffer, measures to dampen excessive leverage in the housing sector and efforts to boost lending during the recession by lowering banks' reserve requirements. In the context of relatively low credit growth overall, most of these measures have been calibrated to have little impact so far. Still, putting the requisite analytical and governance frameworks in place for

the use of such tools makes it more likely that the Bank will use them when the cycle turns. The Bank of England's financial stability capacity is also enhanced by its preference for discretion-based policy implementation; this ensures it has the latitude to act on less than perfect information and where firms comply with the letter but not the spirit of regulations.

As regards policy coordination, the Bank of England faces the same key constraint as its US counterpart. The commitment of the UK government to fiscal austerity has left the Bank's Monetary Policy Committee with little option but to maintain rates at the Zero Lower Bound for an extended period of time. This is a source of systemic risk and increases the importance of the Bank's systemic countercyclical policies. Other aspects of policy coordination are more favourable. In contrast to the Federal Reserve, the Bank is situated in a relatively benign domestic regulatory environment. Whereas the Federal Reserve must coordinate its efforts with more than 100 federal and state regulatory agencies, the Bank of England shares the domestic regulatory space with only one other major player, namely the Financial Conduct Authority (FCA). While there are some overlaps between the Bank's prudential mandate and the role of the FCA in protecting consumers, ensuring market integrity and promoting competition, major policy divergences between the regulators are yet to emerge. This is not to say that the Bank has a completely free hand when it comes to prudential regulation. Its freedom to create new financial regulations is constrained by the requirement to comply with a detailed body of increasingly harmonised European financial legislation. Elements of this regulation clash with the Bank's preferences, but within the Single European

Market it has limited mechanisms to mitigate any adverse effects this might have on financial stability.

7.1.3 THE EUROPEAN CENTRAL BANK

Like the Bank of England, the ECB has also been through rapid, transformational, change in recent years. In the microprudential policy domain, the ECB has become the central hub in the new Single Supervisory Mechanism (SSM), which also comprises the national microprudential supervisors of participating member states. Within the SSM, approximately 130 of the largest or most systemically 'significant' banks are supervised from the ECB's newly created supervisory arm in Frankfurt. This represents a giant leap towards supranationalised financial services governance in the euro area. For the ECB, it is a transformation every bit as significant as the creation of the PRA was for the Bank of England.

However, the ECB enjoys less formal authority in the macroprudential domain than the Bank of England. The ECB plays a dominant role in the European Systemic Risk Board (ESRB), which is an EU-wide intergovernmental body composed of national central banks and an array of officials of EU level organisations. Yet the ESRB has limited formal authority of its own. The ECB's macroprudential authority within the SSM is also constrained. It shares power with the new national macroprudential authorities of participating member states in a complex institutional arrangement also involving the European Commission and the European Council. Like the Federal Reserve, the ECB also gained little new formal authority in respect of crisis management. While it will

be responsible for determining when a bank has reached the point of resolution, responsibility for actually carrying out a resolution rests with the new Single Resolution Mechanism (SRM).

The ECB had only recently begun its banking supervision operations at the end-point of the timeframe considered in this thesis (early 2015). This made a full assessment of its *de facto* authority relative to banks and other financial market institutions more difficult. However, it was not too early to assess the ECB's *de facto* authority in relation to the executive politicians of euro area governments. Following the eruption of the European sovereign debt and banking crisis in 2011, the ECB has clearly demonstrated its strength. On the one hand, it has pursued expansionary monetary policies such as Outright Monetary Transactions and, latterly, quantitative easing, which have been opposed in Germany, the euro area's largest and most powerful member state. On the other hand, it has taken the unprecedented step of making its assistance to crisis-struck Southern European debtor countries explicitly conditional on those countries' governments agreeing to stringent fiscal austerity and neoliberal structural reforms. This is an unparalleled expansion of the power of a central bank over democratically elected politicians.

In the EU, the establishment of the SSM followed years of incremental reform in banking regulation and supervision. It was led and promoted first and foremost by the leadership of supranational policymakers, including the ECB (De Rynck 2015). However, it is worth noting that the SSM was made possible only by a 'series of structural realignments' in the positions of key member states, above all France, Germany and the United Kingdom, which for their own

reasons ceased their opposition to greater supranational integration of banking regulation and supervision (cf. Veron 2014).

As in the other two cases, the ECB's *de facto* authority in relation to financial market actors has been underpinned by the structural dependence of those actors on its liquidity provision. The ECB became an essential component in the European intermediation system; as Northern European financial institutions drew back from Southern European peripheral countries, the ECB stepped up its support to those countries' banks. A key difference between the ECB and the other two central banks considered in this thesis is that the ECB also enjoyed greatly enhanced structural power in relation to executive politicians. While national executive politicians in all three jurisdictions became more dependent on their central banks during the financial crisis, certain crisis-struck Southern European governments have at times been wholly reliant on the ECB to keep their sovereign borrowing costs from driving them into default. Likewise, the so-called 'doom-loop' that emerged between the creditworthiness of European governments and the solvency of their respective banks further increased the structural power of the ECB, which could effectively dictate whether or not certain countries' banks would be able to open for business from one day to the next. In making its assistance to Southern European countries conditional on swingeing austerity and supply-side reforms, the ECB converted this structurally advantageous position into direct, coercive, overt power.

Given the timing of the SSM reforms, it is too early to make a full assessment of the ECB's capacity in relation to financial stability. Like the Bank of England, the ECB appears set to balance the intermediate objectives of resilience and

countercyclicality. The ESRB – in which the ECB is dominant – has pushed member states to develop countercyclical policy frameworks. Furthermore, leading officials within the ECB have been voluble in their support for countercyclical policies. The ECB also looks set to balance rules and discretion in its implementation of its microprudential and macroprudential responsibilities. As a new organisation, the supervisory arm of the ECB is less constrained by legacies of past modes of policy implementation. It has stated its intention to adopt a ‘constrained judgment’ approach. However, much will depend on how its supervisory approach develops in light of its intergovernmental structure and the pressures of ensuring consistent implementation across different jurisdictions. Like the other two central banks, the ECB must adapt to legislation and regulations that are largely defined by other actors. The ECB’s supervisory arm implements the same body of European legislation as the Bank of England. However, where that legislation provides for national discretion, the ECB is committed to implementing whatever options have been exercised at the national level by the member states. Over time it is to be expected that the ECB will develop greater regulatory capacity of its own, which, other things being equal, should benefit financial stability.

As discussed, the ECB has enjoyed a high degree of authority and structural power vis-à-vis executive politicians. Yet its ‘power over’ politicians has not translated into a significantly increased ‘power to’ maintain financial stability. In part, this is because the ECB has itself been a major proponent of fiscal austerity, which – as in the US and UK cases – has contributed to the need to maintain interest rates at rock-bottom levels. Indeed, the ECB has arguably

exercised its structural power in such a way as to undermine its chances of maintaining financial stability in the medium term. In supporting contractionary fiscal policies, it has effectively tied itself to an ultra-loose monetary policy stance. In turn, this monetary policy is a source of financial stability risks in the form of a widespread search for yield amongst investors and the continuation of excessive levels of private sector indebtedness across the continent.

7.2 IMPLICATIONS OF THE STUDY

7.2.1 UNDERSTANDING CHANGE IN CENTRAL BANKING

One implication of the foregoing analysis is the importance of focusing on the mechanisms by which creative and reflexive agents are able to construct and reconstruct the institutional environments in which they operate. Consistent with the agent-centred historical institutionalist analytical framework introduced in Chapter 2, the thesis identified the agency of central bankers as the crucial factor driving change in each case. Central bankers acted as policy entrepreneurs (Kingdon 2011[1984]), advocating change in line with their economic beliefs, in particular the notion that central banks should play a leading role in any post-crisis strengthening and reorientation of financial services regulation. The embrace of macroprudential ideas was partly a reflection of the changed political climate around financial regulation after the crisis. Just as the pre-crisis dominant interpretive frame of 'efficient markets' reflected the ascendance of an ideology of finance (cf. Johnson and Kwak 2009; Baker 2010), so central bankers' more prudent policy stance after the financial crisis reflected the more hostile political climate surrounding financial services

in recent years (Young 2013). Central bankers acted much as a transgovernmental epistemic community in driving reforms. However, the specific diagnoses of pre-crisis regulatory failures and prescriptions for policy change varied across jurisdictions. The economic ideas and policy proposals central bankers' espoused respected local political, cultural and institutional logics. They were a product of ideational 'bricolage' (Campbell 2004; Carstensen 2011) wherein 'new' ideas came to rest alongside 'old' ones, even at the expense of ontological coherence.²

The analysis also highlights the importance of focusing on the distinctive national variations that arise when new ideas and practices are enacted in local institutional environments. Borrowing from Campbell (2004: 79), the thesis employed the notion of 'translation' to describe the mechanisms by which new ideas, principles and practices are enacted at the local level. The existing institutional terrains in which central bankers operated ensured the outcome of reforms in each jurisdiction exhibited distinctive national (or regional) hues. The relatively incremental nature of the reforms in the United States owed to the fragmented nature of power within the US political and regulatory architecture, which all but ruled out a fundamental reorganisation of the architecture of financial supervision. At the same time, regulation continued to focus on individual institutions with a preference for rules-based implementation over discretion. Change in the United Kingdom was more discontinuous, but it followed a characteristically British pattern. The top down reorganisation of the architecture for financial supervision – a second in just 15 years – was made possible because of the exceptionally powerful position of the British executive.

At the same time, UK regulators – relocated *en masse* from the FSA’s Canary Wharf headquarters to a new Bank of England building in the City of London – have retained their preference for discretion-based policy implementation. In the euro area, the ECB’s supervisory arm is a new organisation. Yet even here change has also followed a familiar pattern. While the creation of the SSM represented a giant leap towards more supranational European banking supervision, new organisational structures – including the European Supervisory Authorities, the ESRB, the ECB’s supervisory arm and the Single Resolution Mechanism – each have intergovernmental governance structures, comprising officials from national central banks and other national ‘competent authorities’. In this regard, they follow the increasingly prevalent ‘new intergovernmentalism’ (Bickerton et al. 2015; Howarth and Quaglia 2015) in EU integration, in which member states delegate authority not to traditional supranational organisations such as the European Commission, but to *de novo* bodies composed of national officials.

While change has exhibited distinctive local hues, it would be wrong to infer that institutional arrangements in any given locality are fated to evolve along pre-determined historical paths. Local institutional factors have at times constrained the possibilities for reform, but the policy entrepreneurs considered in this thesis have by no means been locked in ‘an iron cage of institutions’ (Crouch 2005: 3). On the contrary, central bankers have exploited existing institutions as resources from which new institutions can be fashioned. An example of this creativity is the way in which US central bankers – who have been more constrained than their European counterparts – have repurposed

their existing institution-focused and broadly microprudential regulatory framework towards ensuring systemic financial resilience. Whereas pre-crisis institution-specific policies were focused mainly on protecting consumers and taxpayers from losses associated with the failure of individual firms, post-crisis regulation in the United States has concentrated on ending the phenomenon of too-big-to-fail and reducing the complex interconnectedness between market participants, which can propagate instability from one firm to the next. While this thesis is sceptical of the ability of resilience-focused policies to maintain financial stability in the absence of complementary countercyclical measures, it is important to recognise that US regulators have innovated to a considerable extent within the constraints of their existing regulatory framework.

Another example of reflexive policy entrepreneurs using existing institutions as resources is the emergence of 'judgement based' supervision in the United Kingdom. As discussed, the institutional genealogy of the Bank of England's judgement-based approach can be traced to the 'moral suasion' (or 'governors' eyebrows') approach to maintaining standards of behaviour in the City, which prevailed during the era of 'club governance' lasting from the 19th century to the 'Big Bang' in the 1980s (Moran 2003). At the same time, the Bank's judgement-based approach is also a response to new imperatives of the post-crisis era, in particular, the need to make regulation more responsive to innovations in financial markets and more robust to errors arising from financial risk modelling. Judgement-based supervision can, therefore, be regarded as a pragmatic policy solution in which existing institutional and ideational resources are recycled and put to new uses (see McPhilemy 2013: 761).

7.1.1 WILL THE ENHANCED POWER OF CENTRAL BANKS ENDURE?

The reforms of the Federal Reserve, the Bank of England and the ECB were a set of rapid – and in many instances transformational – institutional changes, that were arguably a once in a generation event. Each central bank was delegated new formal powers and obligations, which they are only now beginning to implement. It is probable that change in the functions and governance of the major Western central banks will follow a more incremental dynamic in the coming years. On the one hand, the principal agents for change in central banking in these jurisdictions – central bankers themselves – are largely satisfied with the outcome of the reforms, with the partial exception of some senior officials at the Federal Reserve, who would have preferred to have been afforded a leading role in macroprudential policy (see Kohn 2014b; Fischer 2014). On the other hand, the window of opportunity opened by the crisis – including the high level of public salience of financial regulation and the interest of politicians in pursuing major regulatory changes – is now closed.

To be sure, each of the central banks considered in this thesis faces a degree of political opposition. In the United Kingdom and the euro area, this opposition comes mainly from the left; in the United States it comes mainly from the right. Political opposition to central banks is manifested in each jurisdiction in calls for the central bank to become more accountable to politicians and the public. The central banks considered in this thesis have a tried and tested formula for responding to these calls: namely, to increase transparency, in particular by communicating decisions more promptly and by giving greater information about the analytical judgements underlying their actions. Still, there is little

indication that new legislative changes will be brought to bear to curtail or fundamentally readjust these central banks' mandates in the medium term. Importantly, support for the institution of central bank independence – and for the notion of central banks as depoliticised arbiters of the public interest – remains exceptionally widespread within mainstream political parties, the economics profession and the financial press. In all, this suggests that the formal aspects of these central banks' authority discussed in Chapter 4, including their statutory mandates and the formal mechanisms establishing their autonomy from executive politicians, are unlikely to be watered down any time soon.

However, other aspects of the augmentation of central bank power are likely to prove fleeting. The structural advantages of central banks vis-à-vis financial market participants peaked during the financial crisis. As banks have repaired their balance sheets, they have become less dependent on public support to keep them in business. In the longer-term, new prudential regulations have been agreed that are steadily (if not absolutely) reducing the implicit support that banks and other financial institutions draw from their access to central bank liquidity insurance. New liquidity standards – the Net Stable Funding Ratio and the Liquidity Coverage Ratio – have required banks to become less reliant on unstable sources of wholesale funding and to maintain greater stocks of high quality liquid assets, such as government bonds, which they can easily exchange for cash in a future financial crisis. Likewise, changes in the US Generally Agreed Accounting Principles and the International Financial Reporting Standards have diminished the extent to which unregulated shadow bank entities involved in

securitization and other forms of credit intermediation can benefit from implicit government support (see FSAB 2009). Where banks 'sponsor' such entities, either because they established them in the first place or because they provide them with lines of credit or liquidity facilities on an ongoing basis, they are now generally required to account for those entities within their consolidated financial accounts. Such entities are, therefore, effectively subject to the same prudential requirements as the banks themselves (see FRS 2010). These changes decrease the dependence of banks and other financial companies on (implicit or explicit) central bank support. It also means that such entities can more credibly threaten to 'exit' jurisdictions that impose regulations unfavourable to their preferences.

Analyses of structural power suggest that stratifications of interdependencies between actors tend to have a greater bearing on political processes than 'influence peddling' (cf. Woll 2014a). Having said that, the ability of financial market participants to influence central banks through lobbying and persuasion is likely to increase in coming years. As memories of the events of 2008 begin to fade, the high level of public salience of financial regulation and the general hostility of Western publics towards financial institutions is likely to subside. Public attention is a finite resource and other issues will inevitably occupy greater prominence. Under such circumstances, the *de facto* authority of central banks vis-à-vis financial market participants is likely to be reduced further. On the one hand, regulatory developments will receive less scrutiny from the press and public interest pressure groups than in the immediate post-crisis period. On the other hand, the lobbying activity of the financial sector is

likely to be maintained or even to increase as profits recover and post-crisis regulations take effect.

In the short term, a return to boom-time politicians goading financial regulators into an ever lighter touch is perhaps unlikely. Central banks are generally more insulated from political pressures than other regulatory agencies. The strong societal support for central bank independence, together with the formal mechanisms by which autonomy is maintained, such as secure terms of office for central bank governors, provide central banks with some freedom to persist with a more prudent stance for some time to come. Yet central bankers are by no means immune from criticism. Should a major firm threaten to withdraw from a given jurisdiction on the grounds of excessively burdensome regulation, it is unlikely that politicians will refrain from placing pressure on their central banks to change course, either publicly or behind the scenes.

7.1.2 TOWARDS A CENTRAL BANK LEGITIMACY CRISIS?

In a series of insightful contributions on the emergence of macroprudential policy frameworks after the financial crisis, Baker (2013a, 2015b; see also Baker and Widmaier 2013) has argued that countercyclical variants of macroprudential policy could have the effect of undermining central banks' popular legitimacy. His argument is that central bankers will become overconfident in their ability to act as a 'benign enlightened regulatory planner' (see Baker and Widmaier 2013, quoting Haldane 2011), intervening to curb financial excesses wherever they find them. Baker (2015b) describes this as the

ultimate 'central bankers' paradox'. Curbing the credit cycle, he argues, requires delegating more power to central banks, which in turn must take politically unpopular decisions that restrict access to credit. Implementing such decisions, he suggests, will lead the public and politicians to question central banks' carefully nurtured reputations as 'apolitical' technocratic organisations, thereby undermining the viability of the macroprudential exercise, which is dependent on the central bank being seen as above the political fray.

In focusing on the possibility of declining public support for policies that will restrict borrowers' access to credit, Baker's account concentrates mainly on central banks' 'input' legitimacy (Scharpf 1999). However, there is a potentially more pressing and immediate concern for central banks: namely that they will face a crisis of *output* legitimacy if they fail to fulfil their mandates of maintaining financial stability. As the financial crisis recedes in the public memory, and the structural power of central banks relative to financial market actors begins to ebb, excessive timidity, insufficient radicalism and a bias towards inaction are arguably greater dangers to central bank legitimacy than hubristic interventionism.

As argued in Chapter 6, central banking has not been through a paradigm shift. Rather, a process of ideational and institutional bricolage has taken place, wherein central bankers have pragmatically combined ontologically incompatible policy analyses and disparate policy frameworks. Central bankers tailored their particular messages to the institutional and political climates in which they were operating. The result is that much pre-crisis thinking – whether in regards to the effects of capital requirements on bank lending, the

desirability of 'risk-sensitive' regulation or the ostensible benefits of heightened transparency on economic efficiency – continues to shape the design and implementation of post-crisis financial regulations.

The prevalence of pre-crisis thinking is most apparent in resilience-focused, rules-based, approaches to financial regulation. Resilience-focused approaches are more measurable than countercyclical policies, where reliable indicators of systemic risk are scarce. Likewise, rules-based policies expose central banks to fewer reputational risks and threats of legal challenge. While post-crisis resilience-focused policies are certainly an improvement on pre-crisis microprudential regulations, the argument made in this thesis is that focusing predominantly or exclusively on resilience at the expense of countercyclicity adheres too closely to the failed pre-crisis orthodoxy, in which ensuring the safety and soundness of individual financial institutions was considered a sufficient means of maintaining systemic financial stability.

As this thesis has documented, the Federal Reserve has focused almost exclusively on enhancing resilience, and has downplayed the viability or desirability of policies to mitigate cyclical risks to financial stability. However, neither the Bank of England nor the ECB are exclusively committed to the countercyclical approach. As Western economies recover and the political climate around financial regulation becomes more liberal, there is a risk that central banks will succumb to the risk-aversion characteristic of the resilience focused approach. In particular, there is a danger that scepticism over the ability of policymakers to spot financial bubbles (a view already prevalent within the Federal Reserve) and a fixation on the need for rigorous econometric

modelling of systemic risks will come to dominate thinking in the transgovernmental network of central bankers. This could dissuade central banks from intervening to mitigate cyclical financial stability risks, even where anecdotal evidence suggests action would be warranted (cf. Tucker 2014: 5).

The need for discretion in the exercise of countercyclical macroprudential policy suggests central banks will need to give careful consideration to how they communicate their actions to politicians and the wider public if they are to retain their popular legitimacy. Yet they must also take care to ensure that anticipating and avoiding adverse public reactions does not spill over into a lack of action in the face of emerging threats. Having been delegated extensive new competencies, central banks would find themselves with few excuses were another financial crisis to erupt. In such a scenario, further fundamental reforms of Western central banks and a return to more explicitly politicised forms of financial regulation cannot be discounted.

¹ The PRA is set to become a wholly incorporated division of the Bank in 2015 (see Bank of England 2014c).

² Baker (2015a) highlights the intellectual incoherence between prevailing thinking on macroeconomic policy and financial regulation. The argument made here is that even *within* financial regulation there is a considerable degree of intellectual incoherence, with many pre-crisis beliefs continuing unchallenged.

ANNEX 1: LIST OF INTERVIEWS

Interviews were conducted on a non-attributable basis. Further details available on request.

Title/Role	Sector	Date	Place
Senior official / consultant	Financial Services Authority	06 September 2011	London
Policy officer	Directorate General Internal Market and Services, European Commission	30 May 2012	Brussels
Policy officer	Directorate General Internal Market and Services, European Commission	31 May 2012	Brussels
Policy officer	United Kingdom Representative to the European Union (UKREP)	31 May 2012	Brussels
Senior official	Bank of Spain	31 October 2012	Madrid
Policy officer	Bank of Spain	31 October 2012	Madrid
Senior official (retired) / academic	Bank of England (MPC) / Academia	29 November 2012	London
Senior official	<i>Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin)</i>	14 March 2013	By phone
Senior official	Economic and Financial Committee, European Council	19 March 2013	Brussels
Senior official	ECB, DG Research	22 March 2013	Frankfurt
Senior official	ECB, DG Data and Statistics	23 March 2013	Frankfurt
Senior official	European Systemic Risk Board	25 March 2013	Frankfurt

Senior official	European Banking Authority	26 March 2013	London
Senior official (retired)	<i>Banque de France/IMF</i>	31 May 2013	By phone
MEP	European Parliament	26 June 2013	By phone
Senior official (deceased)	International Monetary Fund	15 October 2013	Oxford
Senior official	Bank of England	07 February 2014	Brussels
Policy officer	Directorate General for Economic and Monetary Affairs, European Commission	07 February 2014	Brussels
Private sector economist	Centre for European Policy Studies	07 February 2014	Brussels
Journalist	Financial Times	12 May 2014	By phone
Senior official	International Monetary Fund	11 June 2014	By phone
Journalist	Financial Times	10 July 2014	Washington D.C.
Senior official	Board of Governors of the Federal Reserve	11 July 2014	Washington D.C.
Senior official	International Monetary Fund	11 July 2014	Washington D.C.
Senior official	Federal Reserve Bank of New York	15 July 2014	New York
Senior official	Office of Financial Research	16 July 2014	Washington D.C.
Senior official	Office of Financial Research	16 July 2014	Washington D.C.

Consultant/Lobbyist	American Enterprise Institute	16 July 2014	Washington D.C.
Senior official (retired)	Board of Governors of the Federal Reserve	17 July 2014	Washington D.C.
Private sector economist	Bruegel	18 July 2014	Washington D.C.
Private sector economist	Group of Thirty	24 July 2014	By Skype
Private sector economist	Senior official, Citigroup	24 October 2014	London
Senior official (retired)	Former Bank of England	06 December 2014	London
Policy officer	Prudential Regulation Authority	12 December 2014	London

BIBLIOGRAPHY

- Abrams, R. and Taylor, M. (2000) 'Issues in the unification of financial sector supervision', International Monetary Fund. Available from: <http://goo.gl/HXfsIV> [Last accessed 27 May 2014].
- Adolph, C. (2013) *Bankers, Bureaucrats, and Central Bank Politics: The Myth of Neutrality*, Cambridge: Cambridge University Press.
- Adrian T and Shin, H.S. (2010) 'The Changing Nature of Financial Intermediation and the Financial Crisis of 2007-09', Federal Reserve Bank of New York Staff Reports. Available from: <http://goo.gl/OrLi4m> [Last accessed 05 September 2014]
- Adrian, T. and Ashcraft, A. (2012) 'Shadow Banking: A Review of the Literature', Federal Reserve Bank of New York Staff Reports. Available from: <http://goo.gl/XUnjRF> [Last accessed 05 September 2014]
- Adrian, T. Covits, D. and Liang, N. (2013) 'Financial Stability Monitoring', Federal Reserve Bank of New York Staff Reports. Available from: <http://goo.gl/OYxcKY> [Last accessed 26 September 2015].
- Admati, A., DeMarzo, P., Hellwig, M and Pfleiderer, P (2011) 'Fallacies, irrelevant Facts, and Myths in the Discussion of Capital Regulation: Why Bank Equity is Not Expensive', Stanford Graduate School of Business Research Paper No. 2065. Available from: <http://goo.gl/0wkk0s> [Last accessed 8 April 2015].
- Admati, A. and Hellwig, M. (2013a) *The Bankers' New Clothes: What's Wrong with Banking and What to Do about It*. Princeton: Princeton University Press.
- —. (2014) 'The Parade of the Bankers' New Clothes Continues: 23 Flawed Claims Debunked', Document post on 'The Bankers New Clothes' website. Available from: <http://goo.gl/y4kOUO> [Last accessed 8 September 2015].

- Ahamed, L. (2009) *Lords of Finance: The Bankers Who Broke the World*, London: Random House.
- Allen, F. and Gale, D (2001) *Comparing Financial Systems*: MIT Press: Cambridge MA.
- Alvarez, S. (2014) 'Regulatory Rulemakings', Remarks Before the Committee on Financial Services, U.S. House of Representatives, Washington, D.C. April 8.
Available from: <http://goo.gl/j4iuhV> [Last accessed 05 September 2014]
- Angeloni, C. and Wolff, G. (2012) 'Are banks affected by their holdings of government debt?', Bruegel Working Paper, March. Available from: <http://goo.gl/Zt84z6> [Last accessed 16 March 2015].
- Archer, D. and Moser-Boehm, P. (2013) 'Central bank finances', BIS Papers No 71.
Available from: <http://goo.gl/JHNSbO> [Last accessed 8 March 2015].
- Armitstead, L. and Aldrick, P. (2009) 'Sir James Sassoon: why I told the Tories to scrap the FSA' *The Daily Telegraph*, 25 July.
- Atkins, R. (2009) 'Trichet defends ECB independence', *The Financial Times*, June 4.
- Avant, D., Finnemore, M. and Sell, S. (2010) 'Who Governs the Globe?' in Avant, D., Finnemore, M. and Sell, S. (2010) *Who Governs the Globe?*, Cambridge: Cambridge University Press.
- Bachrach, P. and Baratz, M. (1962) 'Two faces of power', *The American Political Science Review*, pp. 947-52.
- Bair, S. (2012) *Bull by the Horns*, London: Simon & Schuster.
- Baker, A. (2006) *The Group of Seven: finance ministries, central banks and global financial governance*. Abingdon: Routledge.

- . (2010), 'Restraining regulatory capture? Anglo-America, crisis politics and trajectories of change in global financial governance', *International Affairs*, 86 (3), pp. 647-663.
- . (2013a) 'The New Political Economy of the Macroprudential Ideational Shift', *New Political Economy*, 18(1), pp. 112-39.
- . (2013b) 'When New Ideas Meet Existing Institutions: Why Macroprudential Regulatory Change is a Gradual Process', in Moschella, M. and Tsingou, E. (eds.) *Great Expectations, Slow Transformations: Incremental Change in Post-Crisis Regulation*, Colchester: ECPR Press.
- . (2014) 'Macroprudential Regulation', in Mugge, D (ed.) *Europe and the Governance of Global Finance*, Oxford: Oxford University Press.
- . (2015a) 'Varieties of Economic Crisis, Varieties of Ideational Change', *New Political Economy*, 20(3), pp. 342-346.
- . (2015b) 'The Bankers' Paradox: the political economy of macroprudential regulation', SRC Discussion Paper No 37, The London School of Economics and Political Science Systematic Risk Centre, London. Available from: <http://eprints.lse.ac.uk/61998/> [Last accessed 6th September 2015].
- Baker, A. and Widmaier, W. (2013) 'The Institutionalist Roots of Macroprudential Ideas: Veblen and Galbraith on Regulation, Policy Success and Overconfidence', *New Political Economy*, pp. 1-20.
- . (2014). 'Macroprudential Ideas and Contested Social Purpose: A Response to Terrence Casey'. *The British Journal of Politics & International Relations*. DOI: 10.1111/1467-856X.12058

- Bank of England (2007) 'Central Bank Measures to Address Elevated Pressures in Short-term Funding Markets', News Release, 12 December. Available from: <http://goo.gl/z1zA36> [Last accessed 6th March 2015].
- . (2009) 'The role of macroprudential policy', Discussion Paper. Available from: <http://goo.gl/rYxNku> [Last accessed 11 December 2014].
- . (2011) 'Financial Stability Report', Issue No. 30, December 2011. Available from: <http://goo.gl/Lbuxpt> [Last accessed 11 December 2014].
- . (2012) 'Record of the Interim Financial Policy Committee Meeting', 22 June. Available from: <http://goo.gl/M3Pmip> [Last accessed 11 December 2014].
- . (2013a) 'Financial Stability Report', Issue No. 33. Available from: <http://goo.gl/Mqi5wW> [Last accessed 05 September 2014]
- . (2013b) 'Strengthening capital standards: implementing CRD IV, feedback and final rules - PS 7/13'. Available from: <http://goo.gl/qWCHP5> [Last accessed 11 December 2014].
- . (2013c) 'A framework for stress testing the UK banking system: A Discussion Paper', Available from: <http://goo.gl/EaH6lx> [Last accessed 05 September 2014]
- . (2014a) 'The Bank of England's approach to resolution', Available from: <http://goo.gl/2cqfU4> [Last accessed 11 December 2014].
- . (2014b) 'The Prudential Regulation Authority's approach to banking supervision'. Available from: <http://goo.gl/YAezoM> [Last accessed 05 September 2014].
- . (2014c) 'Press Release - Bank of England announces measures to bolster transparency and accountability'. Available from: <http://goo.gl/oAQN9V> [Last accessed 11 December 2014].

- . (2014d) 'Stress testing the UK banking system: Variable paths for the 2014 'UK variant' scenario', Available from: <http://goo.gl/gXUiYj> [Last accessed 05 December 2014].
- . (2014e) 'CCB Core Indicators', [Tab 5 in Excel worksheet] Available from: <http://goo.gl/lZuxGo> [Last accessed 05 September 2014].
- . (2014f) 'The implementation of ring-fencing: consultation on legal structure, governance and the continuity of services and facilities' Available from: <http://goo.gl/qAb9gV> [Last accessed 05 September 2014].
- . (2014g) 'The Financial Policy Committee's review of the leverage ratio'. Available from: <http://goo.gl/KQ0YCn> [Last accessed 05 September 2014].
- . (2014h) 'The Financial Policy Committee's powers to supplement capital requirements', Policy Statement, Available from: <http://goo.gl/WrmdRb> [Last accessed 05 September 2014].
- . (2014i) 'Financial Stability Report', Issue No. 35. Available from: <http://goo.gl/dXBuXe>. [Last accessed 05 September 2014].
- Barker, A. (2012) 'Leaked legal opinion on eurozone banking union', *The Financial Times*. Available from: <http://goo.gl/KAS2We> [Last accessed 8 April 2015].
- Barker, A. and Spiegel P. (2012) 'ECB policy maker calls for bank crisis plan', 30 March. *The Financial Times*. Available from: <http://goo.gl/HDe1GA> [Last accessed 8 April 2015].
- Barkin, N., Taylor, E. and Taylor, P. (2014) 'Insight - Mario Draghi's German problem' Reuters. October 23. Available from: <http://goo.gl/lAbtQV> [Last accessed 25 March 2015].

- Barnett, M. and Duval, R. (2005) 'Power in International Politics', *International Organization*, 59(01), pp. 39-75.
- BCBS (Basel Committee on Banking Supervision) (2010a) 'Guidance for national authorities operating the countercyclical capital buffer', Available from: <http://goo.gl/80vmOt> [Last accessed 05 September 2014].
- . (2011) 'Basel III: A global regulatory framework for more resilient banks and banking systems', Available from: <http://goo.gl/63tuzc> [Last accessed 05 September 2014].
- . (2014) 'Basel III leverage ratio framework and disclosure requirements', Available from: <http://goo.gl/xG3u6X> [Last accessed 05 September 2014].
- Bean C, Paustian, M Penalver A and Taylor T (2010) 'Monetary Policy after the Fall', paper presented Bean, C at the Federal Reserve Bank of Kansas City Annual Conference Jackson Hole, Wyoming. Available from: <http://www.bis.org/review/r100901d.pdf> [accessed 27 May 2014].
- Beck, U. (1992), *Risk Society: Towards a New Modernity*, London: Sage.
- Becker, G. (1983), 'A Theory of Competition Among Pressure Groups for Political Influence', *The Quarterly Journal of Economics*, 98 (3), pp. 371-400.
- Begg, I. (2009) 'Monetary Policy Strategies', in Dyson, K. and Marcussen, M. *Central Banks in the Age of the Euro: Europeanization, Convergence, and Power*. Oxford: Oxford University Press.
- Bell, S. (2011), 'Do We Really Need a New 'Constructivist Institutionalism' to Explain Institutional Change?', *British Journal of Political Science*, 41(4), pp. 883-906.
- . (2012), 'The Power of Ideas: The Ideational Shaping of the Structural Power of Business', *International Studies Quarterly*, 56(4), pp. 661-73.

- Bell, S. and Hindmoor, A. (2014) 'The Ideational Shaping of State Power and Capacity: Winning Battles but Losing the War over Bank Reform in the US and UK', *Government and Opposition*, 49(3), pp. 342-68.
- . (2015) 'Taming the City? Structural Power and the Evolution of British Banking Policy amidst the Great Financial Meltdown', *New Political Economy*, 20(3), pp. 454-474.
- Bennett, A (2010) 'Process Tracing and Causal Inference', in Brady, H. and Collier, D. (eds), *Rethinking Social Inquiry*, Plymouth: Rowman and Littlefield.
- Bernanke, B. (2008) 'The economic outlook', testimony before the Committee on the Budget, U.S. House of Representatives, Washington D.C., January 17, 2008 [Last accessed 10 April 2015].
- . (2009) 'Semiannual Monetary Policy Report to the Congress', testimony before the Committee on Financial Services, U.S. House of Representatives, Washington, D.C., July 21. Available from: <http://goo.gl/2M9oHN> [Last accessed 10 April 2015].
- . (2013) 'The Federal Reserve and the Financial Crisis', Princeton: Princeton University Press.
- Bernstein, J (2014) 'Inside the New York Fed: Secret Recordings and a Culture Clash', Pro Publica. Available from: <http://goo.gl/K1F1cr> [Last accessed 23rd September 2015].
- Bernstein, M (1955) *Regulating Business by Independent Commission*, Princeton: Princeton University Press.
- Best, J. (2005). *The limits of transparency: Ambiguity and the history of international finance*. Ithaca: Cornell University Press.

- . (2010) 'The Limits of Financial Risk Management: Or What We Didn't Learn From the Asian Crisis', *New Political Economy* 15(1), pp. 29-24.
- Bickerton C. Hodson, D. and Puetter, E. (2015) 'The New Intergovernmentalism and the Study of European Integration', in Bickerton C. Hodson, D. and Puetter, E. (eds.) *The New Intergovernmentalism: States and Supranational Actors in the Post-Maastricht Era*, Oxford: Oxford University Press.
- Bini Smaghi, L. (2009) 'Regulation and supervisory architecture: Is the EU on the right path?', remarks delivered to the ECON meeting with national parliaments on financial crisis, Brussels, February 12. Available from: <http://goo.gl/fLNj8x> [Last accessed 20 March 2015].
- . (2014) 'Monetary Policy, the Only Game in Town? In Akerlof et al. (eds.) *What Have We Learned?: Macroeconomic Policy after the Crisis*, Washinton D.C.: International Monetary Fund and Massachusetts Institute of Technology.
- BIS (Bank for International Settlements) (2014), '84th Annual Report: 1 April 2013–31 March 2014'. Available from: http://www.bis.org/publ/arpdf/ar2014_ec.pdf. [Last accessed 05 September 2014].
- Black, J. (2008) 'Forms and paradoxes of principles-based regulation', *Capital Markets Law Journal*, 3(4), pp. 425-457.
- Black, J. and Baldwin, R. (2010) 'Really responsive risk-based regulation'. *Law & Policy*, 32(2), pp. 181-213.
- Black, J., Hoper, M., and Band, C. (2007) 'Making a Success of Principles-Based Regulation', *Law & Financial Markets Review* (1), pp. 191-206.

- Blair, T. (2005) 'Risk and the State at the Institute for Public Policy Research', speech, 26 May. Available from: <http://goo.gl/rp4NaF>. [Last accessed 05 September 2015].
- Blinder, A. (2010) 'How central should the central bank be?', *Journal of Economic Literature*, 48(1), pp. 123-33.
- . (2013) *After the Music Stopped: The Financial Crisis, The Response and the Work Ahead*, New York: The Penguin Press.
- Block, F. (1977) 'The Ruling Class Does Not Rule: Notes on the Marxist Theory of the State', *Socialist Revolution*, 33(6), pp. 6-28.
- Blyth, M. (2002) *Great Transformations: Economic Ideas and Institutional Change in the Twentieth Century*, Cambridge: Cambridge University Press.
- . (2013a) 'This Time It Really Is Different: Europe, the Financial Crisis, and 'Staying on Top' in the 21st Century' in Breznitz, D. and Zysman, J. (2013) *The Third Globalization: Can Wealthy Nations Stay Rich in the Twenty-First Century*. Oxford University Press: Oxford.
- . (2013b) *Austerity: the History of a Dangerous Idea*. Oxford: Oxford University Press.
- Borio, C. and Shim, I (2007) 'What can (macro-)prudential policy do to support monetary policy?', BIS Working Papers No 242. Available from: <http://www.bis.org/publ/work242.pdf>. [Last accessed 05 September 2014].
- Bowles, S. (2013) "'Banking Union is a greater pooling of sovereignty than signing up to the Euro" - Sharon Bowles MEP', from Sharon Bowles personal website. May 21. Available from: <http://goo.gl/LFAwOd> [Last accessed 8 April 2015].

- Bowman, A., Erturk, I., Froud, J., and Johal, S. (2012) 'Central bank-led capitalism. *Seattle University Law Rev.*, 36, pp. 455-487.
- Brainard, L (2014) 'The Federal Reserve's Financial Stability Agenda', remarks at the At the Hutchins Center on Fiscal and Monetary Policy, The Brookings Institution, Washington, D.C. Available from: <http://goo.gl/cZXeKH> [Last accessed 05 September 2014].
- Braithwaite, J. (2008) '*Regulatory Capitalism: How it Works, Ideas for Making it Work Better*', Cheltenham: Edward Elgar Publishing.
- Briault, C. (1999) 'The Rationale for a Single National Financial Services Regulator', Financial Services Authority Occasional Paper Series, No. 2. Available from: <http://goo.gl/GqyrU7> [Last accessed 1 September 2014].
- (2002). 'Revisiting the rationale for a single national financial services regulator'. Financial Services Authority Occasional Paper Series, No. 16 Available from: <http://goo.gl/vc8Q6g> [Last accessed 1 September 2014].
- Broome, A and Seabrooke, L (2016) 'Shaping Policy Curves: Cognitive Authority in Transnational Capacity Building'. *Public Administration*, doi:10.1111/padm.12179.
- Buiter, W. (2009) 'Fiscal dimensions of central banking: the fiscal vacuum at the heart of the Eurosystem and the fiscal abuse by and of the Fed', *The Financial Times*. Available from: <http://goo.gl/c88GF8> [Last accessed 9 August 2014]
- (2014) Central Banks: Powerful, Political and Unaccountable? *Journal of the British Academy*, Vol. 2: pp. 269–303.
- Buiter, W. and Sibert, A. (2007) 'The central bank as market maker of last resort', *The Financial Times*, 12 August. Available from: <http://goo.gl/o5Gk8x> [Last accessed 05 March 2015].

- Burnham, P. (1999) 'The politics of economic management in the 1990s', *New Political Economy*, 4:1, 37–54.
- . (2001) 'New Labour and the Politics of Depoliticisation', *The British Journal of Politics & International Relations*, 3(2), pp. 127-49.
- . (2007) 'The Politicisation of Monetary Policy-Making in Postwar Britain', *British Politics*, 2(3), pp. 395-419.
- Bush, O. Knott, S. and Peacock C. (2014) 'Why is the UK banking system so big and is that a problem?', *Bank of England Quarterly Bulletin*, 54(4), pp. 385-396.
- Busch, A. (2008) *Banking Regulation and Globalization*, Oxford: Oxford University Press.
- Buti, M. (2013) 'Economic governance: restoring confidence and anchoring stability' remarks delivered to the conference 'Blueprint for a Deep and Genuine EMU', Brussels, 7 May. Available from: <http://goo.gl/9XfvFF> [video time: 2:28:00] [Last accessed 26 March 2015].
- Campbell, J. (2004) *Institutional change and globalization*, Princeton: Princeton University Press.
- Capie, F., Fischer, S., Goodhart, C. and Schnadt, N. (eds) (1994) *The future of central banking: the tercentenary symposium of the Bank of England*, Cambridge: Cambridge University Press.
- Carney, M. (2014) 'Speech given at the Lord Mayor's Banquet for Bankers and Merchants of the City of London at the Mansion House', London, 12 June. Available from: <http://goo.gl/wBsfJU> [Last accessed 21 January 2015].

- Carstensen, M. (2011) 'Paradigm Man vs. The Bricoleur: Bricolage as an Alternative Vision of Agency in Ideational Change', *European Political Science Review*, 3(1), pp. 147-67.
- Caruana, J. (2013) 'Foreword' in Archer, D. and Moser-Boehm, P. 'Central bank finances', BIS Papers No 71. Available from: <http://goo.gl/JHNSbO> [Last accessed 8 March 2015].
- Casey, T. (2014). 'How Macroprudential Financial Regulation Can Save Neoliberalism', *The British Journal of Politics & International Relations*, DOI: 10.1111/1467-856X.12042.
- Cecchetti, S. and Schoenholtz, K. (2014) 'Time-varying Capital Requirements: Rules vs. Discretion (again)'. Available from: <http://goo.gl/ODZsyA> [Last accessed 9 August 2014].
- Chadha, J. Turner, P. and Zampolli, F. (2013) 'The ties that bind: monetary policy and government debt management', *Oxford Review of Economic Policy*, 29(3), pp. 548–581.
- Cheryl Schonhardt-Bailey (2013) *Deliberating American Monetary Policy: a Textual Analysis*, Cambridge, Massachusetts: The MIT Press.
- Chon, M. (2014a) 'Fed gives banks extra time on Volcker compliance', *The Financial Times*: London. Available from: <http://www.ft.com/cms/s/0/323fb550-be9e-11e3-b44a-00144feabdc0.html>. [Last accessed 05 September 2014].
- (2014b) 'US community banks win reprieve on Volcker', *Financial Times*: London. Available from: <http://www.ft.com/cms/s/0/b2fc1d20-7d6f-11e3-a48f-00144feabdc0.html#axzz3JPaLNM77>. [Last accessed 05 September 2014].

- Cihak, M. (2010) 'Price Stability, Financial Stability, and Central Bank Independence' paper presented at the 38th Economics Conference: 'Central Banking after the Crisis', *Oesterreichische Nationalbank*, Austria. Available from: <http://goo.gl/AjnvPD> [Last accessed 9 August 2014].
- Claessens, S. (2014) 'An Overview of Macroprudential Policy Tools', IMF Working Paper WP/14/214. Available from: <http://goo.gl/YmqNBh>. [Last accessed 25 January 2015]
- Claessens, S., Ghosh, S. and Mihet R (2014) 'Macro-Prudential Policies to Mitigate Financial System Vulnerabilities', IMF Working Paper WP/14/155. Available from: <http://www.imf.org/external/pubs/ft/wp/2014/wp14155.pdf>. [Last accessed 05 September 2014]
- Claeys, G., Hallerberg, M. and Tschekassin, O. (2014) 'European Central Bank Accountability: How the Monetary Dialogue Could Evolve', Bruegel Policy Contribution, Issue 4, March. Available from: <http://goo.gl/6EStHs> [Last accessed 05 September 2014].
- Clarke, M. (2000) *Regulation: The Social Control of Business between Law and Politics*, Basingstoke: Palgrave Macmillan.
- Clift, B. (2012) 'Comparative Capitalisms, Ideational Political Economy and French Post-Dirigiste Responses to the Global Financial Crisis', *New Political Economy*, 17(5), pp. 565-90.
- (2014) *Comparative Political Economy, States Markets and Global Capitalism*, Basingstoke: Palgrave Macmillan.

- Clift, B. and Tomlinson, J. (2012) 'When rules started to rule: the IMF, neo-liberal economic ideas and economic policy change in Britain', *Review of International Political Economy*, 19(3), pp. 477–500.
- Clift, B. and Woll, C. (2012) 'Economic patriotism: reinventing control over open markets', *Journal of European Public Policy*, 19(3), pp. 307-23.
- Cœuré, B. (2012) 'The reform of Financial Regulation: Priorities From a European Central Bank Perspective', Speech to the Association for Financial Markets in Europe, 6 March. Available from: <http://goo.gl/WcpGD9> [Last accessed 8 April 2015].
- Cohen, B. (1996). 'Phoenix Risen: The Resurrection of Global Finance', *World Politics*, 48(2), pp. 268–96.
- . (2013) 'Money Power and Crisis', paper prepared for the workshop 'A Retrospective on the Work of Susan Strange: Structure, Power, Knowledge, and Norms', Princeton University, 10-11 January 2014. Available from: <http://goo.gl/Px0aTH> [Last accessed 01 April 2015].
- Conservatives (2009) 'From Crisis to Confidence: Plan for Sound Banking: Policy White Paper', July Available from: <http://goo.gl/RrUs6M> [Last accessed 8 March 2015].
- Constâncio, V. (2014) 'The ECB and Macro-prudential policy: from research to implementation', speech at the 'Third Conference of the Macro-prudential Research Network', Frankfurt-am-Main, 23 June. Available from: <http://goo.gl/2CHwLV> [Last accessed 01 January 2015].

- Corriere della Sera (2011) 'Trichet e Draghi: un'azione pressante per ristabilire la fiducia degli investitori', *Corriere Della Sera*, 5 August. Available from: <http://goo.gl/7zYtpJ> [Last accessed 05 September 2014]
- Council of the European Union (2010) 'EUCO 7/10 Conclusions', 25-26 March. Available from: <http://goo.gl/LIKBEM>. [Last accessed 21 September 2010].
- 'Council Regulation (EU) No. 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions', Brussels: Official Journal.
- Crockett, A. (2000) 'Marrying the micro-and macro-prudential dimensions of financial stability', BIS speeches, 21. Available from: <http://www.bis.org/speeches/sp000921.htm> [Last accessed 27 May 2014].
- Crooks, E. (2002) 'ECB steering collision course over its ambitions to regulate Europe's banks', *Financial Times*, 30 January.
- Crouch, C. (2005) *Capitalist Diversity and Change: Recombinant Governance and Institutional Entrepreneurs*, Oxford: Oxford University Press.
- Cutler, A., Haufler, V. and Porter, T. (eds) (1999) *Private Authority and International Affairs*, New York: SUNY Press.
- Dayen, D (2014) 'Wall Street cop's shameful scheme: Inside an infuriating bureaucratic turf war', May 29. Available from: <http://goo.gl/ndnueQ> [Last accessed 5 September 2014]
- Dahl, R. (1957) 'The Concept of Power', *Behavioral Science* 2(1), pp. 201–215.
- Dal Bo, E. (2006) 'Regulatory Capture: A Review', *Oxford Review of Economic Policy*, 22(2), pp. 203-25.

- Darvas, Z. and Merler, S. (2013). 'The European Central Bank in the Age of the Banking Union', Bruegel Policy Contribution 2013/13, October. Available from: <http://goo.gl/80NLN0> [Last accessed 20 March 2014].
- Davies, H. (1996) 'The Culture of Regulation'. *Financial Stability Review*, Autumn (1), London: The Bank of England.
- Davies, H. and Green, D. (2010) *The Fall and Rise of Central Banking*, Princeton and Oxford: Princeton University Press.
- De Haan, J., Masciandaro, D., & Quintyn, M. (2008). 'Does Central Bank Independence Still Matter?', *European Journal of Political Economy*, 24(4), pp. 717-721.
- De Grauwe, P. (2012) 'How Not to Be A Lender of Last Resort', CEPR Policy Insight. Available from: <http://goo.gl/4Y8GkY> [Last accessed 27 September 2015]
- De Larosière et al. (2009) 'The High Level Group on Financial Supervision in the EU', European Commission'. Available from: <http://goo.gl/laKv5G> [Last accessed 20 January 2015].
- De Mooij, R (2011) 'Tax Biases to Debt Finance: Assessing the Problem, Finding Solutions', IMF Staff Discussion Note SDN 11/11, May 3. Available from: <http://goo.gl/tWWpo4> [Last accessed 21 January 2015].
- De Rynck, S. (2015) 'Banking on a Union: The Politics of Changing Eurozone Banking Supervision, *Journal of European Public Policy*, DOI: 10.1080/13501763.2015.1019551.
- Deane, M. and Pringle, R. (1994), *The Central Banks*, London: Harmish Hamilton.

- DeBelle, G. and Fischer, S. (1994). 'How Independent Should a Central Bank Be?', in Fuhrer, J. (ed.) *Goals Guidelines and Constraints Facing Monetary Policymakers*, Reserve Bank of Boston: pp. 195-229.
- DFA (Dodd-Frank Wall Street Reform and Consumer Protection Act) (PL 111-203 July 21, 2010). United States Statutes at Large 124 (2010), pp. 1376 - 2223
- Dincer, N. and Eichengreen, B. (2012) 'The Architecture and Governance of Financial Supervision: Sources and Implications', *International Finance*, 15(3), pp. 309-25.
- Donelson, D and Zaring, D. (2011). 'Requiem for a Regulator: The Office of Thrift Supervision's Performance During the Financial Crisis'. *North Carolina Law Review*, 89: pp. 1777-1812.
- Dowding, K. (1991) *Rational Choice and Political Power*, Aldershot: Edward Elgar.
- . (2008) 'Power, Capability and Ableness: The Fallacy of the Vehicle Fallacy', *Contemporary Political Theory*, 7(3), pp. 238–258.
- Draghi, M. (2012), 'Introductory Statement', hearing at the Committee on Economic and Monetary Affairs of the European Parliament, 25 April. Available from: <http://goo.gl/Z7jzoK> [accessed 25 January 2015].
- . (2013) 'Money and monetary institutions after the crisis', Speech at the conference organised by Banca d'Italia in memory of Curzio Giannini, Rome, 10 December. Available from: <http://goo.gl/YgydUa> [accessed 27 December 2014].
- Drezner, D. (2007). *All Politics is Global: Explaining International Regulatory Regimes*. Princeton: Princeton University Press.
- Dudley, W. (2013) 'Ending Too Big To Fail' Remarks at the Global Economic Policy Forum, New York City, 7 November. Available from: <http://goo.gl/OSz9Te> [accessed 27 August 2015].

- Dyson, K. (1994) *Elusive union: the process of economic and monetary union in Europe*. London: Longman.
- Dyson, K. (2009) 'The Age of the Euro: A Structural Break? Europeanization, Convergence, and Power in Central Banking', in Dyson, K. and Marcussen, M. (eds.) (2009) *Central Banks in the Age of the Euro: Europeanization, Convergence and Power*, Oxford University Press.
- Dyson, K. and Marcussen, M. (2009) *Central Banks in the Age of the Euro: Europeanization, Convergence and Power*, Oxford: Oxford University Press.
- Eberlein, B. and Newman, A.L. (2008) 'Escaping the international governance dilemma? Incorporated transgovernmental networks in the European Union', *Governance* 21(1): 25–52.
- EC (European Commission) (1999) 'Financial services: implementing the framework for financial markets: action plan'. Available from: <http://goo.gl/kXZpwE> [Last accessed 27 December 2014].
- . (2007a) 'FSAP evaluation part 1: processes and implementation'. Available from: <http://goo.gl/j7DddR> [Last accessed 27 December 2014].
- . (2007b) 'Review of the Lamfalussy process: strengthening supervisory convergence'. Available from: <http://goo.gl/7EkKxB> [Last accessed 27 December 2014].
- . (2008) 'High Level Expert Group on EU financial supervision to hold first meeting on 12 November, Press Release', 11 November. Available from: <http://goo.gl/041yXI>. [Last accessed 30 January 2015.]

- ECB (European Central Bank) (2001) 'The Role of Central Banks in Prudential Supervision', Available from: <https://goo.gl/Y30OUO> [Last accessed 27 December 2014].
- . (2010) 'Decision of the European Central Bank of 14 May 2010 Establishing a Securities Markets Programme (ECB/2010/5)', (2010/281/EU). *Official Journal of the European Union* L 124/8.
- . (2012) 'Financial Stability Review', June 2012. Available from: <http://goo.gl/24VncM> [Last accessed 27 December 2014].
- . (2014a) 'Financial Stability Review', November 2014. Available from: <http://goo.gl/NMHt3c> [Last accessed 27 December 2014].
- . (2014b) 'Guide to Banking Supervision'. Available from: <http://goo.gl/liz7VC> [Last accessed 27 December 2014].
- . (2014c) 'Opinion of the European Central Bank of 19 November 2014 on a proposal for a regulation of the European Parliament and of the Council on structural measures improving the resilience of EU credit institutions (CON/2014/83)'. Available from: <http://goo.gl/WEA4Xy> [Last accessed 27 December 2014].
- . (2014d) 'SSM Quarterly Report 2014/4'. Available from: <http://goo.gl/0atUY2> [Last accessed 27 December 2014].
- . (2014e) 'ECB to adjust schedule of meetings and to publish regular accounts of monetary policy discussions in 2015', Press Release, 3 July. Available from: <https://goo.gl/ibH2Bo> [Last accessed 24th August 2015].
- . (2014f) 'Letter of the ECB president to the Irish Minister for Finance dated 19/11/2010 on the large provision of liquidity by the Eurosystem and the Central

- Bank of Ireland to Irish banks and the need for Ireland to agree to an adjustment programme'. Available from: <http://goo.gl/kwllca> [Last accessed 3 April 2015].
- ECB/ESCB Statute (1992) (Protocol on the Statute of the European System of Central Banks and of the European Central Bank). Available from: <https://goo.gl/RhsT5M> [Last accessed: 27 September 2015].
- Eichengreen, B. (2008) *Globalizing Capital: A History of the International Monetary System, 2nd Edition*, Princeton and Oxford: Princeton University Press.
- —. (2011) *Exorbitant Privilege: The Rise and Fall of the Dollar*, Oxford: Oxford University Press.
- Eichengreen, B. et al. (2011) 'Committee on International Economic Policy and Reform 'Rethinking Central Banking'', Brookings Institute. Available from: <http://goo.gl/5oklBx> [Last accessed: 2 March 2015].
- Elgie, R. and Thompson, H. (1998) *The Politics of Central Banks*, Oxford: Routledge.
- Elgie, R. (1998) 'Democratic accountability and central bank independence: Historical and contemporary, national and European perspectives', *West European Politics*, 21(3), pp. 53-76.
- —. (2002) 'The politics of the European Central Bank: principal-agent theory and the democratic deficit', *Journal of European Public Policy*, 9(2), pp. 186-200.
- Elliot, D. (2014) 'Implicit Subsidies for Very Large Banks: A Primer', Economic Studies at Brookings. Available from: <http://goo.gl/bmruXa>. [Last accessed 05 September 2014]
- Elliot, D, Feldberg, G. Lehnert, A. (2013) 'The History of Cyclical Macroprudential Policy in the United States, 2013-29', Finance and Economics Discussion Series Divisions of Research & Statistics and Monetary Affairs, Federal Reserve Board,

Washington, D.C. Available from: <http://goo.gl/9gr2qB> [Last accessed 05 September 2014]

Enria, A. (2013a) 'Implications of the Single Supervisory Mechanism on the European System of Financial Supervision: the EBA perspective.' Remarks to the Public hearing on financial supervision in the EU. Available from: <http://goo.gl/U3W9gB> [Accessed 14th January 2014].

Epstein, R. and Rhodes, M. (2016) 'The Political Dynamics behind Europe's New Banking Union', *West European Politics*, (forthcoming).

ESRB (European Systemic Risk Board) (2012a) 'Risk Dashboard, Issue 1: 31 August'. Available from: <https://goo.gl/FRhHF5> [Last accessed 27 December 2014].

— (2012b) 'Recommendation of the European Systemic Risk Board of 20 December 2012 on money market funds'. Available from: <http://goo.gl/meV7rs> [Last accessed 27 December 2014].

— (2013) 'Recommendation of the European Systemic Risk Board of 4 April 2013 on Intermediate Objectives and Instruments of Macro-prudential Policy (ESRB/2013/1)'. Available from: <http://goo.gl/opBm65> [Last accessed 27 December 2014].

— (2014a) 'Operationalising the countercyclical capital buffer: indicator selection, threshold identification and calibration options', Occasional Paper Series No. 5, June. Available from: <https://goo.gl/IC2PTY> [Last accessed 27 December 2014].

— (2014b) 'Is Europe Overbanked?', Reports of the Advisory Scientific Committee No. 4, June. Available from: <http://goo.gl/EJc7Xa> [Last accessed 27 December 2014].

- . (2015) 'National measures in the EU/EEA notified to the ESRB, or of which the ESRB is aware, and that are of macro-prudential interest'. Available from: <http://goo.gl/vOAXqG> [Last accessed 20 January 2015].
- Fama, E. (1970) 'Efficient capital markets: A review of theory and empirical work', *The Journal of Finance*, 25(2), pp. pp. 383-417.
- FASB (Financial Accounting Standards Board) (2009) 'Briefing Document: FASB Statement 166 and 167'. Available from: <http://goo.gl/jekUCm>. [Last accessed 1 September 2014]
- Feldman, R. and Schmidt, J. (2001), 'Increased Use of Uninsured Deposits: Implications for Market Discipline', *Fed Gazette*, March: 18–9. Federal Reserve Bank of Minneapolis. Available from: <http://goo.gl/6i8iq9> [Last accessed 05 September 2014].
- Fernandez-Albertos, J. (2015) 'The Politics of Central Bank Independence', *Annual Review of Political Science*, 18, pp. 217-237.
- Financial Crisis Inquiry Commission (2011) *The Financial Crisis Inquiry Report*, New York: Public Affairs.
- Financial Services Act 2012 (21)*, London: Her Majesties Stationery Office.
- Fischer, S. (1990). 'Rules versus discretion in monetary policy,' in Friedman, M and Hahn, F. (eds.) *Handbook of Monetary Economics*, 1(2). Amsterdam: Elsevier. Available from: <http://goo.gl/jAQPvu> [Last accessed 05 September 2014].
- Fischer, 2. (2014) Financial Sector Reform: How Far Are We? Speech at At the Martin Feldstein Lecture, National Bureau of Economic Research, Cambridge, Massachusetts. Available from: <http://goo.gl/Q9u7vz> [Last accessed 28 September 2015].

Fisher, P. (2009) 'The Bank of England's Balance Sheet: Monetary Policy and Liquidity Provision during the Financial Crisis', Remarks at the Professional Pensions Show Excel Centre, London 19 November. Available from: <http://goo.gl/sTGJk1> [Last accessed 30 March 2015].

Fleischer, V. (2011) 'Tax Reform and the Tax Treatment of Debt and Equity', testimony to the Joint Hearing of the US House of Representatives Committee on Ways and Means and the US Senate Committee on Finance, 13 July. Available from: <http://goo.gl/bnPcKc> [Last accessed 21 January 2015].

FRS (Federal Reserve System) (2010) 'Agencies Issue Final Rule for Regulatory Capital Standards Related to Statements of Financial Accounting Standards Nos. 166 and 167'. Available from: <http://goo.gl/ZD9kuV> [Last accessed 05 September 2014].

—. (2011) 'Capital Plans', *Federal Register*, 76(231), December 1, pp. 74631-74648.

—. (2012a) 'Supervisory and Company-Run Stress Test Requirements for Covered Companies', *Federal Register*, 77(198), October 12, pp. 62378-62396.

—. (2012b) 'Annual Company-Run Stress Test Requirements for Banking Organizations With Total Consolidated Assets Over \$10 Billion Other Than Covered Companies', *Federal Register* Vol. 77, No. 198 Friday, October 12, pp. 62396-62409.

—. (2014) 'Enhanced Prudential Standards for Bank Holding Companies and Foreign Banking Organizations', *Federal Register* 79(59), March 27, pp. 17240-17337.

FRS and FDIC (2011) 'Resolution Plans Required', *Federal Register*, 76(211), November 1, pp. 67323-67340.

FRS, OCC and FDIC (Federal Reserve System, Office for the Comptroller of the Currency and Federal Deposit Insurance Company) (2013a) 'Regulatory Capital Rules: Regulatory Capital, Implementation of Basel III, Capital Adequacy, Transition Provisions, Prompt Corrective Action, Standardized Approach for Risk-weighted Assets, Market Discipline and Disclosure Requirements, Advanced Approaches Risk-Based Capital Rule, and Market Risk Capital Rule', *Federal Register*, 78(198) October 11, pp. 62018-62291.

— . (2013b) 'Interagency Guidance on Leveraged Lending', *Federal Register* 78(56) March 22, pp.17766-17776.

— . (2014) 'Regulatory Capital Rules: Regulatory Capital, Enhanced Supplementary Leverage Ratio Standards for Certain Bank Holding Companies and Their Subsidiary Insured Depository Institutions', *Federal Register* 79(84), May 1, pp. 24528-24541.

FRS, OCC, FDIC and SEC (Federal Reserve System, Office for the Comptroller of the Currency, Federal Deposit Insurance Company and Securities and Exchange Commission) (2013) 'Prohibitions and Restrictions on Proprietary Trading and Certain Interests in, and Relationships With, Hedge Funds and Private Equity Funds', *Federal Register* 79(21), January 31, pp. 5536-5806.

FSA (Financial Services Authority) (2009a) 'The Turner Review: A regulatory response to the global banking crisis', Available from: <http://goo.gl/Y3yvI1> [Last accessed 20 December 2014].

— . (2009b) 'A regulatory response to the global banking crisis'. Available from: <http://goo.gl/l8wA9P> [Last accessed 05 September 2014].

- . (2013) The failure of the Royal Bank of Scotland: Financial Services Authority Board Report, Available from: <http://www.fsa.gov.uk/pubs/other/rbs.pdf> [Last accessed 05 September 2014].
- FSB (Financial Stability Board) (2011) 'Key Attributes of Effective Resolution Regimes for Financial Institutions'. Available from <http://goo.gl/olfhZi> [Last accessed 21 January 2014].
- . (2013) 'Global Shadow Banking Monitoring Report', 14 November . Available from: <http://goo.gl/198z5M> [Last accessed 05 September 2014].
- . (2014) 'Adequacy of Loss-Absorbing Capacity of Global Systemically Important Banks in resolution'. Available from: <http://goo.gl/FvvBqr> [Last accessed 05 January 2015].
- Gagnon, J. et al. (2011) 'The Financial Market Effects of the Federal Reserve's Large-Scale Asset Purchases', *International Journal of Central Banking*, 7(1), pp. 3-43. [Last accessed 05 September 2014]
- GAO (United States Government Accountability Office) (2014) 'Large bank Holding Companies Expectations of Government Support'. Available from: <http://www.gao.gov/assets/670/665167.pdf>. [Last accessed 05 September 2014]
- Gapper, J. (2009) 'Squeeze the Leviathans of Finance', July 22. *The Financial Times*.
- Geithner (2009a) 'Press Briefing by Treasury Secretary Tim Geithner on the G20 Meetings'. Available from: <http://goo.gl/J9gbY1> [Last accessed 25 March 2015].
- . (2009b) Testimony before the Committee on Banking, Housing, and Urban Affairs United States Senate hearing on 'The Administration's Proposal to Modernize the Financial Regulatory System'. Transcript of hearing. Available from <http://goo.gl/4Npw1F>. [Last accessed 05 September 2014]

- . (2014) *Stress Test*, New York: Random House.
- George, A. and Bennett, A. (2005), *Case studies and theory development in the social sciences*, Cambridge, Massachusetts: MIT Press.
- Georgosouli, A. (2012) 'The FCA–PRA coordination scheme and the challenge of policy coherence', *Capital Markets Law Journal*, 8(1), pp. 62-76.
- Gennaioli, N., Shleifer, A. and Vishny, R. (2012) 'Neglected risks, financial innovation, and financial fragility'. *Journal of Financial Economics*, 104(3), pp. 452-468.
- Ghysels, E. et al. (2014) 'A High Frequency Assessment of the ECB Securities Markets Programme', ECB Working Paper No.1642. Available from: <http://goo.gl/bFWtZd> [Last accessed 2nd April 2015].
- Giddens (1991) *The Consequences of Modernity*, Stanford: Stanford University Press.
- Giles, C. (2008) 'Central Banks Become Lender of Only Resort.' *The Financial Times* 3 October.
- . (2014) 'Governor Mark Carney sweeps aside secrecy at Bank of England', *The Financial Times*, 11 December.
- Gill, S. and Law, D. (1989) 'Global hegemony and the Structural Power of Capital', *International Studies Quarterly*, 33(4), pp. 475-99.
- Golub, S, Kaya, A. and Reay, M. (2014) 'What were they thinking? The Federal Reserve in the Run up to the 2008 Financial Crisis', *Review of International Political Economy*, 22(4), 657-692.
- Goodhart, C. (2002) 'The organizational structure of banking supervision', *Economic Notes*, 31(1), pp. 1-32.
- . (2011) *The Basel Committee: The Early Years 1974-1997*, Cambridge: Cambridge University Press.

- . (2012) 'Monetary policy and public debt' in 'Public debt, monetary policy and financial stability', *Banque de France Financial Stability Review*, 16, April. Available from: <http://goo.gl/HdF4Hm> [Last accessed 21 January 2015].
- . (2012) 'Bank Resolution in Comparative Perspective: What Lessons for Europe', in Goodhart et al. (eds.) *Central Banks at a Crossroads: Europe and Beyond*, London: Anthem Press.
- Goodhart, C. and Schoenmaker, D. (1992) 'Institutional separation between supervisory and monetary agencies', *Giornale degli economisti e annali di economia*, pp. 353-439.
- Goodhart, C. and Schoenmaker, D. (1995) 'Should the functions of monetary policy and banking supervision be separated?', *Oxford Economic Papers*, 47(4), pp. 539-60.
- Goodhart, C. and Tsomocos, D. (2010) 'Analysis of financial stability', in *Challenges in Central Banking: The Current Institutional Environment and Forces Affecting Monetary Policy*. Cambridge: Cambridge University Press.
- Goodhart, L. (2014) "'Brave New World" Macro-prudential policy and the New Political Economy of the Federal Reserve', *Review of International Political Economy*, 22(2), pp. 280-310.
- Goodman, J. (1991) 'The Politics of Central Bank Independence', *Comparative Politics*, 23(3), p. 329-349.
- Graz, J. and Nölke, A. (2008) *Transnational Private Governance and its Limits*. Abingdon: Routledge.

- Green, D. (2012) 'Political Capture and the Regulatory Cycle: How Should it be Addressed', in Pagliari, S. (ed.) *Making Good Financial Regulation: Towards a Policy Response to Regulatory Capture*, Guilford: Grosvenor House Publishing Ltd.
- Greenspan, A. (2007) *The Age of Turbulence*, London: Allen Lane.
- . (2008) Evidence to the Hearing 'The Financial Crisis and the Role of Federal Regulators', Committee on Oversight and Government Reform, House of Representatives, October 23. Available from: <http://goo.gl/yJdDvJ> [Last accessed 20 January 2015].
- Greenwood et al. (2014) 'Government Debt Management at the Zero Lower Bound', Hutchins Centre on Fiscal and Monetary Policy at Brookings, Working Paper 5, 30 September. Available from: <http://goo.gl/HxCtqC> [Last accessed 20 January 2015].
- Greider, W. (1987) 'Secrets of the Temple: How the Federal Reserve Runs the Country', New York: Simon and Shutter Paperbacks.
- Gros, D., Alcidi, C., Giovanni, A. (2012) 'Central Banks in Times of Crisis: The Fed vs. the ECB', Policy Department A: Economic and Scientific Policies. Brussels: European Parliament.
- Grossman, G. and Helpman, E. (1994) 'Protection for Sale', *The American Economic Review*, 84(4), pp. 833-850.
- . (2001) *Special interest politics*, Cambridge: Massachusetts Institute of Technology.
- Guha, K. and Van Duyn, A. (2009) 'Congress aims to create systemic risk regulator', *The Financial Times*, January 16.

- Haas, P. (1992) 'Introduction: epistemic communities and international policy coordination', *International Organization*, 46(01), p. 1.
- Haldane (2009) Rethinking the Financial Network At the Financial Student Association, Amsterdam Available from: <http://goo.gl/6zhduw> [Last accessed 05 September 2015]
- (2011) 'Constraining discretion in bank regulation', paper given at the Federal Reserve Bank of Atlanta Conference on 'Maintaining Financial Stability: Holding a Tiger by the Tail(s)', Federal Reserve Bank of Atlanta. Available from: <http://goo.gl/visraC> [Last accessed 28 September 2015].
- (2013) 'Macroprudential Policies: When and how to use them?', paper presented at the 'Rethinking Macro Policy II: First Steps and Early Lessons Conference', International Monetary Fund, Washington DC., April 16-17. Available from: <http://goo.gl/rk1bM> [Last accessed 05 September 2014].
- (2014) 'Halfway up the stairs', published in *Central Banking Journal*, 5 August Available from URL: <http://goo.gl/9praRr> [Last accessed 09 August 2014].
- Haldane, A and Madouros, V (2012), 'The dog and the frisbee', speech given at the Federal Reserve Board of Kansas City's 36th Economic Policy Symposium, Jackson Hole, 31 August. Available from: <http://goo.gl/2yyCSm> [Last accessed 05 September 2014].
- Hall, P. (1986) *Governing the Economy: The Politics of State Intervention in Britain and France*, New York: Oxford University Press.
- (1993) 'Policy paradigms, social learning and the state', *Comparative politics*, 25(3), pp. 275-96.

- Hall, P and Taylor, R. (1996) 'Political Science and the Three New Institutionalisms', *Political Studies*, XLIV, 936-957.
- Hall, R. (2008) *Central Banking as Global Governance: Constructing Financial Credibility*, Cambridge University Press: Cambridge.
- Hall, P. and Soskice, D. (2001) 'An introduction to varieties of capitalism', in Hall, P. and Soskice, D. *Varieties of capitalism: The institutional foundations of comparative advantage*, Oxford: Oxford University Press.
- Hardie, I. and Howarth, J. (eds.) (2013) *Market-Based Banking and the International Financial Crisis*, Oxford: Oxford University Press.
- . (2013) 'A Peculiar Kind of Devastation: German Market-Based Banking', in Hardie, I. and Howarth, J. (eds.) (2013) *Market-Based Banking and the International Financial Crisis*, Oxford: Oxford University Press.
- Haubrich, J. (1996) 'Combining bank supervision and monetary policy', Cleveland Federal Reserve Economic Commentary, November. Available from: <http://www.clevelandfed.org/research/commentary/1996/1196.htm> [Last accessed 27 May 2014].
- Hawkins, D. et al. (eds.) (2006) *Delegation and Agency in International Organizations*, Cambridge: Cambridge University Press.
- Hay, C. (1997) 'State of the art: divided by a common language: political theory and the concept of power', *Politics*, 17(1), pp. 45-52
- . (2002) *Political analysis: a critical introduction*, Basingstoke: Palgrave Macmillan.

— . (2004) 'Ideas, Interests and Institutions in the Comparative Political Economy of Great Transformations', *Review of International Political Economy*, 11 (1), pp. 204-26.

Helleiner, E. (1994). *States and the reemergence of global finance: from Bretton Woods to the 1990s*. Ithaca: Cornell University Press.

— . (2005) 'Structural Power in International Monetary Relations', EUI Working Papers RSCAS No. 2005/10. Available from: <http://goo.gl/AlbziK> [Last accessed 2 March 2015].

— . (2014). *The Status Quo Crisis: Global Financial Governance After the 2008 Meltdown*. Oxford: Oxford University Press.

Hermings, R. and Carmassi, J. (2008), 'The Structure of Cross-Sector Financial Supervision', *Financial Markets, Institutions and Instruments*, 17(1), pp. 51-76.

Hirtle, B., and Lehnert, A. (2014). 'Supervisory stress tests', Federal Reserve Bank of New York Staff Report No. 696. Available from: <http://goo.gl/Rj7YEy> [Last accessed 27 January 2015].

HM Treasury (2010) 'A New Approach to Financial Regulation: Judgment, Focus and Stability', Cm7874, July. Available from: <http://goo.gl/2dHXNd> [Last accessed 27 May 2014].

Hodson, D. (2012) *Governing the Euro Area in Good Times and Bad*, Oxford: Oxford University Press.

House of Lords (2009) 'Banking Supervision and Regulation Volume I: Report' Select Committee on Economic Affairs 2nd Report of Session 2008–09 Available from: <http://goo.gl/a11JCQ> [Last accessed 27 December 2014].

- Howard, C (2014) 'Ranking The World's Most Powerful People 2014', *Forbes*, 5 November. Available from: <http://goo.gl/hukAph> [Last accessed 27 May 2014].
- Howarth, D. (2008) 'The European Central Bank: The Bank that rules Europe?' in Dyson, K. and Marcussen, M. *Central Banks in the Age of the Euro: Europeanization, Convergence, and Power*. Oxford: Oxford University Press.
- (2013) 'State Intervention and Market-Based Banking in France', in Hardie, I. and Howarth, J. (eds.) *Market-Based Banking and the International Financial Crisis*, Oxford: Oxford University Press.
- Howarth, D. and Loedel, P (2005) *The European Central Bank: The New European Leviathan? Revised Second Edition*. Basingstoke: Palgrave MacMillan.
- Howarth, D. and Quaglia, L. (2013) 'Banking on stability: the political economy of new capital requirements in the European Union', *Journal of European Integration*, 35(3), pp. 333-346.
- (2015) 'The New Intergovernmentalism in Financial Regulation and European Banking Union', in Bickerton C. Hodson, D. and Puetter, E. (eds.) *The New Intergovernmentalism: States and Supranational Actors in the Post-Maastricht Era*, Oxford: Oxford University Press.
- Howarth, D. and Rommerskirchen, C. (2013) 'A Panacea for all Times? The German Stability Culture as Strategic Political Resource', *West European Politics*, 36(4), pp. 750-70.
- ICB (Independent Commission on Banking) (2011) Final Report Recommendations, September. Available from: <http://goo.gl/smHC4E> [Last accessed 20 January 2015].

- ICI (Investment Company Institute) (2012) 'ICI and Money Market Working Group Statements on FSOC Action on Money Market Fund Regulation'. Available from: <http://goo.gl/HwIOUy> [Last accessed 27 May 2014].
- IMF (International Monetary Fund) (2011) 'Housing Finance and Financial Stability – Back to Basics?', *Global Financial Stability Report* April. Available from: <http://goo.gl/mVyldL> [Last accessed 21 January 2015].
- . (2013) 'Key Aspects of Macroprudential Policy: Background Paper'. Available from: <http://www.imf.org/external/np/pp/eng/2013/061013b.pdf>. [Last accessed 05 September 2014]
- . (2014) 'How Big Is the Implicit Subsidy For Banks Considered Too Important To Fail?', *Global Financial Stability Report*, April. Available from: <http://goo.gl/4mzXUK> [Last accessed 21 September 2015].
- . (2015) 'United States: Financial Sector Assessment Program-Detailed Assessment of Observance on the Basel Core Principles for Effective Banking Supervision', Available from: <https://goo.gl/8F5biJ> [Last accessed 05 September 2015].
- Irwin, N. (2013) *The Alchemists: Inside the Secret World of Central Bankers*, London: Headline Publishing.
- Israël J-M, et al. (2013) 'Statistics and indicators for financial stability analysis and policy', European Central Bank Occasional Paper Series. Available from: <http://goo.gl/w7Gszn> [Last accessed 05 September 2014].
- Johal, S., Moran, M. and Williams, K. (2012) 'Post-Crisis Financial Regulation in Britain', in Mayntz, R. (ed.) *Crisis and Control: Institutional Change in Financial Market Regulation*, Frankfurt, New York: Campus.

- . (2014) 'Power, Politics and the City of London after the Great Financial Crisis', *Government and Opposition*, 49(03), pp. 400-25.
- Johnson, S. (2013) 'Making the Volcker Rule Work', *The New York Times*, December 10. Available from: <http://goo.gl/dOxfRZ> [Last accessed 05 September 2014]
- Johnson, S and Kwack, J. (2009) *13 Bankers: The Wall Street Takeover and the Next Financial Meltdown*, New York: Pantheon Books.
- Jones, C. (2015) 'Draghi and Fischer reject claim central banks are too politicised', *The Financial Times*. 23 May.
- Joyce, M, Tong M. and Woods, R. (2011) 'The United Kingdom's quantitative easing policy: design, operation and impact', Bank of England Quarterly Bulletin, Q3. Available from: <http://goo.gl/n2VzYn> [Last accessed 22 August 2014].
- Kapstein, E. (1992) 'Between Power and Purpose: Central Bankers and the Politics of Regulatory Convergence' *International Organization*, 46(1), pp. 265-287.
- . (1994) *Governing the Global Economy*, Cambridge: Harvard University Press.
- Kaiser, R. (2013) *Act of Congress: How America's Essential Institution Works, and How it Doesn't*. New York: Vintage.
- Kane, E. (1980) 'Politics and Fed Policymaking: The More Things Change the More they Stay the Same' *Journal of Monetary Economics*, 6, pp. 199-211.
- King, M. (2005) 'Epistemic Communities and the Diffusion of Ideas: Central Bank Reform in the United Kingdom', *West European Politics*, 28(1), pp. 94-123.
- Kingdon, J. (2011[1984]) *Agendas, Alternatives, and Public Policies*, London: Longman.
- Kindleberger, C. (2011[1978]) *Manias Panics and Crashes: The History of Financial Crises*, Basingstoke: Palgrave Macmillan.

- Klomp, J. and de Haan, J. (2009) Central bank independence and financial instability, *Journal of Financial Stability*, 5(4), pp. 321-38.
- Knafo, S (2014) *The making of modern finance: liberal governance and the gold standard*. RIPE series in global political economy, Abingdon: Routledge.
- Kohn, D. (2011) 'Enhancing financial stability: the role of transparency', speech delivered at the London School of Economics, 6 September. Available from: <http://goo.gl/Rm3VZ3> [Last accessed 20 August 2014]
- (2014a) 'Federal Reserve Independence in the Aftermath of the Financial Crisis: Should We Be Worried? Hutchins Center Working Papers, The Hutchins Center on Fiscal and Monetary Policy at Brookings. Available from: <http://goo.gl/PlizCF> [Last accessed 20 August 2014]
- (2014b) 'Institutions for Macroprudential Regulation: The UK and the U.S.', speech given at the Kennedy School of Government, Harvard University, 17 April. Available from: <http://goo.gl/ey5tFr> [Last accessed 20 August 2014]
- Koo, R. (2011) 'The World in Balance Sheet Recession: Causes, Cure, and Politics', *Real-World Economics Review*, 58(1), pp. 19-37.
- KPMG (2013) 'Basel 4: Emerging from the Mist'. Available from: <http://goo.gl/rN3Xb5> [Last accessed 20 January 2015].
- Krasner, S. (1984) 'Approaches to the state: Alternative Conceptions and Historical Dynamics', *Comparative Politics*, 16(2) 223-246.
- Krugman, P. (2013) *End this Depression Now!* London: WW Norton and Company.
- Lall, R. (2012) 'From failure to failure: The politics of international banking regulation', *Review of International Political Economy*, 19(4), pp. 609-38.

- Landau, J. (2008). 'Bubbles and macro prudential supervision'. Remarks at the Bank of France and the Toulouse School of Economics Joint conference on 'The Future of Financial Regulation' Available from: <http://goo.gl/0qu6D3> [Last accessed 30 March 2013.]
- Lavelle, K (2013) *Money and Banks in the American Political System*. Cambridge: Cambridge University Press.
- . (2013). 'Foundations of Regulatory Convergence and Divergence between the Federal Reserve and European Central Bank', *Georgetown Journal of International Law*, 45, pp. 1137-1168.
- League of Nations (1920) 'Resolution of the Commission on Currency and Exchange', Brussels Conference, October. Available from: <https://goo.gl/x80Xlu> [Last accessed 27 September 2015].
- Leigh, D. and Wintour, P. (2010) 'WikiLeaks cables: Mervyn King had doubts over Cameron and Osborne', *The Guardian*, 30 November.
- Le Leslé, V. (2012) 'Bank Debt in Europe: Are Funding Models Broken?', IMF Working Paper WP/12/299. Available from: <http://goo.gl/IB1Nnp> [Last accessed 10 March 2015].
- Lindblom, C . (1977) *Politics and Markets*, New York: Basic Books.
- Lim, C. et al. (2011) 'Macroprudential Policy: What Instruments and How to Use Them? Lessons from Country Experiences', IMF Working Paper WP/11/238, Available from: <http://goo.gl/rkQm5A> [Last accessed 10 March 2015].
- Lukes, S. (1974) *Power: A Radical View*. Basingstoke: Macmillan.
- Lütz, S. (2004) 'Convergence Within National Diversity: The Regulatory State in Finance', *Journal of Public Policy*, 24(2), pp. 169-97.

- MacKenzie, D. (2006) *An engine, not a camera: how financial models shape markets*, Cambridge, Massachusetts: MIT Press.
- Mackintosh, S. (2014) 'The Redesign of the Global Financial Architecture: Forums, Institutions, and State Power', PhD Thesis, Newcastle University. Available from: <http://hdl.handle.net/10443/2419> [Last accessed 21 November 2014].
- Majone, G. (1996) *Regulating Europe*, Abingdon: Routledge.
- Marcussen, M. (2005), 'Central banks on the move', *Journal of European Public Policy*, 12(5), pp. 903-23.
- (2006), 'The Fifth Age of Central Banking in the Global Economy', paper presented at the conference 'Frontiers of Regulation', University of Bath, 7-8 September. Available from: <http://goo.gl/0ugHI7> [Last accessed 28 September 2015].
- (2009) "'Scientization" of Central Banking: The Politics of A-Politicization', in Dyson, K. and Marcussen, M. (eds.) *Central Banks in the Age of the Euro: Europeanisation, Convergence, and Power*, Oxford: Oxford University Press.
- Martin, R., Munyan, T. and Wilson, B. (2014) 'Potential Output and Recessions: Are We Fooling Ourselves?' IFDP Notes, Federal Reserve Board. November 12. Available from: <http://goo.gl/ZLAvXO> [Last accessed 20 January 2015].
- Masciandaro, D. (2009), 'Politicians and financial supervision unification outside the central bank: Why do they do it?' *Journal of Financial Stability*, 5(2), pp. 124-46.
- Masciandaro, D. and Quintyn, M. (2009) 'Reforming financial supervision and the role of central banks: a review of global trends, causes and effects' (1998-2008) Policy Insight No.30, Centre for Economic Policy Research [Last accessed 30 March 2013.] Available from URL: <http://goo.gl/C8DsOC>.

- Masciandaro, D., Quintyn, M. and Taylor, M. (2008) 'Inside and outside the central bank: Independence and accountability in financial supervision: Trends and Determinants', *European Journal of Political Economy*, 24(4), pp. 833-48.
- . (2010) 'Independence and Accountability in Supervision: Comparing Central Banks and Financial Authorities', in Siklos, P., Bohl, M. and Wohar, M. *Challenges in Central Banking: The Current Institutional Environment and Forces Affecting Monetary Policy*, Cambridge: Cambridge University Press.
- Maxfield, S. (1998) *Gatekeepers of growth: the international political economy of central banking in developing countries*, Princeton: Princeton University Press.
- McCubbins, M, and Page, T. (1987) 'A Theory of Congressional Delegation', in McCubbins, M. and Sullivan, T. (eds.) *Congress: Structure and Policy*, Cambridge: Cambridge University Press.
- McLaren, N. Banerjee, R. and Latto, D (2014) 'Using Changes in Auction Maturity Sectors to Help Identify the Impact of QE on Gilt Yields', *The Economic Journal*, 124(576), pp. 453-479.
- McNamara, K. (1998) *The Currency of Ideas: Monetary Politics in the European Union*, Cambridge: Cambridge University Press.
- . (2002) 'Rational Fictions: Central Bank Independence and the Social Logic of Delegation', *West European Politics*, 25(1), pp. 47-76.
- McPhilemy, S. (2013) 'Formal Rules versus Informal Relationships: Prudential Banking Supervision at the FSA Before the Crash', *New Political Economy*, 18(5), pp. 748-67.
- . (2014) 'Integrating rules, disintegrating markets: the end of national discretion in European banking?', *Journal of European Public Policy*, pp. 1-18.

- . (2016) 'Integrating Macro-prudential Policy: Central Banks as the 'Third Force' in EU Financial Reform.' West European Politics, <http://dx.doi.org/10.1080/01402382.2016.1143243>.
- McPhilemy, S. and Roche, J. (2013) 'Review of the New European System of Financial Supervision (ESFS) Part 2 The Work of the European Systemic Risk Board – The ESFS's Macroprudential Pillar', Policy Department A: Economic and Scientific Policies. Brussels: European Parliament.
- Meaning, J. and Zhu, F. (2011) 'The impact of recent central bank asset purchase programmes', BIS Quarterly Review, December, pp.73-83. Available from: http://www.bis.org/publ/qtrpdf/r_qt1203e.pdf. [Last accessed 05 September 2014]
- Meltzer, A. (2003) *A History of the Federal Reserve, Volume 1: 1913-1951*. Chicago and London: University of Chicago Press.
- Meltzer, A. (2010) 'Politics and the Fed', *Journal of Monetary Economics*, 58(1), pp. 39-48.
- . (2013) 'What's Wrong With the Federal Reserve: What Would Restore Independence?' *Business Economics* 48(2), pp. 96–103.
- Miles, D., Yan, J and Marcheggiano, G (2011) 'Optimal Bank Capital', External MPC Unit Discussion Paper No. 31, Bank of England. Available from: <http://goo.gl/OuDexL> [Last accessed 22 January 2015].
- Miller, D. and Dinan, W. (2009) 'Revolving Doors, Accountability and Transparency- Emerging Regulatory Concerns and Policy Solutions in the Financial Crisis', *Expert Group on conflict of Interest, Public Governance Committee, OECD*. Available from: <http://goo.gl/22sy4b> [accessed 12th July 2014].

- Milne, R. (2014) 'Central banks: Stockholm syndrome', *The Financial Times*. 19 November.
- Minsky, H. (1986) *Stabilizing an Unstable Economy*, New Haven: Yale University Press.
- . (1992) 'The financial instability hypothesis', *The Jerome Levy Economics Institute Working Paper*, (74). Available from: <http://goo.gl/flyOEG> [Last accessed 22 January 2015].
- Modigliani, F and Miller M. (1958) 'The cost of capital, corporation finance and the theory of investment.' *The American Economic Review*, 48(3), pp. 261-297.
- Mohanty (2011) 'The transmission of unconventional monetary policy to the emerging markets' BIS Papers No 78, Monetary and Economic Department. <http://www.bis.org/publ/bppdf/bispap78.htm>. [Last accessed 05 September 2014]
- Moran, M. (2002) 'Review Article: Understanding the Regulatory State', *British Journal of Political Science*, 32(02), pp. 391-413.
- . (2003), *The British Regulatory State: High Modernism and Hyper-innovation*, Oxford: Oxford University Press.
- Morriss, P. (2002) *Power: A Philosophical Analysis*, Manchester: Manchester University Press.
- Morriss, P. (2012) 'A response to Pamela Pansardi', *Journal of Political Power*, 5(1), pp. 91-9
- Moschella, M. (2012) 'IMF surveillance in crisis: the past, present and future of the reform process', *Global Society*, 26(1), pp. 43-60.

- Moschella, M. and Tsingou, E. (2013) *Great Expectations, Slow Transformation: Incremental Change in Post-crisis Regulation*, Colchester: ECPR Press.
- Mügge, D. (2010) *Widen the Market, Narrow the Competition: the Emergence of Supranational Governance in EU Capital Markets*, Brussels: ECPR Press.
- (2013) 'Resilient Neo-liberalism in European financial regulation' in Schmidt, V. and Thatcher, M *Resilient neo-liberalism in Europe's Political Economy*, Oxford: Oxford University Press.
- N'Diaye, P. (2009) 'Countercyclical Macro Prudential Policies in a Supporting Role to Monetary Policy', IMF Working Paper WP/09/257. Available from: <https://www.imf.org/external/pubs/ft/wp/2009/wp09725.pdf>. [Last accessed 05 September 2014]
- Nier, E. et al. (2011a) 'Institutional Models for Macroprudential Policy', IMF Staff Discussion Note. [Last accessed 30 March 2013.] Available from: <http://www.imf.org/external/pubs/ft/sdn/2011/sdn1118.pdf>. [Last accessed 05 September 2014]
- Nier, E. et al. (2011b) 'Towards Effective Macroprudential Policy Frameworks: An Assessment of Stylized Institutional Models', IMF Working Paper. [Last accessed 9 August 2014.] Available from: <http://goo.gl/aDy9WC>. [Last accessed 05 September 2014].
- OIG (Office of Inspector General) (2014) 'The Board Should Enhance Its Supervisory Processes as a Result of Lessons Learned From the Federal Reserve's Supervision of JPMorgan Chase & Company's Chief Investment Office', Summary Report Available from <http://goo.gl/cV21Yh> [Last accessed 05 September 2014].

- Osborne, G. (2013) 'Letter from the Chancellor to the Governor of the Bank of England', 30 April. Available from: <http://goo.gl/q6ldk3> [Last accessed 1st July 2011].
- Olson, M. (1971) *The logic of collective action public goods and the theory of groups*, Cambridge, Massachusetts: Harvard University Press.
- Painter and Pierre (eds.) (2005) *Challenges to State Policy Capacity: Global Trends and Comparative Perspectives*, Basingstoke: Palgrave Macmillan.
- Papademos, L. (2009) 'Tackling the financial crisis – policies for stability and recovery', remarks to the Annual Dinner of the Society of Business Economists, London, 11 February. Available from: <http://goo.gl/jDlmy> [Last accessed: 24 March 2015].
- Pansardi, P. (2012) 'Power to and power over: two distinct concepts of power?', *Journal of Political Power*, 5(1), pp. 73-89.
- Paul, R. (2009) 'End the Fed', New York: Grand Central Publishing.
- Peek, J., Rosengren, E. and Tootell, G. (1999) 'Is bank supervision central to central banking?', *The Quarterly Journal of Economics*, 114(2), pp. 629-53.
- Pellegrina, L., Masciandaro, D. and Pansini, R. (2010) 'Government, Central Bank and Banking Supervision Reforms: Does Independence Matter?' *Paolo Baffi Centre Research Paper*, no. 2010-74. Available from: <http://goo.gl/qODKnl> [Last accessed 27 September 2015]
- Peltzman, S. (1976), 'Toward a More General Theory of Regulation', *Journal of Law and Economics*, 19 (2), pp. 211-40.

- Perez, S. (1998) 'Systemic Explanations, Divergent Outcomes: The Politics of Financial Liberalization in France and Spain', *International Studies Quarterly*, 42(4), pp. 755-84.
- Perez, S. and Westrup, J. (2010) 'Finance and the macroeconomy: the politics of regulatory reform in Europe', *Journal of European Public Policy*, 17(8), pp. 1171-92.
- Perrow, C. (2010), 'The Meltdown was not an accident', in M. Lounsbury and P.M. Hirsch, (eds.), *Markets on Trial: The Economic Sociology of the U.S. Financial Crisis*, Bingley: Emerald Publishing Group Limited.
- Persaud, A. (2000) 'Sending the Herd Off the Cliff Edge', *World Economics* 1(4), pp. 15-26.
- . (2005), 'Regulatory Capture', Lecture at Gresham College. Video available from: <http://goo.gl/rfg6m2> [Last accessed 1st July 2014].
- . (2009), 'Boomtime politicians will not rein in the bankers', *The Financial Times* 26 November.
- . (2015), *Reinventing Financial Regulation: A Blueprint for Overcoming Systemic Risk*, New York: Apress, Springer.
- Peston, R. (1997). 'Governor Thought of Quitting over Bank Proposals', *The Financial Times*, 22 May.
- Peters, B. (2012) *Institutional Theory in Political Science: The New Institutionalism*. 3rd Edition, London: Continuum
- Pfleiderer, P. (2010), 'On the Relevancy of Modigliani and Miller to Banking: A Parable and Some Observations', working paper. Available from: <http://goo.gl/xzmGbw> [Last accessed 8 April 2015].

- Pierson, P. (2004) *Politics in Time: History, Institutions, and Social Analysis*, Princeton: Princeton University Press.
- Pinto, E. (2010) 'Government Housing Policies in the Lead-up to the Financial Crisis: A Forensic Study', November 4. Available via the Internet: <http://goo.gl/xvjHgB> [Last accessed 20 January 2015]
- Plenderleith, I. (2012) 'Review of the Bank of England's Provision of Emergency Liquidity Assistance in 2008–09', Report Presented to the Court of the Bank of England. Available from: <http://goo.gl/W4Wd7g> [Last accessed 9 April 2015].
- Polidano, C. (2000) 'Measuring Public Sector Capacity, World Development', 28(5), pp. 805-822.
- Porter, T. (ed.). (2014). *Transnational Financial Regulation After the Crisis*, Abingdon: Routledge.
- Posner, E. (2007) 'Financial Transformation in the European Union', in McNamara, K. and Meunier, S. (eds.) *Making History: European Integration and Institutional Change at Fifty*, Oxford: Oxford University Press.
- (2010) 'The Lamfalussy Process: Polyarchic Origins of Networked Financial Rule-Making in the EU', in Sabel, C. and Zeitlin, J. (eds.) *Experimentalist Governance in the European Union: Towards a New Architecture*, Oxford: Oxford University Press.
- Pozsar, Z et al. (2012) 'Shadow Banking', Federal Reserve Bank of New York Staff Report No. 458, July 2010 Revised February 2012. Available from: http://www.newyorkfed.org/research/staff_reports/sr458.pdf. [Last accessed 05 September 2014]

Powell, J. (2013) 'Communications challenges and quantitative easing', speech at the 2013 Institute of International Finance Annual Membership Meeting, Washington DC, 11 October 2013. Available from: <http://www.bis.org/review/r131015d.pdf> [Last accessed 20 August 2014]

PRA (Prudential Regulation Authority), Delegations and Matters Reserved to the Board, September. Available from: <http://goo.gl/TkmTEU> [Last accessed 28 September 2015].

Praet, P. (2012) 'Sound money, sound finances, a competitive economy - principles of a European culture of stability', Speech, 27 February. Available from: <http://goo.gl/bfNkDt> [Last accessed 08 April 2015].

Quaglia, L. (2008a) *Central Banking Governance in the European Union: A Comparative Analysis*, Abingdon: Routledge.

Quaglia, L. (2008b) 'Explaining the Reform of Banking Supervision in Europe: An Integrative Approach', *Governance*, 21(3), pp. 439-63.

Rajan R. and Zingales, L. (2003) 'Banks and Markets: The Changing Character of European Finance.' CRSP Working Paper No. 546. Available from: <http://ssrn.com/abstract=389100> [Last accessed 9th August 2014].

'Regulation (EU) No 1092/2010 of 24 November 2010 on European Union macro-prudential oversight of the financial system and establishing a European Systemic Risk Board', Brussels: Official Journal.

Reinhart, C. and Rogoff, K. 2009 *This Time It's Different: Eight Centuries of Financial Folly*, Princeton: Princeton University Press.

Rethel, L. (2014) 'Bank Regulation after the Global Financial Crisis', in Porter, T. (ed.) *Transnational Financial Regulation after the Crisis*, Abingdon: Routledge.

- Rethel, L. and Sinclair, T. (2012) *The Problem with Banks*, London; New York: ZED Books.
- Rompuy, H. (2012) 'Towards a Genuine Economic and Monetary Union', European Council, The President. Available from: <http://goo.gl/ffnmNP> [Last accessed 8 April 2015].
- Saad, L. (2009) 'CDC Tops Agency Ratings; Federal Reserve Board Lowest', Gallup News. Available from: <http://goo.gl/289OgP> [Last accessed 05 September 2014].
- Scharpf, F (1999) *Governing in Europe*, Oxford: Oxford University Press.
- Schelkle, W. (2012) 'Good governance in crisis or a good crisis for governance? A comparison of the EU and the US', *Review of International Political Economy*, 19(1), pp. 34-58.
- Schmidt, V. (2008) 'Discursive Institutionalism: The Explanatory Power of Ideas and Discourse', *Annual Review of Political Science*, 11: 303-326.
- Schoenmaker, D. (2013) 'Central Banks Role in Financial Stability', in *Handbook of Safeguarding Global Financial Stability*, Elsevier, pp. 271-84.
- Schwartz H. and Seabrooke, L. (2008) 'Varieties of Residential Capitalism in the International Political Economy: Old Welfare States and the New Politics of Housing', *Comparative European Politics* 6(3)pp. 237–261.
- Seabrooke, L (2010) 'What Do I Get? The Everyday Politics of Expectations and the Subprime Crisis', *New Political Economy*, Volume 15, Issue 1, 2010, pp. 51-70.
- Seabrooke L. and Tsingou, E. (2009) 'Revolving doors and linked ecologies in the world economy: policy locations and the practice of international financial reform', CSGR Working Paper 260/09 . Available from:

- http://wrap.warwick.ac.uk/1849/1/WRAP_Seabrooke_26009.pdf [Last accessed 9 August, 2014].
- —. (2014) 'Distinctions, affiliations, and professional knowledge in financial reform expert groups', *Journal of European Public Policy*, 21(3), pp. 389-407.
- SEC (Securities and Exchange Commission) (2014). 'Money Market Fund Reform; Amendments to Form PF'. Available from: <http://goo.gl/005ojT> [Last accessed 20 August 2014]
- Shultz, G. et al. (2014) 'The Magnitude of the Mess We're In', *Wall Street Journal*, 16 September.
- Simmons, B. (1996) 'Rulers of the game: central bank independence during the interwar years', *International Organization*, 50(03), p. 407-443
- Singer, D. (2004). 'Capital Rules: The Domestic Politics of International Regulatory Harmonization', *International Organization*, 58(3), pp. 531-65.
- —. (2007). *Regulating Capital: Setting Standards for the International Financial System*. Ithaca: Cornell University Press.
- Spiegel, P. (2014) "'If the euro falls, Europe falls": How the euro was saved', *The Financial Times*, 15 May.
- Spiegel, P., Pignal, S. and Peel, Q. (2011) 'ECB and Merkel clash over Greece', *The Financial Times*, 17 July.
- Stanley, L. (2014) 'We're Reaping What We Sowed': Everyday Crisis Narratives and Acquiescence to the Age of Austerity, *New Political Economy*, 19(6), pp. 895-917.
- Steil B. and Walker G. (2014) 'Europe's Dodgy Bank Stress Tests', *Wall Street Journal* Available from: <http://goo.gl/4w5nRD> [Last accessed 9 December 2014].

Stein, J. (2013), 'Overheating in Credit Markets: origins, measurement, and policy responses', remarks at a Research Symposium sponsored by the Federal Reserve Bank of St. Louis, 7 February. Available from: <http://goo.gl/ih2M3f> [Last accessed 05 September 2014].

— . (2014) 'Incorporating Financial Stability Considerations into a Monetary Policy Framework', remarks at the At the International Research Forum on Monetary Policy, Washington, D.C. March 21. Available from: <http://goo.gl/Z1vs2B> [Last accessed 05 September 2014].

Stein, K. (2014) 'Remarks Before the Peterson Institute of International Economics' Washington, D.C., June 12. Available from: <http://goo.gl/m8Kuog> [Last accessed 05 September 2014]

Steinmo, S. and Thelen, K. (1992) 'Historical Institutionalism in Comparative Politics', in Steinmo, S. Thelen, K. and Longstreth, F. (1992) *Structuring politics: historical institutionalism in comparative analysis*, Cambridge: Cambridge University Press.

Stella, P. (2005) 'Central Bank Financial Strength: Transparency, and Policy Credibility', IMF Staff Papers 52(2), pp. 335-365.

Stigitz, J. (2010) *Freefall*, London: Allen Lane.

Stigler, G. (1971), 'The Theory of Economic Regulation', *The Bell Journal of Economics and Management Science*, 2 (1), pp. 3-21.

Strange, S. (1988) *States and Markets*, London: Pinter Publishers.

— . (1996) *The Retreat of the State: The Diffusion of Power in the World Economy*, Cambridge: Cambridge University Press.

Suskind, R. (2004) *The Price of Loyalty*, London: Simon and Schuster.

- Taleb, N. (2007) *The Black Swan: The Impact of the Highly Improbable*, London: Penguin Books.
- Tarullo, D. (2009) 'Regulatory restructuring', Testimony Before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, July 2009 Washington, D.C. Available from: <http://goo.gl/n27ldh> [Last accessed 05 September 2014]
- (2013) 'Macroprudential Regulation', Remarks at the Yale Law School Conference on Challenges in Global Financial Services New Haven, Connecticut September 20. Available from: <http://goo.gl/0hhl76m> [Last accessed 20 August 2014]
- Taylor, M. (2014) 'Regulatory Reform After the Financial Crisis: Twin Peaks Revisited', in Huang, R. and Schoenmaker, D. (2014) *Institutional Structure of Financial Regulation: Theories and International experiences*. Routledge: Abingdon.
- Thatcher, M. and Stone Sweet, A (2002) 'Theory and practice of delegation to non-majoritarian institutions', *West European Politics*, 25(1), pp. 1-22.
- Thomopoulos, P. (2009). 'The role of central banks as financial supervisors'. speech at 'The Economist Conferences 8th Banking Forum: Banking and the Economy in Turbulent Times', Athens, 26 January. Available from: <http://goo.gl/7VsTsp> [Last accessed 30 March 2015]
- Tirole, J. (1986) 'Hierarchies and Bureaucracies: On the Role of Collusion in Organizations', *Journal of Law, Economics, & Organization*, 2(2), pp. 181-214.
- Todd, T (2012) *The Balance of Power: The Political Fight for an Independent Central Bank, 1790 Present*. Available from: <https://goo.gl/i2TnxD> [Last accessed 27 September 2015].

- Tognato, C (2012) *Central Bank Independence: Cultural Codes and Symbolic Performance*, Palgrave Macmillan, New York.
- Toniolo, G. and White, E (2015) 'The Evolution of the Financial Stability Mandate: From Its Origins to the Present Day', NBER Working Paper No. 20844. Available from: <http://goo.gl/EBNjIO> [Last accessed 01 September 2015].
- Treaty on European Union. Brussels: Official Journal. Available from: <http://goo.gl/D0ay6M> [Last accessed 27 September 2015].
- Trichet, J. (2009) 'The ECB's Enhanced Credit Support', speech at the University of Munich, 13 July. Available from: <http://goo.gl/K2wBW0> [Last accessed 09 April 2015].
- Tripartite Review (2009) 'The Tripartite Review: A review of the UK's Tripartite system of financial regulation in relation to financial stability', Available from: <http://goo.gl/1BUHAz> [Last accessed 8 March 2015].
- TSC (Treasury Select Committee) (2011a) 'Accountability of the Bank of England', Twenty-first Report of Session 2010–12. Available from: <http://goo.gl/4JnfMk> [Last accessed 20 December 2014].
- . (2011) 'Written Evidence - Financial Regulation: a preliminary consideration of the Government's proposals', Available from: <http://goo.gl/IMq3CH> [Last accessed 8 March 2015].
- Tsingou E. (2008) 'Transnational Private Governance and the Basel Process: Banking Regulation, Private Interests and Basel II', in Nölke A. and Graz, J. (eds) *Transnational Private Governance and its Limits*, ECPR/Routledge Series, Abingdon: Routledge.

- Tucker, P. (2011) 'Discussion of Lord Turner's Lecture, "Reforming finance: are we being radical enough?"' remarks by Paul Tucker, Deputy Governor, Financial Stability, Clare Distinguished Lecture in Economics, Cambridge. Available from: <http://goo.gl/eXlwqO> [accessed 27 May 2014].
- (2013) 'Banking reform and macroprudential regulation: implications for banks' capital structure and credit conditions', speech given at the SUERF/Bank of Finland Conference, 'Banking after regulatory reform – business as usual', Helsinki, 13 June. Available from: <http://goo.gl/Enp2Qf> [Last accessed 8 April 2015].
- (2014) 'Regulatory Reform Stability and Central Banking', Hutchins Centre for Fiscal and Monetary Policy at Brookings. Available online: <http://goo.gl/wXHicq> [Last accessed 20 May 2015].
- Turner, A. (2009a) 'The Turner Review: A regulatory response to the global banking crisis', Financial Services Authority. Available from: <http://goo.gl/zPPEI8> [Last accessed 25 March 2015].
- (2009b) 'Oral evidence before the House of Commons Treasury Select Committee's Banking Crisis Inquiry', Available from: <http://goo.gl/Yrv4mf> [Last accessed 08 April 2015].
- (2011) 'Reforming finance: are we being radical enough?', Clare Distinguished Lecture in Economics and Public Policy 18 February. Available from: <http://goo.gl/NWYmAa> [Last accessed 08 April 2015].
- (2014) 'Escaping the Debt Addiction: Monetary and Macro-Prudential Policy in the Post-Crisis World', Centre for Financial Studies, 10 February. Available from: <http://goo.gl/wv0AwP> [Last accessed 1 September 2015]

- Underhill, G. (2014) 'The Emerging Post-Crisis Financial Architecture: The Path-Dependency of Ideational Adverse Selection', *The British Journal of Politics & International Relations*. 17(3), pp. 461-493.
- US Department of the Treasury (2009) 'Financial Regulatory Reform. A New Foundation: Rebuilding Financial Supervision and Regulation'. Available from: http://www.treasury.gov/initiatives/Documents/FinalReport_web.pdf. [Last accessed 05 September 2014]
- Vandenbussche, J., Vogel, U. and Detragiache, E. (2013) 'Macroprudential Policies and Housing Prices — A New Database and Empirical Evidence for Central, Eastern, and Southeastern Europe', IMF Working Paper WP/12/303. Available from: <http://goo.gl/8rR9wP>. [Accessed 20 January 2015].
- Verdun, A. (1999). 'The Role of the Delors Committee in the Creation of the EMU: An epistemic community?' *Journal of European Public Policy*, 6(2), pp. 308-328.
- Vigna, P. (2013) 'Volcker Rule Makes Taxpayers 'Safer, If Not Safe,' Barofsky Says' *Wall Street Journal*, December 10.
- Veron, N. (2013) 'Banking Nationalism and the European Crisis', Available from: <http://www.bruegel.org/nc/blog/detail/article/1175-banking-nationalism-and-the-european-crisis/> [Last accessed 05 September 2014].
- . (2014) 'L'Union Bancaire, Un Succès Européen', *En Temps Reel, Les Cahiers*. Available from: <http://goo.gl/pZpymk> [Last accessed 8 April 2015].
- Walter, A. (2008). *Governing Finance: East Asia's Adoption of International Standards*. Ithaca: Cornell University Press.
- Warren, E. et al. (2014) 'Letter to Federal Reserve Chairman Janet Yellen', August 18. Available from: <http://goo.gl/CysXhr> [Last accessed 05 September 2014]

- Watson, M. (2002) 'The institutional paradoxes of monetary orthodoxy: reflections on the political economy of central bank independence', *Review of International Political Economy*, 9(1), pp. 183-96.
- Watson, C.M. and Kincaid, R. (2013) 'The Implications of Macroprudential Policies for International Policy Coordination', *Political Economy of Financial Markets Discussion Draft*, December. Available from: <http://goo.gl/zuHH5Y> [Last accessed 05 September 2014].
- Watson, C.M. and Herzberg, V. (2014) 'Macroprudential policies in the Euro Area: Issues for the next ten years' Discussion Draft, *Political Economy of Financial Markets Programme*. Available from: <http://goo.gl/hjq6wW> [Last accessed 27 May 2014].
- Wellink, N. (2009). 'Supervisory arrangements – lessons from the crisis'. speech at the 44th SEACEN Governors' Conference 2008 'Preserving monetary and financial stability in the new global environment', Kuala Lumpur, 6 February. Available from: <http://goo.gl/zliJHP> [Last accessed 30 March 2014].
- Wessels, D. (2010) *In Fed We Trust: Ben Bernanke's War on the Great Panic*. New York: Three Rivers Press.
- Westrup, J. (2007) 'The Politics of Financial Regulatory Reform in Britain and Germany', *West European Politics*, 30(5), pp. 1096-1119.
- Whelan, K. (2012) 'Should Monetary Policy be separated from Banking Supervision?' European Parliament Directorate General for Internal Policies: Policy Department A: Economic and Scientific Policy. European Parliament, Brussels.

- Williams, J. (2011) 'Unconventional monetary policy: Lessons from the Past Three Years.' FRBSF Economic Letters, 31. Available from: <http://goo.gl/3EH00z> [Last accessed 30 March 2015].
- Wolf, M. (2014) *The Shifts and the Shocks: What We've Learned – and Have Still to Learn – from the Financial Crisis*, London and New York: Allen Lane.
- Woll, C. (2014a) *The Power of Collective Inaction: Bank Bailouts in Comparison*, Ithaca: Cornell University Press.
- . (2014b) 'Bank Rescue Schemes in Continental Europe: The Power of Collective Inaction', *Government and Opposition*, 49(3), pp. 426-451.
- Wooley, J. (1984) *Monetary Politics: The Federal Reserve Bank And the Politics of Monetary Policy*. Cambridge: University Press: Cambridge.
- Yellen, J. (2014) 'Monetary Policy and Financial Stability', speech at the 2014 Michel Camdessus Central Banking Lecture, International Monetary Fund, Washington, D.C. Available from: <http://goo.gl/2uY0Fw> [Last accessed 20 January 2015].
- Young, K., (2013) 'Financial industry groups' adaptation to the post-crisis regulatory environment: Changing approaches to the policy cycle', *Regulation & Governance*, 7(4), pp. 460-80.
- Zhang, L. and Zoli, E. (2014) 'Leaning Against the Wind: Macroprudential Policy in Asia', IMF Working Paper WP/14/22. Available from: <http://goo.gl/MIBWAI> [Last accessed 20 January 2015].
- Zysman, J. (1983) *Government, Markets and Growth: Financial Systems and the Politics of Industrial Change*. Ithaca: Cornell University Press.