

THE LONDON SCHOOL OF ECONOMICS AND
POLITICAL SCIENCE



ESSAYS ON THE POLITICAL ECONOMY OF
FINANCIAL CRISES:
CAUSES, CONTAINMENT AND RESOLUTION

Mícheál O'Keeffe

A four article format thesis submitted to the Government Department of the
London School of Economics for the degree of Doctor of Philosophy,
September 2014.

Declaration

I certify that the thesis I have presented for examination for the PhD degree of the London School of Economics and Political Science is solely my own work other than where I have clearly indicated that it is the work of others (in which case the extent of any work carried out jointly by me and any other person is clearly identified in it). The copyright of this thesis rests with the author. Quotation from it is permitted, provided that full acknowledgement is made. This thesis may not be reproduced without the prior written consent of the author. I warrant that this authorisation does not, to the best of my belief, infringe the rights of any third party. I confirm that chapter 3 was jointly co-authored with Christopher Gandrud and chapter 4 was jointly co-authored with Alessio Terzi. I certify that Christopher and I jointly prepared the model, I wrote the case study and Christopher did the simulations. I certify that I wrote chapter 4 and Alessio undertook the data analysis for the chapter. I confirm that my thesis was proof-read for spelling and grammar by Almha O'Keeffe and Meadhbh O'Keeffe.

Word count: 44,103

Abstract

What role does politics play in financial crises and how does this affect economic outcomes? This thesis employs a political economy framework to examine the effect politics has on the causes, containment, and resolution of financial crises. The first paper examines the development of Irish financial regulation and supervision in the context of the politics of financial services policy. It argues that domestic politics prior to the crisis in Ireland played a significant contributing role in fostering a permissive banking environment which allowed the build up of financial imbalances. The second paper, with Christopher Gandrud, aims to understand why policymakers may end up choosing sub-optimal financial crisis containment strategies when taking decisions under uncertainty. We develop a signalling model of financial crisis management to enhance our understanding of the interactions between bureaucrats and decision-makers and to show how asymmetries of information can have significant implications for policy choice. The third paper, with Alessio Terzi, uses cross-country econometric evidence to examine the impact that political and party systems have on the fiscal cost of financial sector intervention. The results of our empirical analysis suggest that there is a systematic relationship between political economy factors and the fiscal cost of financial sector intervention in banking crises. We find that governments in presidential systems are associated with lower fiscal costs when managing banking crises. Looking further at crisis containment strategies, we show that these governments are less likely to employ costly bank guarantees and bank recapitalisations which expose the state to significant contingent and direct fiscal liabilities, and are more likely to impose losses on depositors. The fourth paper analyses reform of the framework for crises management in the EU from a political economy perspective, following the 2007 financial and subsequent sovereign debt crisis. It explains how the limits of coordination and unprecedented public support led to the proposal for the establishment of a harmonised framework for bank resolution across the EU. However, the distributional consequences of financial sector support and the establishment of the Single Supervisory Mechanism led to deeper integration for euro area Member States and agreement on the Single Resolution Mechanism. It analyses in detail the negotiations on the financing structure for future resolution, decision-making procedures and crisis management tools and demonstrates how the power of certain Member States and distributive conflict with regard to legacy assets shaped the new architecture. It also highlights the important role the European Parliament played in the negotiations.

This thesis makes a number of substantive contributions to political economy. The new theoretical and empirical findings will help foster a better understanding as to how governments may react to future financial crises and show what factors lead to and shape reform. It also has a number of policy implications. It stresses the need for a robust regulatory and supervisory architecture which creates the appropriate incentives for bureaucrats to provide timely and accurate information to decision-makers. It also highlights the need for a more intrusive approach to supervision.

Acknowledgements

First and foremost, I would like to thank my supervisor Simon Hix for his boundless enthusiasm for research, his reassurance, guidance and helpful comments throughout the years at the LSE. Thanks also to my co-authors Christopher Gandrud and Alessio Terzi for the many hours spent debating and discussing ideas, arguments and approaches to the respective co-authored papers. My PhD is far better than it would have been thanks to their stimulating collaboration. I am very grateful to the many others who gave helpful comments and advice on each of the individual papers, they are acknowledged accordingly below. Furthermore, a number of politicians and supervisors generously gave me their time for interviews, for which I am very thankful. I would also like to thank the National University of Ireland for their generous funding of my research. Finally I would like to thank my examiners Paul de Grauwe and Henrik Enderlein for a thorough and challenging viva. Their suggestions greatly contributed to my research.

I am very lucky to have made many friends during my PhD. Sharing an office with David Marshall and Eric Woods was always interesting. Thanks to Ignazio De Ferrari, Ursula Durand Ochoa, Irina Iordachescu, Kathleen Henehan, Carolyn Armstrong, Matthew Whiting, Juergen Braunstein, Jose Olivas Osuna, Mike Seiferling, Stefan Bauchowitz, Ninfa Fuentes, Lila Caballero-Sosa, Jessie Tarlov, Anar Ahmadov, and Simon Meier-Beck for sharing the experience. The Political Science and Political Economy Group at the LSE was also a great place to discuss research.

I would also like to thank my management and colleagues at the ECB, and in particular Johannes Lindner, for their continued support to complete the PhD. Susie O'Doherty also deserves special thanks. Also thanks to my twin Almha for her proof reading. Finally, and most importantly, my parents Meadhbh and Jim and family gave me endless encouragement and support over the years for which I am eternally grateful.

Contents

Contents	4
List of Figures	7
List of Tables	8
List of Abbreviations	9
1 Introduction	12
1.1 A political economy approach to financial crises	12
1.2 Causes	14
1.3 Containment	16
1.4 Resolution and reform	17
2 Capture and Containment of the Celtic Tiger?	19
2.1 Introduction	20
2.2 The political economy of financial regulation	22
2.3 Research design	27
2.4 A brief history of financial regulation and supervision in Ireland (1970 -2008)	28
2.5 Capture of Irish financial supervision?	33
2.6 ‘In the public interest’? The politics of financial regulation in Ireland	36

2.7	Discussion of the alternatives	42
2.8	Conclusion	46
3	Information and Financial Crisis Policy	49
3.1	Introduction	50
3.2	Defining banking crisis containment policymaking	54
3.3	Previous explanations of banking crisis containment	55
3.4	Signalling game setup	57
3.5	Model 1: The single signaller game	63
3.6	Model 2: The game with two signallers	66
3.7	Comparative statics	67
3.8	Case study: containment policy decisions in Ireland	69
3.9	Conclusion	77
4	The Political Economy of Financial Crisis Policy	81
4.1	Introduction	82
4.2	Policy choice and financial crisis policy	83
4.3	The political economy of financial crisis policy: theory	85
4.4	Data and research design	94
4.5	Empirical evidence	99
4.6	Policies for financial crisis management	103
4.7	Conclusion	109
5	Reform of the Framework for Financial Crisis Management in the EU	111
5.1	Introduction	112
5.2	Crises, reform, and the politics of financial integration	113
5.3	Crisis management in the EU and the political economy of reform	116

5.3.1	Bureaucratic incentives and the limits of coordination	117
5.3.2	Public support to the financial sector	120
5.3.3	Distributional consequences of financial support	123
5.3.4	The SSM and the changing costs and benefits of deeper integration .	126
5.4	The politics of crisis management in the EU	127
5.4.1	Resolution financing	128
5.4.2	Decision-making	132
5.4.3	Crisis management tools	134
5.5	Deposit Guarantee Scheme Directive and ESM Direct Recapitalisation Instru- ment	139
5.6	Conclusion	142
6	Concluding Remarks: Contributions, Policy Implications, & Future Re- search	144
6.1	Empirical contributions	145
6.2	Theoretical contributions	147
6.3	Directions for future research and policy implications	149
	Bibliography	152

List of Figures

3.1	Equilibrium from a two signaller game with a moderate PM and various signaller ideal points.	80
4.1	Variance in government response to banking crises (1970-2011)	84
4.2	Variance in fiscal costs associated with bank guarantees and bank recapitalisations	104
5.1	2009, 2012 guarantees and liquidity support in the EU (%GDP)	120
5.2	2008-2012 recapitalisation and asset relief (% GDP)	121
5.3	2010-2013 correlation between bank and sovereign CDS in the euro area and the US	124
5.4	Hierarchy of resolution financing for the Single Resolution Fund	130
5.5	Burden sharing and bail-in under the State aid framework and BRRD/SRM	137

List of Tables

4.1	Institutional characteristics - descriptive statistics	98
4.2	Frequency distribution of crisis duration	98
4.3	Regression results for veto players and fiscal costs of banking crises	100
4.4	Regression results for political systems and fiscal costs of banking crises . . .	101
4.5	The impact of different policies on the fiscal costs of crisis management . . .	105
4.6	Linear probability model for bank guarantees	106
4.7	Linear probability model for depositor losses	107
4.8	Linear probability model for bank recapitalisations	108
5.1	Mutualisation schedule for the Single Resolution Fund	129
6.1	Banking Crises, Dates 1970- 2011	194

List of Abbreviations

AIB	Allied Irish Bank
Anglo	Anglo Irish Bank
BMF	Bundesfinanzministerium (German Federal Ministry of Finance)
BRRD	Bank Recovery and Resolution Directive
CB	Central Bank
CBFSAI	Central Bank and Financial Services Authority of Ireland
CBI	Central Bank of Ireland
CBSG	Cross-Border Stability Groups
CDS	Credit Default Swop
C&AG	Comptroller and Auditor General (of Ireland)
DGS	Deposit Guarantee Scheme
DGSD	Deposit Guarantee Scheme Directive
DoF	(Irish) Department of Finance
EBA	European Banking Authority
ECB	European Central Bank
ECOFIN	The Economic and Financial Affairs Council of the EU
EMU	Economic and Monetary Union
EP	European Parliament

ERA	European Resolution Authority
ESAs	European Supervisory Authorities
ESM	European Stability Mechanism
ESM-DRI	European Stability Mechanism Direct Recapitalisation Instrument
EU	European Union
FDI	Foreign Direct Investment
FDIC	Federal Deposit Insurance Corporation
FR	Financial Regulator
FSA	Financial Services Authority
GDP	Gross Domestic Product
GNP	Gross National Product
HoSoG	Heads of State or Government
ICI	Insurance Corporation of Ireland
IGA	Intergovernmental Agreement
IFSC	Irish Financial Services Centre
IFSRA	Irish Financial Services and Regulatory Authority
IMF	International Monetary Fund
INBS	Irish Nationwide Building Society
MoF	Minister of Finance
MoU	Memorandum of Understanding
NAMA	National Asset Management Agency
NPL	Non-Performing Loan
OECD	Organization for Economic Co-operation and Development
PM	Prime Minister
PMPA	Private Motorists Protection Association
RWA	Risk Weighted Asset

SREP	Supervisory and Review and Evaluation Process
SRF	Single Resolution Fund
SRM	Single Resolution Mechanism
SSM	Single Supervisory Mechanism
SEC	Securities and Exchange Commission
TFEU	Treaty on the Functioning of the European Union
UCITS	Undertakings for the Collective Investment in Transferable Securities
UK	United Kingdom
US	United States of America

Chapter 1

Introduction

1.1 A political economy approach to financial crises

The 2007 global financial crisis and subsequent sovereign debt crisis in Europe has had a devastating effect on both economies and societies as a whole. The severity of the crisis compels us to better understand the causes and consequences of such crises. This includes analysis of the policies, costs and effectiveness of financial sector intervention. There is a rich and voluminous literature on the macroeconomic and financial dynamics of financial crises. However much of this research does not take political variables into account. Political economy analyses the effect that politics has on economic choices and outcomes (Drazen, 2000).¹

Banking crises, although common, are perhaps the least understood type of financial

¹Political economy is a diverse field of research often defined by the methodological tools, theoretical approaches or subject matter of investigation (see Drazen, 2000, Persson and Tabellini, 2002). Furthermore, there is a debate as to whether political economy differs substantively from the theory of public choice (Mueller, 2003). Blankart and Koester (2006) provide an overview of the similarities and differences between the literatures. Whilst rational choice applications to governance, decision-making and allocation are the primary focus of this thesis, other approaches to political science are also drawn from, such as historical institutionalism (Hall and Taylor, 1996, Pierson, 2000*a*, 2004), as well as constructivist approaches (Blyth, 2002, 2003).

crises (Claessens and Kose, 2013, 18).² Understanding the interaction between the politics and economics of banking crises is particularly important given the special role banks have for economic growth and development. Politicians, for example, decide upon the institutional architecture to govern financial systems which may elevate or diminish the risk of crises (Čihák et al., 2012). During a crisis, decisions by governments to intervene with public resources to stabilise financial systems are ultimately political decisions. Also it is politicians who decide on reforms of frameworks for crisis management or bank resolution following a crisis. Political constraints may therefore explain the different and often sub-optimal policy choices taken before, during, and after financial crises. From a political economy perspective policies are the outcome of strategic interactions between politicians, voters, economic agents and bureaucratic actors and are constrained by institutional rules. The processes by which these variables interact, in this context, are the subject matter of *the political economy of financial crises*.

The papers in this thesis broadly contribute to three categories of the political economy of financial crises: causes, containment, and resolution. However each of the papers are also designed to make a specific contribution to different sub-fields of political economy. From a methodological perspective a mixed-methods approach is therefore most appropriate and a number of different analytical tools are employed. The first paper contributes to the literature on the causes of banking crises by analysing specific features of bank regulation and regulatory capture. To do this a case-study approach is used. This allows in-depth research on the interactions between the politics of financial services policy, regulatory governance,

²This thesis deals primarily with a specific subset of financial crises - banking crises. Typologies of financial crises can include currency crises, sudden stops, foreign and domestic debt crises, and banking crises (Claessens and Kose, 2013). Bakker and Lipschit (2014) differentiate between conventional and insidious macroeconomic balance sheet crises. The former are triggered by external imbalances with substantial foreign currency exposures, the latter are triggered by internal imbalances following an equilibrating shift in relative prices, resources and credit. However some prominent scholars oppose such classifications because “financial crises ... involve a number of critical elements- speculation, monetary expansion, an increase in the prices of securities or real estate or commodities, followed by a sharp fall and a rush into money” (Kindleberger and Aliber, 2011, 34). The recent crisis in Europe is exemplar of this phenomenon.

financial sector governance and financial stability. The second and third paper contribute to the literature on financial crisis management. To do this two different methods of investigation are deployed. The second paper leverages formal modelling techniques to analyse some political economy aspects of financial crisis containment. The third paper uses cross-country econometric evidence to examine the fiscal costs of crisis management. The final paper contributes to the wide literature on European public policy. It provides a positive policy analysis of the emerging architecture for future crisis management in the EU. Together this thesis hopes to provide a multifaceted view of the political economy of financial crises and draw the relevant theoretical, empirical, and policy implications from the different types of analysis. The remainder of this section will briefly discuss these three categories and give a more extensive overview of the papers.

1.2 Causes

Although financial crises are multidimensional, they are typically preceded by substantial changes in the volume of credit which encourage greater risk-taking and leverage, looser credit standards, and unsustainable asset price increases which sharply deviate from fundamentals (Claessens and Kose, 2013, Reinhart and Rogoff, 2010, Dell’Ariccia, Igan and Laeven, 2012, Demirgüç-Kunt and Detragiache, 1997, Borio and Lowe, 2002, Schularick and Taylor, 2009, McKinnon and Pill, 1997, Minsky, 1977).³ In principle regulation and supervision can prevent, or at least mitigate the risk of banking crises. However “failures in regulation and supervision remain the most mentioned cause for crises, despite significant

³This, for example, can result from global imbalances caused by internal microeconomic weaknesses (Obstfeld and Rogoff, 2009), or “excess elasticity” (whereby the financial system lacks sufficiently strong anchors to prevent the build-up of unsustainable financial imbalances (Borio and Disyatat, 2011). In the euro area, financial linkages increased considerably before the crisis with ‘core’ countries playing a dominant role in financing current account deficits before the crisis (Hobza and Zeugner, 2014). Structural factors like financial liberalisation or financial innovation also induce behaviour that is associated with financial crises (Kaminsky and Reinhart, 1999, Dell’Ariccia, Igan and Laeven, 2012, Demirgüç-Kunt and Detragiache, 1998, 2000). However this thesis will not focus on the macroeconomic or financial causes of banking crises.

upgrading of regulations, supervisory capacity and expertise over decades” (Claessens and Kose, 2013, 19). The political economy literature has sought a deeper understanding of these structural problems (Stigler, 1971, Peltzman, 1976, Tirole, 1986, Laffont and Tirole, 1993, Dal Bó, 2006, Barth, Caprio and Levine, 2006, Čihák et al., 2012, Barth, Caprio and Levine, 2004). For example, Calomiris and Haber (2014) trace the co-evolution of banking and politics in several countries and argue that the emergence of different banking systems, the abundance or scarcity of credit, and hence the stability of the financial system is the result of a game of political bargains between government, bankers, minority shareholders, debtors and depositors. They explain that because banking systems cannot develop without the active encouragement of government, and regulatory outcomes are the result of political bargains, banking systems, they argue, are “fragile by design”. Others stress the role and strength of political and legal institutions in implementing regulatory policies (see for example Barth, Caprio and Levine, 2006, La Porta et al., 1997).

The first paper (chapter 2) looks at regulatory and supervisory failure in Ireland. Using the framework provided by capture theory, it analyses the evolution of Irish financial regulation and supervision in the context of the politics of financial services policy. It explains the reluctance of supervisors from taking remedial action against financial institutions prior to the crash as the result of the establishment of an inadequate framework for regulation and supervision. This however resulted from the primacy placed by successive Irish governments on the attraction of financial services to Ireland and an active policy to encourage the provision of credit. Politics in Ireland, prior to the crisis, therefore played a significant contributing role in fostering such a permissive banking environment.

1.3 Containment

Financial intermediation theory suggests that banks are inherently fragile because of their role in liquidity creation and maturity and risk transformation (Bryant, 1980). Shocks to financial markets can therefore lead to self-fulfilling crises and bank runs (Diamond and Dybvig, 1983), or a downturn in an economy can lead depositors to anticipate a crisis, causing a banking panic (Allen and Gale, 1998). Whether because of market psychology or ‘animal spirits’ (Keynes, 1936), widespread panic, contagion and spillovers across the financial system, may require government intervention to stabilise financial markets and contain a crisis.

There has been a growing literature in political economy which analyses the public responses to banking crises (Alesina and Drazen, 1991, Keefer, 2007, Rosas, 2006, 2009, Pepinsky, 2014). The second and third papers (chapter 3 and chapter 4 of this thesis) aim to further enhance our understanding of decision-making during banking crises. Previous political economy explanations as to how decision-makers choose policies to contain crises are substantively incomplete as many of them unrealistically assume that policymakers, especially in advanced countries, have complete information. Drawing on the seminal models by Crawford and Sobel (1982) and Gilligan and Krehbiel (1987) and recent application by Satyanath (2006), the second paper develops a signalling game of crisis containment. To choose the appropriate level of public intervention, decision-makers must rely primarily on financial bureaucrats and other banking system actors for information about the proportion of non-performing loans in a banking system and the recovery value of these loans in the aftermath of shocks. The model predicts that if information providers have different preferences than decision-makers they are likely to give vague or even uninformative messages, harming the decision-makers’ ability to choose their preferred policy responses. The model also predicts that where preferences are closely aligned, the decision-maker will receive

accurate information.

Using a dataset of 147 systemic banking crises from 1970-2011, the third paper (chapter 4) tries to better understand how political variables may condition policy choice in banking crises and hence impact economic outcomes. It quantitatively assesses the impact political and party systems have on the fiscal cost of banking crises. Our empirical findings suggest that the fiscal costs of financial sector intervention are systematically associated with political economy factors. We find that crisis management in presidential systems are associated with lower fiscal costs of financial crisis management. We further explore the channels through which this may occur and find that governments in these systems are less likely to use fiscally expensive tools such as guarantees on bank liabilities and bank recapitalisations and more likely to impose losses on depositors.

1.4 Resolution and reform

The political economy of reform literature tries to better understand the political factors that make reforms successful (e.g. Williamson, 1994, Sturzenegger and Tommasi, 1998). Financial crises upset old political economy equilibria and can lead to reform because of the large public support provided during crises and the distributional consequences of this support. Crises also affect bureaucratic incentives and change the relative costs and benefits of reform (Kroszner, 1998).

The final paper (chapter 5) analyses reform of the framework for financial crisis management in the EU, particularly focusing on the new framework for the resolution of financial institutions as provided for in the Bank Recovery and Resolution Directive (BRRD) and the establishment of the Single Resolution Mechanism (SRM). It explains how the limitations of coordination and unprecedented public support to financial sectors led to the push for greater harmonisation in crisis management across the EU. However the distributional con-

sequences of financial sector support and establishment of the Single Supervisory Mechanism (SSM) led to a consensus to complete Economic and Monetary Union (EMU) and agreement on the creation of the SRM. The paper analyses the negotiations on the financing structure for resolution, decision-making procedures, and crisis management tools and emphasises how the power of certain Member States and distributive conflict with regard to legacy issues, shaped the new architecture. It also highlights the important role the European Parliament played in the negotiations as well as the different conceptions the negotiators had regarding the role of the State in crisis management.

This thesis provides a number of substantive empirical and theoretical contributions to the literature, as well as implications for policy. These, as well as the directions for future research, are discussed in the concluding chapter.

Chapter 2

Capture and Containment of the Celtic Tiger?

Abstract:¹ Regulatory and supervisory failure have been widely attributed as a being one of several simultaneous forces which allowed the build-up of significant imbalances in the financial system ultimately leading to the financial crisis in Ireland. The causes of such failure have received less attention. This paper provides a broad analysis of Irish regulation and supervision in the context of the politics of financial services policy. It assesses the case of capture of Irish financial supervision and regulation and finds that although some examples appear consistent with the conditions necessary to identify capture, a more complex picture emerges when analysed in its political context. Whilst in principle Ireland had a seemingly robust architecture for regulation and supervision, in practice the primacy placed by successive Irish governments on the attraction of financial services to Ireland and an active policy to encourage greater competition in the Irish financial sector led to the establishment of a regulatory framework and supervisory approach that was weak and inadequate. This can in turn explain why supervisors were reluctant to take action against Irish financial institutions, or correct the governance problems identified in credit institutions prior to the crisis. The establishment of the Single Supervisory Mechanism (SSM) in the European Central Bank (ECB) should help prevent some of the problems identified in this paper from developing in the future.

¹The author would like to thank Simon Hix, Jim O’Keeffe, Philip Lane, and Stefano Pagliari for their helpful comments, as well as the interviewees who generously gave their time.

2.1 Introduction

The financial crisis has led to widespread reform at the global, European and national levels. This has included the reinforcement of institutional structures of regulatory governance to better cope with the complexities and finance and the overhaul of supervisory practices. In Ireland, a deep restructuring of the financial sector is ongoing, as well as a determined programme of institutional and legislative reform. The macroeconomic background to the crisis, the role of the authorities the banks and auditors have been thoroughly examined (see Nyberg, 2011, Honohan, 2010, Regling and Watson, 2010). However, despite the establishment of a Commission of Investigation, many questions remain unanswered. Consequently, in November 2014, the Dáil (Irish Parliament) decided that a Committee of Inquiry into the Banking Crisis should be established to “to inquire into the reasons Ireland experienced a systemic banking crisis, including the political, economic, social, cultural, financial and behavioural factors and policies which impacted on or contributed to the crisis and the preventative reforms implemented in the wake of the crisis”.²

There is now a clear consensus that “Ireland’s mounting financial vulnerabilities meant that strong action was called for to over-ride the prevalent light-touch and market fashions in supervision” (Regling and Watson, 2010, 38). Why did Irish supervisors not take measures to restrain lending or ensure better risk management in Irish financial institutions?³ Existing research has pointed *inter alia* to regulatory and supervisory failure as one of several simultaneous causal factors in explaining the Irish financial crisis (see for example O’Sullivan and Kinsella, 2013). Some research has even suggested that regulatory capture

²<https://inquiries.oireachtas.ie/banking/>

³These could have included more intrusive supervision with a willingness to use sanctions to ensure compliance and the imposition of tougher requirements on credit institutions (for example direct controls on lending, increased capital requirements or sectoral limits) (see Honohan, 2010).

existed (Taylor, 2012). However, less scholarship has focused on the underlying reasons for such failures. Whilst attempting to answer this seemingly basic question this paper lends itself to the broader debate on bank regulation and the renewed scholarship on capture theory and rent-seeking (Pagliari, 2012, Carpenter and Moss, 2013*b*). It hopes to contribute to the understanding of the causes of the Irish financial crisis, by focusing on some of the political dynamics of financial services policy and regulatory governance.⁴ This paper thus provides an alternative narrative as to the causes of the Irish financial crisis and presents a theoretically informed assessment of the impact of policymaking on regulatory and financial sector governance in Ireland.

At first sight, it appears that capture was both strong and pervasive. Evidence from supervisory practice in Ireland in the years preceding the crisis and successful lobbying by industry to limit the application of key governance structures, appear consistent with some of the conditions necessary to identify capture. However a more complex picture emerges when analysed in the context of the politics of financial services policy. This paper argues that the primacy placed by the Irish government on the promotion of financial services led to the establishment of an inadequate framework to preserve financial stability. This is evident from the design of the supervisory framework, its objectives and intense lobbying that took place when the Irish Financial Services and Regulatory Authority (IFSRA) was being established (1998-2003). Finally, this paper argues that the establishment of the Single Supervisory Mechanism (SSM) in the European Central Bank (ECB) should help prevent some of the problems identified in this paper in the future.

The paper will first discuss the relevant literature on the politics of financial regulation.

⁴Regulation refers to the establishment of rules, whereas supervision refers to the oversight of financial firms' behaviour (licensing, supervision *stricto sensu*, sanctioning, and crisis management) (Lastra, 2003). The main tasks of a regulator are to define and implement the regulatory framework, whereas the main task of the supervisor is to enforce this framework and enforce sanctions in the case of non-compliance (Quintyn, 2007, 7, footnote 4). However, for the purposes of this paper, the terms 'regulator' and 'supervisor' are used interchangeably because the Irish Financial Services and Regulatory Authority, which also acted as supervisor, was commonly referred to as the Irish 'Financial Regulator'.

It then presents the research design for the paper. Following this it provides a brief overview of financial regulation and supervision in Ireland (1970-2008). Thereafter it assesses capture of Irish supervision and examines the politics of regulation and supervisory reform in Ireland. Finally the alternative approaches to the subject are discussed.

2.2 The political economy of financial regulation

The literature on the political economy of financial development emphasises the impact political institutions have on financial structure (Haber and Perotti, 2008, La Porta et al., 1997, Beck, 2011). Political economy theories of governance assume that “markets and their structures are basically contestable, that power, preference, and institutional variables interact to produce outcomes, and that the state and the market are both embedded in the broader political economy or social whole” (Underhill, 2006). This allows us to better explain governance structures, their formation and subsequent outcomes. The confidential nature of banking supervision means that the supervisory function is typically highly invisible (Quintyn and Taylor, 2002). This invisibility makes it vulnerable to interference from (i) supervised institutions or (ii) politicians (Das, Quintyn and Chenard, 2004, Barth, Caprio and Levine, 2006, Pagliari, 2012, Kane, 1977).

Banks or special interests may seek to use the governance structure to promote their own interests. Stigler (1971) argues that as a rule regulation is captured by the industry - its operation is designed for the benefit of the regulated. Stigler’s (1971) seminal positive economic analysis of regulation proposes that whereas self-interested politicians supply the regulation, producers and consumers compete for rents. “Who will receive the benefits and burdens of regulation, what form regulation will take, and the effects of regulation upon the allocation of resources” are of central concern (Stigler, 1971, Stigler and Friedland, 1962, 3). Due to collective action problems and because producers have a greater interest in barriers

to entry, they are inevitably more successful. This approach was expanded to a more general theory of regulation by Peltzman (1976), who shows that in equilibrium a rational political regulator will be utility maximising. Extensions, to account for a variety of influences of interest groups (Posner, 1974) and more complex competition and efficiency between interest groups (Becker, 1983), were developed to better understand the equilibrium structure. For example, Becker (1983, 395) explains how the political equilibrium is determined by “the efficiency of each group in producing pressure, the effect of additional pressure on their influence, the number of persons in different groups, and the deadweight costs of takes and subsidies”.

Tullock (1967) first introduced the concept of ‘rent-seeking’.⁵ Rents can be defined as “a return in excess of the resource owner’s opportunity cost” (Tollison, 1982, 575). Rent-seeking is allocatively unnecessary and hence efficiency reducing as “individual efforts to maximise value generate social waste rather than social surplus” (Congleton, Hillman and Konrad, 2008, 56).

A useful structural model to think about incentives is a three-tier hierarchical model in which there is a political principal (the government), a regulator and an agent (the firm), and whereby asymmetric information is the source of regulatory discretion which facilitates capture (Tirole, 1986, Laffont and Tirole, 1993). A firm has the incentive to induce the regulator into not telling the government when the firm is inefficient, which reduces general welfare (see Dal Bó, 2006). Whilst such models of regulatory capture represent stylised extremes, they allow us to frame the “complex motivations” underlying regulatory policies and policy-making (Barth, Caprio and Levine, 2006, 65).

Theory suggests capture is more likely when regulation is highly complex and exacerbates the information asymmetries between regulators and the regulated (Laffont and Tirole, 1991).

⁵However the phrase was coined by Krueger (1974). This public choice approach focuses more on the role of political institutions and attempts to influence government in the competition for artificially contrived transfers (Tollison, 1982, 576).

The Irish financial crisis provides an interesting case study because the failures in supervision contrast sharply with those of other countries faced with similar risks (Regling and Watson, 2010, 6). Unlike the US or UK markets, financial institutions did not, in the main, sell complex structured financial products. Rather it was “an old-fashioned, plain-vanilla case of excess, in which banks made big loans to questionable borrowers, and taxpayers ended up holding the bag” (Krugman, 2010).

Although financial systems in most advanced economies have been liberalised, governments play a more involved role in the financial sector than other sectors of the economy. This is because of the critical role the financial system plays for economic growth and development. The objective of a stable financial system however may not always align with short-term political objectives. Slow growth often generates demand for change, by the public or the media, and politicians may attempt to use the financial system to achieve such change (Green, 2012). Directing credit to preferred ends often spares the government the political risk of raising taxes or lowering expenditure (Barth, Caprio and Levine, 2006, 41). “Politicians are more likely to be re-elected if they prolong a boom rather than burst a bubble. Booms often lead to greater access to goods such as housing and the financing of large infrastructure, something politicians do not want to stop.” (Persaud et al., 2009, 4). Furthermore, once in a crisis, bank closures are typically unpopular and politicians may pressure supervisors to exercise forbearance or organise a bail-out to avoid short-term costs (Quintyn and Taylor, 2002, 12).

Political interference in the regulatory process is referred to as the ‘governance nexus’.⁶ This captures the interlinkages between different layers of governance: public sector governance, regulatory governance, financial sector governance, and ultimately the impact on financial stability and the performance of the economy through distortions in the allocation

⁶This is different to the concept of ‘State capture’, whereby firms make “illicit and non-transparent private payments to public officials in order to influence the laws, rules, regulations, or decrees, by state institutions” (Hellman, Jones and Kaufmann, 2000, 6-7).

of capital. Governments ultimately decide on regulatory policy. They design the legislative framework, institutional structure, and the scope for action of regulators and supervisors. “As banks become more important for the overall success of the economy, controlling them through regulation [becomes] more important for the overall success and political survival of governments” (Barth, Caprio and Levine, 2006, 41). However, “as long as interference in the regulatory process—or directly in the financial system—is not costly for the politicians, regulatory governance cannot be effective” (Das, Quintyn and Chenard, 2004). A badly designed regulatory framework can undermine financial sector governance (Quintyn, 2007, 16).

There is a significant body of evidence that a lack of independence and political interference contribute to deepening crises. For example, in the (1997-98) East Asian crisis, “in some cases supervisors were aware of the severity of the problems in some financial institutions or sub-sectors, but political pressure inhibited them from tackling these problems” (Quintyn and Taylor, 2002, 6, footnote 8). This lack of regulatory and supervisory autonomy made them susceptible to political and industry pressure, leading supervisors in Korea and Thailand, in particular, to frequently waive prescribed limits (Lindgren et al., 1999, 14-15). Similarly, during the Japanese crisis in the 1990s, “the lack of independence of the financial supervision function within the ministry of finance and the inability of the regulators to take steps quickly to address and forestall problems in the financial system is widely believed to have contributed toward the financial sector weakness” (Aikins, 2009, 28). Woo and Kanaya (2000) explain that at the root of the Japanese crisis was an inappropriate adjustment of the regulatory framework, issues with corporate governance and regulatory forbearance. Kane (1989, 1992) documents the role and influence of lobbyists in the Savings and Loan (S&L) crisis in the U.S., in limiting the application of key regulations, and in their own resolution. He explains how the system created perverse incentives for both regulatory agencies and U.S. Congress to ignore emerging problems and postpone solutions - “Congressional pressure for

forbearance can be compared to a western marshal having to worry about his gun backfiring or being shot in the back by an alleged colleague in the midst of a gunfight” (Kane, 1989, 97). Das, Quintyn and Chenard (2004) provide further empirical support for the impact of regulatory governance on financial stability. Using a multivariate cross-sectional analysis they find better regulatory governance framework tends to strengthen and enhance financial system soundness. To be able to ensure a stable financial system, regulators must have the appropriate incentive structure and governance arrangements (Quintyn, 2007, 53). The political salience of financial regulation therefore must be a central feature of any political economy analysis of financial regulation (Baker, 2010).

Other possible alternative theories or approaches which may explain the inaction of the Irish supervisor include bureaucratic capacity and historical institutionalism. Variations in the regulatory environment may be explained by the bureaucratic capacity of regulatory and supervisory institutions (Satyanath, 2006, 18). Some regulatory institutions with ‘higher capacity’ and more numerous staff may be better able to implement policy than others. Alternatively, historical institutionalism explains the effects of institutions over time, whereby “past lines of policy condition subsequent policy” (Hall and Taylor, 1996, 9). Increasing returns and positive feedback mechanisms reinforce existing institutions – through ‘path dependence’ (Pierson, 2000*a*). Such processes however can lead to unintended consequences or inefficiencies. In this case, previous institutional choices may have constrained the ability of the new regulatory authority to act. Finally, the approaches to capture, outlined above, all assume rational actors. However, non-rational forms of influence, such as cognitive and behavioural biases, can also induce action that may favour the regulated industry (Needham, 2009, Kwak, 2013). These will also be discussed.

2.3 Research design

Empirically the identification of capture is difficult and thus evidence on the causes and consequences is scarce and has not been systematic (Dal Bó, 2006, Posner, 1974). This could be because outcomes are probabilistic and bad outcomes do not necessarily mean bad policy (Kwak, 2013). Legislatures, for example, may adopt policies because they are the ‘right policies’, which happen to be supported by powerful interest groups (Baxter, 2010). It could also be that the task assigned to the regulatory agency is simply too difficult (Barth, Caprio and Levine, 2006, 33).

Carpenter and Moss (2013*a*) systematic evaluation of the methodological and empirical problems of detecting and measuring capture provides a useful guide for this research design. They define capture as “the result or process by which regulation (in law or application) is, at least partially by intent and action of the industry regulated, consistently or repeatedly directed away from a defensible model of the public interest and towards the interests of the regulated industry” (Carpenter and Moss, 2013*a*, 5). They propose three conditions that are necessary and jointly sufficient for a full diagnosis of capture:

1. to posit a defensible model of public interest
2. to show action and intent by the regulated industry
3. to demonstrate that ultimate policy is shifted away from the public interest towards industry interest

Carpenter and Moss (2013*a*) differentiate between distinct, but related dimensions of capture; strong and weak forms of capture, and pervasive and limited capture, thus highlighting that capture is neither absolute nor uni-dimensional, rather it varies in both degree and kind, across regulation and agencies. They calculate these relative to the net benefit of the regulation, thus capture can, for example, be pervasive but weak in form. They note however

that credible evidence of strong and/or pervasive capture is difficult to find, and suspect that cases of both are quite rare (Carpenter and Moss, 2013*b*, 5). Finally, they differentiate between anti-competitive capture whereby incumbent firms are protected through new regulation, or deregulatory capture whereby firms seek to avoid regulation (for evidence, see for example, Djankov et al., 2002).

For the purposes of this research, this paper analyses primary evidence, such as debates in the Oireachtas; (Dáil Éireann - House of Deputies and Seanad Éireann – Senate), committee hearings, parliamentary questions, and primary documents published by the Public Accounts Committee following the crisis. It also relies on the reports of the Commission of Investigation into the Banking Sector in Ireland (Honohan, 2010, Regling and Watson, 2010, Nyberg, 2011)⁷ and the numerous secondary evidence provided in academic and policy analyses published in recent years. Finally, the paper relies on evidence from 12 semi-structured interviews undertaken between 2011 and 2014. These were undertaken with current and former senior politicians in government and opposition from the major political groups in Ireland and their advisers, former members of the Irish Financial Services and Regulatory Authority (IFSRA) and journalists. To assess the alternative approaches described above, this paper will also comparatively analyse the regulatory framework, both in its historical and institutional context.

2.4 A brief history of financial regulation and supervision in Ireland (1970 -2008)

The Irish financial system had been heavily regulated throughout the seventies and early eighties. Restrictions on entry, capital structure, permitted activities, asset structure, issu-

⁷Whilst comprehensive in scope, these reports were limited by their terms of reference (for example they did not address the influence of vested interests on policymaking or regulation) (Byrne, 2012).

ance of liabilities, prices and interest rates applied (see Kelly and Everett, 2004). Furthermore, credit restrictions and the strict guidelines on sectoral lending limited bank activities.⁸ A cartel operated for clearing banks who “paid and charged a common schedule of interest rates and levied common charges for bank services” (Davy, Kelleher and McCarthy, 1984). By the early 1980s unemployment in Ireland stood at 17%, budget deficits exceeded 12% GNP and output was stagnant. A perception emerged amongst politicians and the media that the financial sector was not adequately supporting economic growth in the Irish economy.⁹ This led the then government of the day to pursue two overarching objectives: (i) to bring competition to the Irish banking sector and (ii) to ensure credit was provided on a competitive basis.¹⁰

With respect to financial regulation, the mid-eighties onwards can be characterised as a period of financial liberalisation. Formal guidelines for bank lending were ended in 1984 and the issuance of indicative credit guidelines ended in 1986. New interest-rate arrangements introduced in 1985 to ‘break-up the interest rate cartel’, were followed by the removal of all restrictions on interest rates (see Kelly and Everett, 2004, 95).¹¹ Effective lobbying on the part of building societies resulted in their allowance to operate in the wholesale money market and to undertake a variety of financial services - “underpinning the state’s willingness

⁸These included a liquidity standard for banks (which was introduced in 1958 and specified a minimum level of external assets and balances relative to their domestic resources, to be held at the CBI), quantitative limits on inflows from abroad, and anti-competitive measures including extensive licensing provisions. In 1973, for example, banks were advised not to increase private sector credit to non-productive sectors (i.e. financial, property companies and personal sectors), in 1974 credit restrictions on banks were reinforced by provisions for special deposits at non-commercial rates of interest, and in 1978 stricter guidelines backed by supplementary non-interest bearing deposits were applied. Although sectoral guidelines were discontinued in 1981 they were re-imposed in 1982 (see Kelly and Everett, 2004).

⁹Interview with former senior government politician.

¹⁰Interview with former senior government politician.

¹¹Furthermore, in 1988 exchange rate controls were significantly relaxed. This was closely followed by a removal of restrictions on purchases of medium to long term foreign securities. Restrictions on non-residents holding Irish pound accounts and on foreign exchange borrowing by residents were lifted in 1992, with the remaining exchange rate controls removed in 1993. Reserve requirements were steadily reduced during the nineties and the secondary liquidity ratio (which required the holding of government securities) was abolished in 1994. The primary liquidity ratio was reduced to 6 per cent in 1992, to 4 per cent in 1993, to 3 per cent in 1994 and to the common Eurosystem level 2 per cent in 1999 (see Kelly and Everett, 2004).

to introduce this legislation was a desire to enhance the flow of funds to the mortgage market” (Murphy, 1995, 149). Increased competition in mortgage and retail money markets however undermined traditional lending practices.¹² This financial liberalisation occurred in the context of the establishment of the European Monetary System and agreement on the Single European Act which led to the adoption in 1988 of Directive (88/361/EEC) implementing Article 67 of the Treaty Establishing the European Communities, designed to give the single market its full financial dimension.

Kelly and Everett (2004) explain how the dismantling of credit, capital and interest rates controls both at European and domestic levels however led to a structural change in the Irish financial sector. By the mid-1990s mortgage intermediaries began to exert significant control over the first time buyer’s market, as the market segment became increasingly attractive for lenders and central for customer acquisition and lending (Nyberg, 2011, 21).¹³ The entry of foreign banks into the Irish mortgage market in the late 1990s led to further competition for market share. On the supply side, financial liberalisation created the conditions for strong private sector credit growth. On the demand side, the advent of the euro led to significantly lower interest rates (Kelly and Everett, 2004). This also facilitated the entry of new entrants into the Irish market, notably Bank of Scotland (HBOS) in 1999 (Nyberg, 2011).

Turning to supervision, the 1971 Central Bank Act conferred a licensing and supervisory role on the Central Bank of Ireland (CBI)¹⁴ although balance of payments problems in the 50’s and again in the 60’s had led to a deepening influence of the CBI in the control of domestic lending prior to this (McGowan, 1989, Hein, 1967). The 1989 Central Bank Act provided for the extension of the bank’s licensing and supervisory powers in respect of

¹²For example a savings criterion whereby prospective borrowers had been required to invest 10% of the value of the loan one year before it was granted, was removed. This resulted in faster loan approval (see Murphy, 1995, 150).

¹³By 2005, at the peak of the market, mortgage intermediaries were a significant force in the market and accounted for about 45% of new residential mortgage loans (Nyberg, 2011, 21, footnote 27).

¹⁴The 1942 Central Bank Act had conferred specific powers on the CBI prior to this.

banking business and the supervision by the Central Bank of certain institutions in the Irish Financial Services Centre (IFSC), futures and options exchanges and money brokers.

By 1998, the CBI was responsible for the direct supervision of most financial institutions. This amounted to 877 institutions, 175 of which were IFSC companies (McDowell, 1999, chapter 2). The Irish authorities however did not have a glorious record in supervising and regulating financial institutions. Indeed, “one of the most striking features in the [banking] scandals of the last 30 years is the failure of the banking police, the CBI and later the Irish Financial Services and Regulatory Authority (IFSRA), to patrol the industry adequately” (Carswell, 2011, xi). The Irish Trust Bank affair in 1976 led to the exchequer having to compensate borrowers to the tune of £1.8 million (Honohan, 2010, 130). PMPA an insurance company collapsed in 1983, requiring the preparation of emergency legislation to appoint an administrator (Houses of the Oireachtas, 1983). This was shortly followed by the near collapse of Allied Irish Bank (AIB) in 1985 when it revealed indeterminate losses in its subsidiary, the Insurance Corporation of Ireland (ICI). In the mid-1990’s, a government inquiry found that the Central Bank did little to prevent the widespread use of off-shore bank accounts. They found that the Central Bank had a “particularly close and inappropriate” relationship with the regulated entities and “was perhaps too mindful of the concerns of the banks and too attentive to their pleas and lobbying” (Houses of the Oireachtas, 2001). Scandals in 1996 and again in 1998 highlighted concerns about the adequacy of the framework for consumer protection (Westrup, 2002, 1).

In the wake of these failures in supervision “a picture had emerged in the public domain that Irish banks were hopelessly supervised and that the Central Bank had gone to sleep on the job”.¹⁵ The scandals also exposed a deeper institutional flaw- a “disturbing, dramatic and disastrous breakdown in public accountability..... and an equally dramatic breakdown in the system of parliamentary scrutiny” (Houses of the Oireachtas, 2001). This led to the

¹⁵Interview with former senior government politician.

broad political push for institutional reform of the regulatory supervisory architecture.

In 2003, a new authority was established which created a single Financial Regulator called the Irish Financial Services and Regulatory Authority (IFSRA) as a ‘constituent part’ of the newly named Central Bank and Financial Services Authority of Ireland (CBFSAI), but operating independently, with powers for prudential supervision and consumer protection.¹⁶

The crisis however exposed systemic flaws in both financial regulation and supervision, not least in the information it gave to the government in 2008 when it was putting in place its crisis containment strategy. The Financial Regulator advised the government that the financial sector was merely suffering from a short term liquidity crisis.¹⁷ This led the government to put in place a blanket guarantee of all liabilities of the banking system, amounting to €365 billion, or almost 2.5 times GNP (Honohan, 2010, 19), ultimately forcing the State out of the sovereign markets and into an EU/IMF programme of economic adjustment. “Decisions were made on the erroneous assumption that all banks would remain solvent” (Nyberg, 2011, ix).

The reports into the crisis concluded that the Financial Regulator practiced a regulatory approach that was excessively deferential and accommodating, insufficiently challenging and not persistent enough, under-resourced and unwilling to swim against the tide of public opinion and ‘rock the boat’ (Honohan, 2010, 16). Risks associated with their funding strategies, concentration risk and speculative lending were ‘in plain sight’ (Nyberg, 2011)). Furthermore, corporate governance in the credit institutions was not sufficient. Procedures and processes were either not implemented or did not exist in Anglo Irish Bank and Irish Nationwide (INBS) respectively (Nyberg, 2011, iv-vii). It was clear that supervisors at one

¹⁶Whilst it was the role of the Central Bank to monitor systemic risk (in the financial system as a whole), this paper deals specifically with the micro-prudential functions of the Financial Regulator.

¹⁷For example, on 26/09/2008, following a presentation by the auditor Price Waterhouse Coopers on Anglo’s situation, the Financial Regulator Pat Neary concluded that “there is no evidence to suggest that Anglo is insolvent, it is simply unable to continue on the current basis from a liquidity point of view” (Houses of the Oireachtas, 2008e).

level or another were aware of most of the risks in the financial system (Regling and Watson, 2010, 37). However “when prudential sector concentration ratios were exceeded, the [Financial Regulator] did nothing to demand any limitation in risk exposure despite being fully informed” (Nyberg, 2011, viii). Some have suggested its actions may be consistent with ‘regulatory capture’ (Honohan, 2010, Taylor, 2012). However little, if any, analysis of this or the politics surrounding the regulatory and supervisory framework has been undertaken.

2.5 Capture of Irish financial supervision?

Supervisors depend heavily on regulated entities for information on performance, compliance, disclosure, data, documentation, products and operations. The confidentiality of this relationship between the supervisor and regulated entities can however produce deviations from legislative intent (‘agency slack’) (Walter, 2012, 102). Supervisors must have close contact with banks. However close contact through on-site and off-site inspections and consultation with industry (in rule-making, for example) means that banks have numerous opportunities to present their views and interact with the supervisor and regulator (Hardy, 2006, 4). This can lead to capture of supervisors or regulators.

The Irish Financial Regulator was committed to a ‘principles-based’ approach to regulation (O’Reilly, 2004a). In seeking to fulfil their objectives, the supervisor did not seek to “interfere unnecessarily in commercial decisions taken by regulated institutions”, rather they placed a large responsibility with the management of the institution.¹⁸ The supervisors’ “primary concerns concentrate[d] on the authorisation of entities and individuals” (O’Reilly, 2004a). In this context the supervisor interpreted its role as focusing on processes and regulation relied heavily on ensuring adequate governance structures and systems were in place (Honohan, 2010, 44).

¹⁸One senior government politician of the day of the day stated that “rather than light-touch regulation, it was no regulation”.

Two specific examples show how the actions of the supervisor appear to be consistent with two of the necessary conditions to identify capture outlined in the research design above – to show action and intent by the regulated industry, and to demonstrate that ultimate policy is shifted towards industry interest. These include: (i) the case of Directors’ Compliance requirements and (ii) the case of the Corporate Governance Code.

In response to an inquiry into misbehaviour of banks in facilitating tax evasion,¹⁹ a provision was inserted into the Central Bank Act concerning compliance statements to the Financial Regulator.²⁰ This provided the Financial Regulator with the discretionary power to seek such statements. The Financial Regulator took a decision in November 2004 to proceed with the new Directors’ Compliance requirements. In November 2005, it was decided to publish a public consultation paper on the issue. However this did not happen. Instead an informal pre-consultation process took place with Industry and Consumer Panels and industry representative bodies. Honohan (2010, 50) explains that following strong resistance and lobbying from the industry, the Department of Finance requested the Financial Regulator not to proceed with a consultation. Subsequently, following concerns expressed by the Minister for Finance regarding the impact this would have on competitiveness, the Financial Regulator agreed not to implement the provision. A similar example took place with respect to a second key element of the governance framework, the Corporate Governance Code. Following an informal pre-consultation exercise with the 12 credit institutions in September 2005 it was decided to delay issuing the formal consultation paper and subsequently no paper was presented. In line with the theory outlined above, rent-seeking behaviour is therefore clearly visible.

Two further types of ‘deviation from the public interest’ in the post rule-making, or implementation phase, may also constitute further evidence of capture: (i) formal non-compliance-

¹⁹The so-called DIRT inquiry refers to the investigation into the use of non-resident accounts as a means of evading Deposit Interest Retention Tax (DIRT).

²⁰All evidence from this paragraph is taken from Honohan (2010, chapter 4).

when actors openly resist implementation of the agreed rules that approximate the public interest and (ii) ‘mock’ compliance- whereby actors engage in formal compliance, but their behaviour negates their intent (Walter, 2012). In the Irish case, implementation was also a major issue (Regling and Watson, 2010, 37). The supervisor had a reluctance to apply powers in relation to micro-prudential functions and its preferred approach to enforcement was to seek “voluntary compliance with legislation, codes and rules” and an enforcement strategy that relied on ‘moral suasion’ (Honohan, 2010, 43). This led to a pattern of inconclusive engagement and lack of decisive follow-through. In one case, the regulator identified weaknesses requiring corrective action. However a protracted and somewhat inconclusive correspondence extended over many years with the identified problems not being corrected before the crisis (see Honohan, 2010, 75). In general “it would have been known within the Financial Regulator that intrusive demands from line staff could be and were set aside, after direct representations were made to senior regulators” (Honohan, 2010, 5). In fact, no penalties for breach of prudential regulations were ever imposed on a bank before 2008.

These cases show that both action and intent by the industry was clearly evident. Secondly, they show how ultimate policy is shifted towards industry interest. As per the research design outlined above however, these two conditions must be assessed against the final necessary condition - a defensible model of public interest.

Carpenter and Moss (2013*a*) outline four possible defensible models for an empirical analysis of capture: (i) to stipulate the ‘public interest’ on the basis of accepted theory or broad empirical evidence (ii) to suggest that the long-run judgements of democratically elected public officials or aggregated public opinion for the ‘public interest’ is superior to that of any other actor (iii) to take a technocratic or scientific approach or (iv) when the ‘public interest’ is not known, to look for capture procedurally by (a) trying to identify the special interests involved, and (b) examine those institutions and outcomes that would seem consistent with capture. Because there is no theory or scientific approach that is broadly

accepted, the next section will therefore evaluate the case of capture against the long-run judgements of democratically elected public officials.

2.6 ‘In the public interest’? The politics of financial regulation in Ireland

What were the long-run judgements of democratically elected public officials in Ireland? To assess this we must look at government objectives, the institutional architecture for regulation and supervision and supervisory mandate. As mentioned above two key government objectives in the 1980s were to bring competition to the Irish banking sector and ensure credit was provided on a competitive basis. Despite significant success in attracting foreign direct investment (FDI) in the 1980s, policy-makers recognised the need to re-orientate policy away from capital intensive industries towards the services sector (Burnham, 2003, O’Gráda, 1997). This upgrade in the nature of investment occurred in the wake of highly publicised plant closures, corporate restructurings and emerging competition (Murphy, 1998).

The policy shift led to a determined effort to establish a favourable environment for financial services in Ireland and laid the foundation for the development of the Irish Financial Services Centre (IFSC) in 1987. The IFSC was “a purpose built tax and regulatory environment for financial institutions” which aimed to attract investment from global financial services organisations (O’Sullivan and Kinsella, 2013, 8). A particular attraction was the preferential corporation tax rate of 10% given on the trading income accruing to institutions conducting international financial services activities. Establishing a favourable regulatory regime was also a key priority of government in this respect.

The IFSC was a widely successful initiative and by the year 2000 had in excess of 500 companies engaged in a range of financial services including banking, treasury management, custodial services, insurance, leasing and back-office support (Forfas, 2000, 30, footnote 14).

Employment from the IFSC in 2000 amounted to almost 8,500 people and funds managed exceeded \$150 billion (*ibid*). By 2008 estimates suggest wholesale finance had reached 7.4% of GDP and Ireland commanded 5.3% of wholesale financial services in the EU (London Economics, 2009). Indeed today (2014), even after the crisis, estimates suggest the IFSC directly employs 32,700 people and contributes approximately €2.1bn to the Irish Exchequer (IFSC-Ireland).

In Ireland, the legislature was traditionally slow to react to changes in financial regulation. Therefore to facilitate the governments' objectives - of providing a favourable regulatory environment for financial services - the IFSC Clearing House Group was established to assist in the growth and development of the IFSC under the auspices of the Department of the Taoiseach (Prime Minister). This consisted of representatives of Government departments, relevant State agencies and members of the IFSC.²¹ This was a forum "for the public and private sectors to work together to identify the supports which might be needed to assist in the long-term development of the international financial services industry in Ireland and any constraints which might act as a barrier".²² The government made a commitment to fast-track regulatory alterations and improvements, whilst ensuring that they were up to international standards. "They looked at obstacles across government departments and ensured a 'friendly environment' for new products".²³

As described in the theory section, a central aspect of private- interest theory is rent-seeking behaviour of interest groups to manipulate government (Stigler, 1971, Krueger, 1974).

²¹In 1998, the IFSC Clearing House Group members included; Paddy Teahon, Department of the Taoiseach (Chair), Michael Buckley, Allied Irish Banks, Ron Bolger, KPMG, Peter Coyne, Dublin Docklands Development Authority, Garrett Murphy, Central Bank of Ireland, Torlach Denihan, FSIA, David Doyle, Department of Finance, Brian Goggin, Bank of Ireland, Paul Haran, Department of Enterprise, Trade and Employment, Kurt Hochheuser, Commerzbank, Kieran McGowan, IDA Ireland, Sam Mollinaro, Bear Stearns, Donagh Morgan, Department of the Taoiseach, Frank Mullen, Office of the Revenue Commissioners, John Shaw, Department of the Taoiseach (Secretary to Group), John Sievwright, Merrill Lynch, Michael Tutty, Department of Finance (Houses of the Oireachtas, 1998b).

²²Interview with senior government politician.

²³Interview with former senior government politician.

Large firms can overcome collective action problems and concentrate resources to obtain special advantages. A number of papers have analysed the dynamics of this relationship with respect to finance. Tressel, Igan and Mishra (2009) analyse the relationship between lobbying by financial institutions and mortgage lending in the US prior to the crisis. They find that faster relative growth by lobbying lenders is associated with higher ex-post default rates. Kroszner and Strahan (1998) find interest group factors can explain the timing of branch de-regulation and congressional voting in the US. Whilst this group clearly afforded the participants the opportunity for further rent-seeking behaviour, it appears to have been largely a government-led initiative. This institutionalised forum for lobbying does however demonstrate the closeness of the relationship between the office of the Taoiseach and the regulated entities, and highlights the political salience of financial regulation in Ireland.

Turning to the regulatory architecture, the establishment of the Irish Financial Services and Regulatory Authority (IFSRA) in 2003 was the subject of much political debate. In 1998 a parliamentary committee produced a damning report on financial supervision in Ireland. They concluded “that no structure or body existed that could, with confidence, assure the Committee, or indeed the general public, that the commercial banking sector or other financial institutions were properly supervised and/or accountable”, that legislation and regulations were inadequate to supervise the commercial banking sector effectively and that the Department of Finance had inadequate or insufficient powers and resources to regulate financial institutions on a day to day basis (Houses of the Oireachtas, 1998*a*).²⁴

²⁴The responsibility for financial regulation was fragmented and distributed across multiple institutions. The Department of Finance was responsible for the development of most of the financial services legislation carried out by the CBI. The Department of the Environment was responsible for the legislative framework for building societies, whilst the Department of Enterprise Trade and Employment was responsible for insurance companies and insurance intermediaries and undertakings in collective investment schemes (UCITS). UCITS had been a key driver for the IFSC’s early success (Sally, 2010). The Department of Enterprise Trade and Employment also maintained the legislative framework for the Office of the Director of Consumer Affairs (ODCA) and worked closely with that Office in developing policy. The ODCA had considerable powers with regard to consumer relations with the financial services sector. This complex structure however lacked credibility and many issues were left unregulated.

Whilst the CBI had been empowered to supervise banking institutions, they had been largely unable to prevent such malpractices. Therefore the committee proposed the establishment of a single, independent, regulatory authority, given supervisory powers in relation to all commercial bodies which handled funds or financial transactions in Ireland. The reform of financial services regulation in the United Kingdom in 1997 and the establishment of the Financial Services Authority (FSA) also give direct context to this shift. In October 1998, the Irish Government agreed in principle to the establishment of a single regulatory authority and established an Implementation Advisory Group to advise the Government on the role, functions, organisational structure, funding, resources and staffing of the authority, as well as the legislative changes necessary for its establishment (McDowell, 1999, chapter 1). The group recommended a ‘completely new, independent, organisation outside the Central Bank’, with clear statutory responsibility for implementation of prudential regulation and supervision of financial services and consumer protection.

This paper does not seek to assess the merits or otherwise of the establishment of a single regulatory authority. The debate around the establishment of the IFSRA however does allow us to identify the special interests involved. Following the proposal for a single regulatory authority, intense lobbying occurred to leave regulatory and supervisory functions with the Central Bank, rather than establish a new independent authority.²⁵ A minority of the Advisory Group proposed an alternative structure whereby a parallel separate division would be set up, responsible for the implementation of the functions of the Central Bank concerning all the prudential and consumer regulation, but within the CBI. One of the minority of the Advisory Group who opposed the new structure represented the Department of the Taoiseach.²⁶ One of the advantages highlighted for the ‘alternative approach’ was that “there [was] very considerable support among the entities currently regulated by the

²⁵Interview with former senior government politician.

²⁶Mr Dermot McCarthy was then, Assistant Secretary, Department of the Taoiseach. His opposition is highlighted in footnote 46 of the paper version of the report (McDowell, 1999).

Central Bank for it to become the new regulator” (McDowell, 1999, appendix II). It was not until 2003 that the legislation was agreed and the prudential functions remained within the newly named Central Bank and Financial Services Authority of Ireland (CBFSAI) . What eventually emerged in the legislation was a twin- pillar structure within the Central Bank. The institutional design was complex. However despite the new institutional structure, “the general approach of the [Financial Regulator] did not mark a change from that of the [Central Bank]... rather the approach of the [Financial Regulator] was in essence a continuation of custom and practice of the [Central Bank]” (Honohan, 2010, 43). This again shows how the political salience of financial regulation impacted the establishment of the institutional architecture for regulation and supervision. One of the main arguments for maintaining the status quo was a continuation of past practice. One senior politician interviewed for this paper highlighted that “the job of the Financial Regulator was to not get in the way of the IFSC”.

Looking at the regulatory approach and mandate in more detail, the Financial Regulator was committed to a principles-based approach to financial regulation and supervision.²⁷ Indeed it was one of the strategic goals of the regulator (IFSRA, 2006). “The underlying idea was that the prudential regulator would not be prescriptive in terms of product design, pricing and the specific risk decisions adopted by a firm, as long as the firm had a robust governance structure, together with reliable oversight and control systems, especially systems for managing risks” (Honohan, 2010, 43). This was a clear element of ensuring a ‘favourable regulatory environment’ for financial services. This approach was ‘inherited’ from the Central Bank (Honohan, 2010, 43) and supported by industry (O’Reilly, 2004*b*).²⁸ Furthermore, such

²⁷Whilst a principles-based approach was in line with accepted ‘theory’ at the time, at the time, it cannot supplant a model of the public interest in this research design, given that rules versus principles represents somewhat of a false dichotomy (see Honohan, 2010, 48).

²⁸Globally, during the 80’s, an epistemic consensus had emerged around the ‘efficient market hypothesis’. This assumes that markets were ‘informationally-efficient’ and that asset prices would reflect underlying fundamentals (Fama, 1970). This became the intellectual underpinning of financial market deregulation across the world and spurred banks to lobby for less stringent restrictions. Under this ideological approach,

was the importance of financial services in Ireland however that the ‘promotion of financial services’ was one of the statutory objectives of the newly established authority, although this was explicitly subject to the objective of preserving the stability of the State’s financial system.²⁹ Nonetheless, it is again a clear indication of the political salience of financial regulation.

Whilst in principle the IFSC and local retail banks represented two very different banking systems, it was accepted that they should be treated equally on the grounds of competition. Regulatory sector credit limits were not adhered to prior to the establishment of the Financial Regulator initially for IFSC banks and when these limits were subsequently exceeded by large margins in certain institutions prior to the crisis, with the tacit approval of the Financial Regulator, it was accepted that they could not be applied to banks operating in the domestic market (Nyberg, 2011, 64). Secondly, banks in Ireland chose strategies (on the assumption of continued strong property demand and increased values) to retain market share in the presence of strong foreign and domestic competition leading to higher growth, reported profits and bank valuations and “it appears that concerns about a loss of market share by Irish banks to potentially less regulated foreign competitors may have inhibited forceful action by the [Financial Regulator]” (Nyberg, 2011, 21,65).

Often, robust regulation and intrusive supervision are required, to ensure the preservation of financial stability. This put the Financial Regulator in a compromising position “as the possible adverse effects on discouraging inward investment in the IFSC were more immediate and real than what were perceived as more distant concerns about financial stability.” (Honohan, 2010, 109).

financial market innovation was viewed as market-perfecting and therefore assumed to be welfare-enhancing. The distributional consequences were left out of the picture (Thirkell-White, 2009, 701).

²⁹Article 5(b) of the Central Bank and Financial Services Authority Of Ireland Act 2003 states that one of the functions of the Bank was to “to promote the development within the State of the financial services industry (but in such a way as not to affect the objective of the Bank in contributing to the stability of the State’s financial system)”.

2.7 Discussion of the alternatives

Consistent with capture theory the examples of the implementation of Directors' Compliance requirements and the implementation of the Corporate Governance Code show, as per the research design, both action and intent by the regulated industry and demonstrate that ultimately policy was shifted towards industry interest. It was however only following concerns expressed by the then Minister for Finance regarding the impact this would have on competitiveness, that the former were withdrawn. One senior government politician noted that "light touch was a pretty fundamental philosophy of the Fianna Fáil/ Progressive Democrat (PD) government".³⁰ The then Minister for Finance from an ideological perspective preferred "minimum regulation".³¹ Another interviewee highlighted that "government policy was easy regulation, without a shadow of a doubt, even if this was not spelled out".³²

A broader analysis of regulation and supervision in the context of the politics of financial services policy suggests that the Irish case better aligns with the 'governance nexus'. Weaknesses in the governance structures of financial institutions can result from a badly designed regulatory framework. This can result from government policy or political interference in the regulatory process. Analysing the Irish case, key government objectives in the 1980s were to bring competition to the Irish banking sector and to ensure credit was provided on a competitive basis. In a bid to attract financial services to Ireland, they established a favourable tax and regulatory environment for financial institutions. On the legislative side, part of this involved a commitment to fast-track regulatory alterations and improvements; on the institutional side, it involved institutionalising a light touch regulatory and supervisory approach. This included a role for the Financial Regulator to promote financial services in Ireland. This institutional architecture, regulatory framework and supervisory approach

³⁰Interview with former senior government politician.

³¹Interview with Journalist.

³²Interview with former senior government politician.

can in turn explain why supervisors were reluctant to take action against Irish financial institutions, or correct the governance problems identified in credit institutions.

This analysis aligns with the conclusions of the preliminary report into the regulatory and financial stability policy prior to the crisis (Honohan, 2010, 107-110). It highlights three key concerns of the Financial Regulator that militated against more decisive action or intervention. Firstly, there was a worry that stronger regulatory action would adversely affect the competitiveness of regulated credit institutions against those operating either on a consolidated or subsidiary basis.³³ Secondly, there was concern that more robust regulation might make Ireland less attractive for international financial investment. A third concern was that more aggressive use of some of the instruments discussed above could have been criticised as running contrary to the spirit of principles-based regulation. These can all be directly attributed to government objectives and the dichotomy between promoting financial services and preserving financial stability. One senior politician noted that “because relationships were so close, the thinking was that what was good for the banking system was good for Ireland.....eventually the regulator became more concerned with protecting the reputation of the system, than regulatory misdemeanours”. The outcomes in the Irish case, although sometimes consistent with capture, can possibly be better characterised as ‘domestic bias’. As this paper has shown, bias in this case was toward government objectives.

Alternative approaches also may have some explanatory power in explaining the (in)action of the Financial Regulator. Firstly, in relation to ‘bureaucratic capacity’, agency slack can result from systematic under-resourcing of the regulatory agency (e.g. the SEC or the Office of Thrift Supervision in the U.S.), or discretionary non-enforcement (e.g. Japan in the mid-1990s or Korea in 2001) (Walter, 2012, Satyanath, 2006). In Ireland however, the resources of the Financial Regulator were broadly comparable with EU and global counterparts. A

³³The ‘home-country principle’ in EU law gives primacy to the ‘home’ country legislative and regulatory framework when a bank conducts activity in other EU Member States (see Hertig, 2000).

comparison of the costs of regulation of credit institutions in 2005 (per €million of assets) shows that whereas Ireland spent €14, the UK spent €10, France €12, Germany €7, Hong Kong €26, Singapore €28 and the US €177 (C&AG, 2007, 65). In terms of staff, Ireland was comparatively was ‘resource intensive’. Numbers increased from 299 to 334 between 2004 and 2009. By 2007 63% were engaged in prudential supervision and 23% in consumer protection (EIU, 2011, 85-87), although only a limited number of people, with a considerable asymmetry in expertise and seniority, were allocated to supervise the leading institutions (Honohan, 2010, 75).³⁴ Nyberg (2011, 63, footnote 99) notes however, that there was no evidence that the Financial Regulator requested authorisation for a substantial increase in staff for its banking supervision department.

Secondly, a historical institutionalist analysis may also have some explanatory power. Historical institutionalists emphasise how institutions structure behaviour (Hall and Taylor, 1996). Path dependence is a central element of historical institutionalism. It suggests that initial institutional decisions become self-reinforcing over time and “social adaptations to existing institutions drastically increases the cost of exit from existing arrangements” (Pierson, 2000a,b, 492). Institutional designers may not act instrumentally, rather institutional arrangements may be adopted because they are perceived to be appropriate, designers may have short time horizons, and institutional choices may have significant unanticipated consequences (*ibid*). Indeed the above analysis has shown that the new supervisory approach did not mark a change from past practice in the general approach (Honohan, 2010, 43). Locating the IFSRA as a constituent part of the CBI may have been inadequate to establish a new regulatory culture, particularly given the previously identified ‘close and inappropriate relationship’ between the CBI and regulated entities (Houses of the Oireachtas, 2001). Such an approach however, cannot fully account for the politics surrounding the broad policy response (political, legislative, and institutional) between 1998 and 2003.

³⁴Another interviewee highlighted that the Financial Regulator simply did not understand risk.

Thirdly, non-rational forms of influence such as cognitive and behavioural biases may also induce action that may favour the regulated industry. Needham (2009, 2333-2354), for example, suggests that “confirmation bias, overconfidence, groupthink, bounded search and status quo bias”, hold significant explanatory power in understanding why the Federal Reserve refrained from exercising effective oversight of financial services in the sub-prime mortgage market and refused to conduct a top-down review of entire lending entities. Similarly, Buiter (2008, 498) argues that because the Federal Reserve (Fed) is a Financial Regulator and supervisor, “cognitive regulatory capture of the Fed by Wall Street resulted in excess sensitivity of the Fed not just to asset prices... but also to the concerns and fears of Wall Street more generally”. Choi and Pritchard (2003, 83)) assess behavioural biases in the context of the Securities and Exchange Commission (SEC) and explain how regulators are vulnerable to behavioural contagion, may suffer from over-confidence and process information with only bounded rationality, or may misapply heuristics. Regulators are more likely to adopt positions of those that they perceive as ‘in their group’, in their social networks, or whom they perceive to be of higher status in social, economic, intellectual, or other terms (Kwak, 2013, 11). Kwak (2013) outlines two plausible explanations for this. The first is deference to people with higher status (Henrich and Gil-White, 2001). Secondly, people may want to obtain higher status or confirm their belief that they have that higher status. Similar dynamics appear to have some explanatory power in understanding the reasons for supervisory culture in Ireland. Honohan (2010, 60) notes that “the reluctance to take decisive action can also be characterised as displaying both deference and diffidence to regulated entities” and “may have contributed to a reluctance to second-guess bankers in any aggressive manner” (Honohan, 2010, 9).

2.8 Conclusion

Regulatory and supervisory failure have been widely attributed as being one of several simultaneous forces which allowed the build-up of significant imbalances in the financial system ultimately leading to the recent financial crisis in Ireland. This paper assesses the case of capture of Irish financial supervision and regulation and finds that whilst some examples appear consistent with rent-seeking behaviour and the conditions necessary to identify capture, a more complex picture emerges when analysed in its political context. Whilst in principle the Irish architecture for regulation and supervision appeared robust, in practice, the primacy placed by successive Irish governments on the attraction of financial services to Ireland and an active policy to encourage greater competition in the Irish financial sector led to the establishment of a regulatory framework and supervisory approach that was weak and inadequate. Combined with the simultaneous macroeconomic, financial and bandwagon effects well documented elsewhere, as well as the speculative mania in the property market, this paper argues that politics prior to the crisis in Ireland played a significant contributing role in fostering such a permissive banking environment.

A number of problems have been highlighted in this paper. Firstly, from a policy perspective, domestic bias and susceptibility to this bias was clearly an issue. A clearer mandate and more independent institution could have helped overcome this. Independence here does not imply legal independence, rather independence from time-inconsistent government objectives. Secondly, whilst a competitive and attractive financial services sector is a valuable asset to any economy, it must be accompanied by a robust regulatory and supervisory framework. It is the responsibility of political ‘principals’ to ensure a clear legislative and institutional architecture is in place where supervisors are confident in applying powers (for example using sanctions to ensure compliance) and where necessary are fully capable of imposing tougher requirements on credit institutions. Thirdly, a principle-based approach to financial regula-

tion, as implemented by the IFSRA, was clearly inadequate to safeguard financial stability in the Irish case. Therefore, a more intrusive approach to supervision is clearly warranted, where supervisors have a better understanding of the business models and associated risks and challenge the strategy and governance of banks in a credible way. Finally this paper highlights some of the clear externalities from cross-border banking in the EU.

This study represents only one single case. Therefore the external validity may be limited. However it does show, in detail, how an advanced economy with seemingly well developed institutions can become susceptible to domestic bias. This does not however appear to be an isolated case. Recent research from the European System Risk Board (2014) suggests that spurred by European financial integration, this may be a European phenomenon. “As the protection afforded by national boundaries diminished, politicians felt that they had to facilitate domestic banks’ quest for size, so as to be able to fend off foreign competitors (often on the basis of economies-of-scale arguments) and lower the contestability of their control” (Véron (2013) in European Systemic Risk Board, 2014).

For the future, the establishment of the SSM in the ECB represents a landmark shift for supervision in Ireland and the EU in this regard. The ECB will take over the supervision of approximately 130 ‘significant’ credit institutions in November 2014. This will include the three largest institutions in Ireland.³⁵ Locating the supervisor in a supra-national institution should make it much less susceptible to bias from local domestic interests. This is because the new supervisory architecture has a European, rather than national, mandate and is a constituent part of a legally independent supranational institution. Furthermore, the ECB is politically independent of any Member State and “as European supervisor it has no incentives related to national champions and its mandate is fully aligned with its European

³⁵Article 6 of the 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 specifies that ‘the ECB shall carry out the tasks conferred on it by this Regulation in respect of the three most significant credit institutions in each of the participating Member States, unless justified by particular circumstances.’

financial stability objective (Draghi, 2013). Third, the creation of a harmonised supervisory manual,³⁶ which will apply to all banks, should help to ensure best practice supervision across all participating Member States.

³⁶This will cover on-site and off-site inspections, procedures, processes, risk assessments, model validation and methodology for the Supervisory Review and Evaluation Process (SREP).

Chapter 3

Information and Financial Crisis Policy

Christopher Gandrud and Mícheál O’Keeffe

Abstract¹: The degree to which governments intervene to contain financial crises varies considerably across countries and crises and has important consequences for the fiscal cost of the intervention, the solvency of banks and the real economy. In this paper we aim to understand why policymakers choose the level of intervention they do to contain threats to their financial system. In particular, we want to understand why policymakers may end up choosing sub-optimal policies that lead to outcomes that they do not want. We focus on the fact that to be able to choose an optimal response, policymakers must rely on information from bureaucrats and other actors about the health of the banking system. However, information providers may have different policy preferences. To understand the interactions between these actors and the implications for policy choice, we develop a ‘signalling game’ of financial crisis containment. We use comparative statics and a case study of the recent Irish bailout to demonstrate the implications of the model, which highlights the important role that information asymmetries play in affecting policy responses to financial crises.

¹The authors are listed in alphabetical order. Thank you to participants at the 2012 Mid-west Political Science Association Annual Conference, seminar participants at the London School of Economics and Waseda University, as well as Klaus Brösamle, Sahil Deo, Andy Eggers, Charles Goodhart, Mark Hallerberg, Simon Hix, Philip Lane, Suhjin Lee, Cheryl Schonhardt-Bailey and Shanker Satyanath for their helpful comments.

3.1 Introduction

The 2007-2009 financial crisis highlighted the need for widespread government intervention to stabilise the financial system. Tools such as direct recapitalisation, widespread liquidity support, as well as asset and liability guarantees have been used to contain systemic threats to many countries' financial systems. However, chosen containment policy levels varied considerably across countries and crises (see chapters 4 and 5), with important consequences for financial system solvency, the direct fiscal costs of crisis responses and the subsequent impact on the real economy. Governments face a trade-off in financial crisis containment. To contain a crisis they must announce a policy response that will restore confidence to the financial system. At the same time, such measures expose governments to significant possible fiscal costs which may threaten the solvency of the state itself. This was dramatically demonstrated by the decision of the Irish government in 2008 to provide a blanket guarantee of bank liabilities.

The Irish case is particularly thought-provoking. Despite the size of the response, which included guarantees that amounted to €365 billion, or almost 2.5 times GNP (Honohan, 2010, 19), decision-makers believed that it would end up costing very little, as the guarantees were not likely to be redeemed. Many believed that the financial sector was merely suffering a short-term liquidity crisis rather than a fundamental problem of insolvency. This sentiment was expressed by the Minister for Finance, who shortly after the first round of banking system support was announced, commented that it was “the cheapest bailout in the world so far”.² However by Spring 2011, the bill had reached €70 billion, leading the Central Bank Governor to note that it had ended up being one of the costliest crises in history.³ Irish policymakers seemed to have chosen exactly the containment level that they did not want.

²Brian Lenihan (Former Irish Minister for Finance, 2008- 2011) to the Leinster Society of Chartered Accountants lunch in Dublin, October 23rd, 2008.

³Patrick Honohan, Central Bank Governor, March 31st, 2011.

The recent Irish example motivates us to create a general way of understanding banking crisis policy-making that allows us to understand how decision-makers may end up choosing crisis containment policies that lead to non-preferred outcomes.

There has been growing attention given to the political economy of public responses to banking crises (see Alesina and Drazen, 1991, Keefer, 2007, Pepinsky, 2014, Rodrik, 1999, Rosas, 2006, 2009, Satyanath, 2006, Homar and van Wijnbergen, 2013). These works have tried to understand why governments respond to widespread bank insolvencies or the possibility of widespread insolvencies that are the hallmark of financial crises (Laeven and Valencia, 2012a, Sundararajan and Baliño, 1991) by focusing on, for example, differences between democracies and non-democracies, institutional weaknesses in emerging economies, or the number of veto players within democracies. However, these approaches lack explanations for cases like Ireland’s recent bailout, as it is an advanced democracy with a developed economy and (at least before the crisis) well-regarded public and private financial institutions. One factor that has been largely been ignored in previous work, but which may be crucial, is the role of information asymmetries.

To fill this gap in the literature we draw on the seminal model by Crawford and Sobel (1982) and Gilligan and Krehbiel (1987) to develop a signalling game, where the actor who makes the containment policy decision relies on information from their financial bureaucrats and other banking system actors. Information-poor decision-makers primarily rely on these actors for information about the proportion of non-performing loans (NPL) in their banking systems and the recovery value of these loans in the aftermath of shocks. These are important indicators of how much a given policy response is likely to cost. Our model predicts that if information providers have different preferences than decision-makers they are likely to give vague or even uninformative messages, which harms the decision-maker’s ability to choose policy responses they prefer. The model also predicts situations where the decision-maker will receive accurate information, i.e. when decision-makers and information-providers have

closely aligned preferences.

Before beginning, it is important to emphasise the external validity of the environment we are modelling, especially for drawing conclusions to more sophisticated financial markets. Previous work has largely assumed that decision-makers in wealthier and especially democratic countries, are not as reliant on domestic public bureaucracies and banks themselves for information about banks' health, as are policy-makers in less wealthy and less democratic countries (e.g. Satyanath, 2006). It is assumed that bureaucratic actors in more advanced markets are more transparent and that non-bureaucratic actors, including a free financial press and robust auditors, serve as independent sources of information. However, these may not be reasonable assumptions. Financial bureaucracies, particularly in Europe, have tended not to be very transparent. Gandrud and Hallerberg (forthcoming) document that only about one third of EU Member States regularly released marginally detailed supervisory data on banks. In the data that is released, it is difficult or impossible to get a real-time and accurate impression of the full extent of non-performing loans. This limits the independent information that the press and decision-makers can access. In some countries, such as Germany, confidentiality laws even prohibited law-makers from accessing bank-level supervisory information. Only after the 2007-2009 crisis have law-makers gained some access to this information, although still within the confines of a special investigation. Though in general, non-governmental actors are important sources of information, their ability to provide accurate information about quantities such as NPL's during the start of a crisis has been limited.

Sikka (2009) shows that banks across Europe and the United States received clean bills of health from external auditors, often within a few months of their collapse in the 2007-2009 crisis. Looking at Ireland specifically, all banks received unqualified 'clean bills of health' prior to the crisis, even though some had to be rescued within six months (Nyberg, 2011, 52). Despite problems of credit quality, the sustainability of lending practices and adequacy

of internal procedures building up over several years in Irish banks, “auditors . . . did not feel that commenting on the implications of such business model problems fell within their proper remit” (if they saw them at all), as they were not related to general operational problems and loan documentation (Nyberg, 2011, vi).

International or supranational institutions such as the International Monetary Fund, the European Commission or the European Central Bank institutions may release their own information to governments and closely scrutinise domestic bureaucracies’ information. However, these actors have generally played a major role after a crisis has started. Often they are brought in because a government’s initial crisis response (what we are primarily trying to explain) ended up being unsustainable. It is also reasonable to assume that non-domestic bureaucratic actors are strategically motivated and may have incentives to use information asymmetries to their advantage. Our model and its implications could easily be extended to situations where these actors do play important roles as information providers.

Assuming that perfect information or few information asymmetries exist between financial bureaucrats and decision-makers is therefore unreasonable. We thus need to better understand how these asymmetries and biases affect policy choices.

We start the paper with a brief definition of banking crisis containment policymaking and a discussion of the previous literature on the political economy of banking crisis containment policies, to which our paper directly contributes. We then begin to develop our signalling model by setting up the game, including the actors and their preferences. Following this, we describe the signalling game with one decision-maker and one signaller and then develop the game to include more than one signaller. To illustrate the implications of our model we present comparative statics and apply our approach, to understand the recent bailout of the Irish financial system.

3.2 Defining banking crisis containment policymaking

When a country has widespread bank insolvencies it is traditionally said to be in a banking crisis (Sundararajan and Baliño, 1991). We can add to this definition, banking systems with significant signs of distress that indicate systemic insolvency problems in the very near future (see Laeven and Valencia, 2012a). “Because bank balance sheets are tightly integrated and bank capital is highly leveraged, the failure of a single insolvent bank may threaten to upset the entire banking system and have effects on the real economy” (Rosas, 2009, 6). If bank failures have potentially large and widespread negative externalities it is reasonable to assume that most actors—(policymakers, bankers, the public)—greatly prefer mitigating the impact of these crises with government intervention to in-action. There are many ways for policymakers to respond to crises (Detragiache and Ho, 2010, Laeven and Valencia, 2008a, Rosas, 2009). These policies can be categorised by their use during two broad phases beginning with containment and followed by resolution (Honohan and Laeven, 2005). In this paper we focus exclusively on crisis containment policymaking.

A shock to the banking system from economic (or political) developments, can trigger a liquidity crisis which threatens otherwise solvent banks (Frydl and Quintyn, 2006). In order to contain the crisis and avoid widespread insolvencies, policymakers can choose policies such as liability and asset guarantees, liquidity support and recapitalisation, to help prevent banks from failing. However, policymakers face a trade-off between providing support and exposing taxpayers to the possibility of considerable losses. Policymakers must therefore choose the degree of policy intervention they want to use to contain the crisis. A higher level of intervention may stabilise the system, but may be very costly to taxpayers, as bank losses are taken on by the government. A lower level of intervention may not effectively contain a crisis, leading to contagion, the unnecessary destruction of asset values, and possibly lead to

recession.⁴

3.3 Previous explanations of banking crisis containment

Before developing our signalling game for explaining how decision-makers choose crisis containment policies, we briefly discuss some of the major previous approaches in the political economy literature. Our argument builds on this literature. Nonetheless, as we will show empirically in our case study, each is substantively incomplete for explaining events, as many of them unrealistically assume that policy-makers, especially in advanced countries, have complete information.

Crony capitalism is possibly the most straight-forward political economy approach to understanding why countries choose high levels of bank support to contain crises. Bankers prefer public to private losses as public losses in banking crises are wealth transfers to them. This preference leads them to push for high public guarantees to forestall insolvency, i.e. they gamble for resurrection (Downs and Rocke, 1994). Politicians with cronyistic ties to bankers are more likely to use bailouts at the expense of diffuse public interests such as taxpayers (Rosas, 2006). The crony capitalism theory expects decision-makers with close ties to the banking sector to pursue policies that maintain the solvency of banks even at substantial public expense.

Another major stream in the literature focuses on veto players effects. However, opinion about how the number and polarisation of a country's veto players affects policy choices during banking crises ranges considerably. On the one hand, Alesina and Drazen (1991) argue that as the number of veto players increases, we are less likely to expect them all to agree on a new policy. Therefore crisis responses in general will be slow and inadequate. Conversely, Rodrik (1999) suggests that having many veto players, if organised to manage

⁴High and low are relative terms based on the underlying problem. We discuss this formally below.

conflicts, will result in more appropriate and quickly implemented crisis management policies.

Keefer (2007) argues that the number of veto players has no effect on crisis responses, but that competitive elections encourage better crisis responses for the general public since they weaken policymakers' ties to banking interests and align them more closely with taxpayers. Similarly, Rosas (2009) argues that actors in democratic, rather than authoritarian, countries are more likely to use public cost-reducing crisis responses, since electoral incentives push them to favour limiting public losses. Countries with competitive elections, regardless of the number of veto players, could be more likely to choose crisis response policies that limit public costs.

Choices may also be constrained or shaped by bureaucratic capacity (for a discussion of this type of argument see Satyanath, 2006, 18). Bureaucratic institutions do not have equal capacity across all countries. Higher capacity regulators, ministries of finance, and central bank officials with expertise are better able to implement complex policies, such as orchestrating sustainable bank mergers.⁵ For the same reasons, bureaucrats with lower capacities might be restricted in the policies that they can plausibly enact. Policymakers may take this into account when choosing policy responses. Furthermore, high capacity bureaucracies may be able to obtain better quality information about the true health of the banking sector (Abonyi, 2005). How might bureaucratic capacity help us predict containment policy choices? We would expect that if a bureaucracy had better information and could more accurately monitor banking activity, that the country would accurately target support at solvent, though illiquid institutions, and thus would be less likely to issue costly crisis containment support.

Through conditions on loans that countries in financial crises desperately need, international institutions may force countries to adopt certain policies (Vreeland, 2003). Receiving support from international institutions can result in policies closer to the preferences of these

⁵Higher capacity implies relatively numerous and highly-qualified staff with plentiful resources.

institutions.

Satyanath (2006), examined how information asymmetries could affect developing countries' financial regulatory choices. However, he explicitly assumed that information asymmetries were not an important component of decision-making in more advanced financial centres.

3.4 Signalling game setup

We directly try to understand how information asymmetries affect the containment policy level that is chosen even in more sophisticated financial markets. To do this we build on seminal analysis by Crawford and Sobel (1982)⁶ and Gilligan and Krehbiel (1987), and recent application by Satyanath (2006) to develop a signalling *game* where the actor who makes the containment policy decision relies on information from more information rich actors such as their financial bureaucrats and banking officials. We demonstrate the empirical usefulness of this approach in later sections.

The Players We model banking crisis policymaking as the result of a game between two sets of actors. One set makes the containment policy decision. We call her the prime minister (PM). Before making her decision she needs to receive information sent by one or more signallers who are information-rich. In the single signaller version of the game, we denote the information provider as the financial regulator (FR). In the two signaller version, we add a player called the Ministry of Finance (MoF). Information senders and receivers in any given situation may be different. As illustrated in the Irish case below, officials at banks were also important signallers.

⁶Crawford and Sobel (1982) consider a more general specification of preferences and state distributions to make welfare comparisons. For simplicity this paper considers a uniform quadratic model. Our application also draws on explanations by Gibbons (1992) and Levin (2002).

Field of Play: To demonstrate why a decision-maker must rely on signals from financial bureaucrats for a containment policy decision, we first model how a shock would generate changes to the proportion of NPL's for a bank. This can be characterised in terms of assets (A), liabilities (L) and capital (C) and is given by the identity $A = L + C$.

We consider a portfolio of assets which have two broad types: performing P and non-performing N . These can be loans to households or firms, for example. The value of assets that are performing is denoted A_P whereas non-performing assets are denoted A_N . Firms or mortgage-holders may fall behind on their payments or default on their loans creating γ proportion of non-performing assets. Non-performing assets always have a real value less than their book value.⁷

Banks play a fundamental role in the transformation of short-term deposits into long-term loans. However, this creates an asset-liability maturity mismatch. Banks rely on both traditional retail deposits and wholesale funding on the liabilities side to finance their assets. Deposits may be withdrawn and wholesale funding may not be rolled over. As such, the structure of the banking system makes it vulnerable to liquidity risk. Finally banks hold capital which will often take the form of hybrid claims such as subordinated debt or preferred equity instruments which are considered as a buffer against losses that protect depositors. Building on Aghion, Bolton and Fries (1999), we characterise the net worth of a bank as:

$$\theta = \gamma A_N + (1 - \gamma)A_P - (L - C). \quad (3.1)$$

When $C \geq 0 \iff A \geq L$ the bank is solvent. This is where the weighted average pay-off from performing and non-performing assets exceeds the value of liabilities issued to fund the assets. However when (C) becomes negative the banking system is deemed insolvent.

Banks' asset portfolios are sensitive to macro-financial vulnerabilities. A shock to an

⁷Non-performing assets may be liquidated and the bank will obtain j with probability β . Otherwise the assets will have a continuation value with a realised return π . Formally: $A_N = \beta j + (1 - \beta)\pi$.

economy can cause asset price declines and disruptions to the supply of credit generating non-performing loans (Nkusu, 2011). To capture this, we assume that the shock i changes the proportion of non-performing loans by μ_i , where $\mu_i \geq 1$. Therefore, following a shock the expected proportion of NPLs is given by:

$$\gamma_i = \mu_i \gamma. \quad (3.2)$$

For the time being, we'll assume that γ_i is from a uniform distribution between $[0, 1]$ with mean $\bar{\gamma}_i$ and variance $\sigma_{\gamma_i}^2$. θ_i represents the net worth of a bank as a result of shock i :

$$\theta_i = \gamma_i A_N + (1 - \gamma_i) A_P - (L - C). \quad (3.3)$$

Information Banks are assumed to have private information about the quality of their loan portfolio. This can be accessed by signallers. However the PM does not know the proportion of non-performing assets (γ_i) following the shock, so she does not know the recovery (r) value of assets in the crisis $A_{ri} = \gamma_i A_N + (1 - \gamma_i) A_P$. This is primarily because of the opacity of loan valuations during a crisis. She does however know the distribution of A_r . This is somewhat of a simplifying assumption, as NPLs can to a certain degree be endogenous to the degree of intervention (discussed further below).

Containment Policy Choices Government's have a range of containment policy choices to restore confidence in the financial system. These can include liability or asset guarantees (e.g. supporting the value of certain assets held by banks), as well as liquidity assistance and re-capitalisation which ensures their solvency. In this paper we very broadly call all of these measures containment policies. For simplicity, we assume that the PM is indifferent between the different types of containment policies.

Therefore, we conceptualise containment policies g as being from a unidimensional space

where $0 \leq g \leq 1$. We choose to further conceptualise g as a proportion of the pre-shock book value of assets of a bank A , and denote this $g = \frac{g}{A}$.

Whereas direct recapitalisation directly supports the solvency of a bank, asset relief directly addresses the issue of uncertainty regarding the quality of bank balance sheets. Secondly, it contributes to help revive confidence in the sector, to the extent that asset impairment increases amid a deteriorating situation in the real economy (European Commission, 2009e, 2). In the latter case the return to the state can be endogenous to the level of intervention (see Pesola, 2005).

Government intervention on the asset side of the balance sheet can come in many forms for example asset purchases, insurance, swaps, guarantees or hybrid models (see European Commission, 2009e). Just like retail depositors, investors in debt are prone to “run” which can “simultaneously drive down security prices and build up liquidity premiums, regardless of the fundamental values for the assets that back the securities”, (see Hancock and Passmore, 2010, 2). Government intervention on the asset side can help restore financial stability, for example by putting in place an ex-ante price guarantee which facilitates the creation of an environment in which asset prices can be credibly expected to remain above the crash levels that trigger sudden stops (Mendoza and Durdu, 2004, 3). The correct valuation of assets is therefore critical to ensure the return to the state. This can be complex, and deeper levels of intervention such as the creation of a good bank or nationalisation can be used as alternatives which further eliminate uncertainty about the proper value of assets (see European Commission, 2009c).

Both theoretical and empirical research has shown that credit default risk is related not only to idiosyncratic factors but also to systematic factors such as macroeconomic developments (see for example Merton, 1974, Bonfim, 2009, Pederzoli and Torricelli, 2005). Allen and Saunders (2002) provide a useful overview of cyclical effects of credit risk measurement. They note that “firm interdependence (such as industry effects) can produce correlated PDs.

In addition, cyclical effects in asset valuations and shifts in regime (due to structural, regulatory, or economic factors) impact PD” (Allen and Saunders, 2002, 10). An unexpected macroeconomic shock can cause an increased number of bankruptcies and hence NPLs (Pesola, 2005). The recovery value here therefore can be endogenous to the level of intervention.

Choosing to focus on containment policies as a proportion of assets is not necessary.⁸ However, it is substantively meaningful for actors who care about containment costs. Assuming a best case scenario where containment costs can be recuperated up to the recovery value of a banks assets,⁹ if support is equal to the recovery value of those assets the support will be ‘costless’.¹⁰

For a shock i we can express the assets’ recovery value A_{ri} in terms of the assets’ pre-shock book value A with α_i , where $\alpha_i = \frac{A_{ri}}{A}$. Therefore a costless containment policy g for a shock i would be one where $g - \alpha_i = 0$.

PM’s Preferences If the PM has ‘moderate’ preferences, in that she wants to ensure that the guarantee has no direct costs to the taxpayer, she would choose a guarantee g_k that equals the recovery value of the loans in the system α_i . This choice may calm the liquidity crisis and maintain banking system solvency, while ensuring that the state could recuperate the containment policy costs. It is not necessary to assume that the PM prefers $g_k - \alpha_i = 0$. She may be more concerned about financial system stability or protecting banks from losses and want some $g_k > \alpha_i$. Or she may be worried about the potential losses from the guarantees or that the moral hazard containment policies could create and prefer some $g_k < \alpha_i$. Regardless, our information-poor PM does not know the recovery value of banking system assets. Because of this, she cannot choose the containment level that most matches

⁸For example, we could think of them as a proportion of the banking system’s total balance sheet value θ or indeed of liabilities.

⁹They would effectively be collateral either *ex-ante* or *ex-post*.

¹⁰This of course assumes that there are no costs associated with acquiring, administering and selling the assets, as well as the costs of extending the support. However, including these costs would not fundamentally change our model.

her preferences without more information.

Signaller Preferences To learn the recovery value of the banking system's assets she must rely on signals from the other players who have their own containment policy preferences. It may be the case that the signallers' preferences are perfectly aligned with the PM's. Of course such a close alignment of preferences may not always be the case. In crony capitalist and other models of crisis containment policymaking, banking industry actors are often assumed to want high levels of support to forestall insolvency (Rosas, 2006, 2009). Public sector signallers may have cronyistic ties with the banking industry or be 'captured' by the industry. Capture may involve the regulator perceiving the interests of the banks to be the same as that of the state (Barth, Caprio and Levine, 2006). They may therefore prefer policies that ensure the continuation of financial institutions rather than prioritising the recovery value of bank assets to protect taxpayers. Even in countries with seemingly 'strong' institutions, an independent central bank governor, for example, may have a preference for financial stability over low costs to the state and as such prefer large containment policies (Honohan and Laeven, 2005). On the other hand, other bureaucrats involved in the game, Departments of Finance for example, may be more concerned with fiscal costs and/or moral hazard problems. They would therefore prefer that the state minimise its containment policies so that they are less directly exposed to banking system losses and the possibility of socialising losses. Though many banks, especially troubled banks, may want a high containment level, preferences in the banking system may actually be heterogenous. Healthy banks, that believe they could weather a crisis, may prefer a lower containment level. They could believe that accepting public assistance would undermine market confidence in them, or that failures at weaker banks could be an opportunity to consolidate their presence in the market. This is all to say that signaller's containment policy preferences can be very heterogenous and certainly need not be the same as the decision-maker's.

Sequence of Play The game has the following sequence of play:

- In t_0 , there is a shock to the banking system i that creates a new proportion of non-performing assets. Hence, α_i is created.
- In t_1 , the sender observes α_i and sends a message m_α about the level of non-performing assets α_i to the PM. In games with more than one signaller, each sends their own message.
- In t_2 , the PM receives m_α , updates her prior knowledge about α and decides g_k , the containment policy level.
- In t_3 , the outcome $x_k = g_k - \alpha_i$ is realised.

3.5 Model 1: The single signaller game

We will now consider the utilities and equilibrium strategies of the actors in a version of the game with one signaller.

Utilities Because the PM requires information from the FR to make her preferred containment policy choice, the PM's pay-off depends on the message m_i sent by the FR and an unknown state of the world. The PM's payoff can be thus characterised by:

$$U^{PM}(g, \alpha) = -(g - \alpha)^2. \quad (3.4)$$

The payoff of the FR is:

$$U^{FR}(g, \alpha, b) = -(g - (\alpha - b))^2 \quad (3.5)$$

where $b \geq 0$. The b parameter captures the distance between the PM's and the FR's ideal containment policy points, denoted x_{PM} and x_{FR} . As we will see, this distance influences

the *bias* in the information that the FR gives to the PM. If $b = 0$, then their preferences are perfectly aligned and as has been well established in the signalling literature (Crawford and Sobel, 1982), the FR's message will be completely accurate.

Equilibrium Consider that the FR can choose to send two messages $m_{L\alpha}$ and $m_{H\alpha}$ where $m_{L\alpha} < m_{H\alpha}$. The signal is costless. Let $g(m)$ denote the action taken by the PM in response to the message sent by the FR. If α is uniformly distributed over $[0, 1]$ with mean $\bar{\alpha}$, in equilibrium the FR will use a threshold strategy, whereby the FR will choose $m_{L\alpha}$ when $\alpha \in [0, \alpha^*)$ and $m_{H\alpha}$ when $\alpha \in (\alpha^*, 1)$. α^* represents the threshold value of α at which the FR is indifferent between $m_{L\alpha}$ and $m_{H\alpha}$. Therefore, the payoffs for the FR are characterised as:

$$\begin{aligned} m_{L\alpha} : & (g(m_{L\alpha}) - (\alpha - b))^2 \\ m_{H\alpha} : & (g(m_{H\alpha}) - (\alpha - b))^2 \end{aligned} \quad (3.6)$$

The benefit for the FR of sending message $m_{H\alpha}$ over $m_{L\alpha}$ is increasing in α and can be characterised as:

$$\Delta g = -(g(m_{L\alpha}) - (\alpha - b))^2 + (g(m_{H\alpha}) - (\alpha - b))^2. \quad (3.7)$$

After receiving the message from the types in $[0, \alpha^*)$, the PM will believe that the FR's type message is uniformly distributed on $\alpha \in [0, \alpha^*)$ and type $(\alpha, 1)$ is uniformly distributed on $\alpha \in (\alpha^*, 1)$. Therefore, the PM's equilibrium strategy will be:

$$g(m_{L\alpha}) = \frac{\alpha^*}{2} \text{ and } g(m_{H\alpha}) = \frac{\alpha^* + 1}{2}. \quad (3.8)$$

For all types in $[0, \alpha^*)$, for the FR to prefer sending $m_{L\alpha}$ to $m_{H\alpha}$, it must be that all types in $[0, \alpha^*)$ prefer $g(m_{L\alpha}) = \frac{\alpha^*}{2}$ over $g(m_{H\alpha}) = \frac{\alpha^* + 1}{2}$. Also all types in $(\alpha^*, 1)$ must prefer

$g(m_{H\alpha}) = \frac{\alpha^*+1}{2}$ over $g(m_{L\alpha}) = \frac{\alpha^*}{2}$. Given that α^* characterises the type that is indifferent, we solve for the partially pooling equilibrium by using the fact that when the utilities of the FR and PM are equal as:

$$\alpha^* + b - \frac{\alpha^*}{2} = \frac{\alpha^* + 1}{2} - (\alpha^* + b). \quad (3.9)$$

simplifying to the formula $\alpha^* = \frac{1}{2} - 2b$. Given $\alpha = [0, 1]$, α^* must be positive. A two-step equilibrium only exists if $|b| < \frac{1}{4}$. Thus when the value of $|b| \geq \frac{1}{4}$, the FR does not distinguish between high and low recovery values and the signal becomes completely uninformative. A pooling equilibrium called a “babbling equilibrium” exists where the FR does not even make a crude distinction between types, whereby he chooses randomly over one interval $[0, 1]$ and uses each message $m \in M$, regardless of α_i and no information is transmitted. Therefore, if the FR always reports the same message, the PM’s optimal strategy is to simply ignore the message and assign a uniform belief to all values $\alpha \in [0, 1]$. Her optimal strategy when she is unable to update her prior is to set $g = \bar{\alpha}$, i.e. 0.5. Therefore, central to the argument presented here is the distance between the preferences of the financial regulator and the prime minister.

It may be more realistic to consider the equilibrium in the one signaller game when the FR makes very fine distinctions between different levels of α . Crawford and Sobel (1982) show that in the n -step equilibrium, the number of intervals is a function of the preference parameter and largest integer given by the quadratic formula:

$$\frac{1}{2} \left[1 + \sqrt{1 + \left(\frac{2}{|b|} \right)} \right]. \quad (3.10)$$

Therefore, as b approaches zero, more communication occurs and only if preferences are perfectly aligned and an infinite number of intervals exist, does full communication occur (Gibbons, 1992). However, when $|b| > 0$, signals become vague and uninformative. When

$|b| > \frac{1}{4}$, the FR randomises over the interval and the PM simply ignores the messages. Therefore, as Crawford and Sobel (1982) show, all equilibria are partition equilibria where the FR can introduce noise in his signal, by not distinguishing as finely between information states. The FR does this to a larger degree the further his preferences are from the PM.

In this application we see how slight differences in preferences can lead the PM to miscalculate the containment level and could lead either to a non-preferred socialisation of bank losses or a low containment level.

3.6 Model 2: The game with two signallers

We now extend the game to include two signallers that we refer to as the FR and MoF for convenience.

Utilities Following Gilligan and Krehbiel (1987), the PM, FR and MoF's preferences can be characterised as quadratic utility functions, whereby x_{MoF} and x_{FR} are the ideal outcomes for the MoF and FR respectively and x_{PM} is the optimal outcome for the PM. All players maximise their expected utilities and their utility functions are given by:

$$U^{MoF} = -(x_{MoF} - x)^2 \quad U^{PM} = -(x_{PM} - x)^2 \quad U^{FR} = -(x_{FR} - x)^2. \quad (3.11)$$

We assume that the MoF always has a preference for a lower containment level than the FR, except when they have the same ideal points. This is merely for notational convenience. Similar to the single signaller game, at t_1 the signallers (MoF and FR) observe the shock, infer accurately α_i and send messages $m_{1\alpha}$ and $m_{2\alpha}$ from a set of feasible messages $M = \{m_{j1\alpha}, \dots, m_{jn\alpha}\}$. At t_2 the PM observes $m_{1\alpha}$ and $m_{2\alpha}$ but not α_i and updates her prior. She selects a guarantee g_k . The outcome x_k is realised at time t_3 : $x_k = g_k - \alpha_i$.

Equilibrium The equilibrium concept here is Perfect Bayesian. A Perfect Bayesian Equilibrium is a set of strategies $g_k^*(m_{1\alpha}, m_{2\alpha})$, $m_{1\alpha}^*(\alpha_i, m_{2\alpha}, g_k)$, $m_{2\alpha}^*(\alpha_i, m_{1\alpha}, g_k)$, and posterior beliefs $h^*(\alpha_i; m_{1\alpha}, m_{2\alpha})$, such that four conditions are met. The FR's signalling strategy must maximise his expected utility given the PM's optimal choice of g_k and the MoF's optimal signalling strategy. The MoF's signalling strategy must maximise his expected utility given the PM's optimal choice of g_k and the FR's optimal signalling strategy. The PM's choice of g_k must maximise her expected utility given her posterior belief about the value of α . The PM's posterior belief must be consistent with the optimal strategies of the senders as per Bayes' rule. Building on Satyanath (2006, 43), as well as Crawford and Sobel (1982) and Gilligan and Krehbiel (1987), there exists a Perfect Bayesian Equilibrium with the following characteristics:

1. When α_i takes values outside of the range $\bar{\alpha} + 2x_{MoF}$ to $\bar{\alpha} + 2x_{FR}$, the two signallers send the true value of α_i to the PM. The PM then chooses $g_k = \alpha_i$, with the outcome $x_k = 0$.
2. When α_i takes values between $\bar{\alpha} + 2x_{MoF}$ and $\bar{\alpha} + 2x_{FR}$, the two senders send conflicting messages of the value of α_i . The PM then chooses $g_k = \bar{\alpha}$, with the outcome $x_k = \bar{\alpha} - \alpha_i$.

See the Appendix I for the proof.

3.7 Comparative statics

We now turn to examining the two signaller model's equilibrium in comparative statics with various levels of signaller polarisation. Comparative statics give us an idea of when accurate communication between the signallers and the PM breaks down, i.e. signals become uninformative. The further away the signallers' ideal points are from the PM's, the more

often that the PM will make non-preferred containment policy choices. Figure 3.1 (at the end of this paper) shows the guarantee choices and outcomes made under the two signaller game from four scenarios, using 1,000 random draws of α from a uniform continuous distribution with the range $[0.65, 0.95]$ and mean of 0.8.¹¹ In other words, the realisation value of the banking system assets following a shock, ranges between 65 and 95 percent of the book value of the pre-shock assets. This is a more realistic range of values than $[0, 1]$, although it represents a situation that is on average more dire than the Irish case discussed below.

The first row of plots shows how costly the containment policy is. In all of the scenarios, we assume that the PM is moderate and so most prefers $g - \alpha = 0$. The first scenario (shown in the left-most column) is one where the signallers ideal points are somewhat close to the PM's (the MoF's is -0.05 and the FR's is 0.05). One third of the values of α are outside of the range $[\bar{\alpha} + 2x_{MoF}, \bar{\alpha} + 2x_{FR}]$, i.e. $[0.7, 0.9]$. When this is the case, both signallers signal α_i and the PM chooses $g_k = \alpha_i$. This is represented in the top-left most square by the 45 degree containment policy decision lines below 0.65 and above 0.85. The PM's pay-off is 0 and the signaller's pay-offs are both -0.0025. Only when $0.7 < \alpha_i < 0.9$ do signallers send conflicting messages. In these cases the PM chooses $g_k = \bar{\alpha} = 0.8$. The PM's payoff is less than 0 in all cases except when $\alpha_i = 0.8$, with decreasing utility the further away α_i falls from $\bar{\alpha}$. She chooses a lower containment policy than she ideally wants when $\bar{\alpha} + 2x_{MoF} \leq \alpha_i < \bar{\alpha}$. She chooses a higher level than she would like when $\bar{\alpha} < \alpha_i \leq \bar{\alpha} + 2x_{FR}$.

The right-most column of Figure 3.1 shows a situation where signallers have very polarised preferences and as a result are completely uninformative. The MoF's ideal point is -0.15, while the FR's is 0.15. So the range $[\bar{\alpha} + 2x_{MoF}, \bar{\alpha} + 2x_{FR}]$ is greater than the range of α 's distribution. So the FR and MoF only send conflicting signals and the PM always chooses a containment policy at $\bar{\alpha}$. This leads to only one situation where the PM chooses her ideal

¹¹Figure 3.1 can be reproduced using the Python and R scripts available at <https://github.com/christophergandrud/GuaranteeGame>.

policy, when $\alpha_i = \bar{\alpha}$. Clearly, having signallers with containment policy preferences further away from the PM's, leads to less preferred policies for the PM.

The two centre columns show asymmetric signaller preferences around the PM's ideal point. In the second column is a situation where $x_{MoF} = -0.05$ and $x_{FR} = 0.15$. In this case the FR and MoF send uninformative signals for all values of $\alpha > 0.7$. The reverse preference arrangement is shown in the third column with the reverse results, i.e. informative signals are sent at all values of $\alpha > 0.9$.

3.8 Case study: containment policy decisions in Ireland

To further demonstrate the plausibility and usefulness of our signalling model, we apply it to understand the Irish Government's 2008 crisis containment policymaking. We first make a prediction about the chosen containment level based on our signalling game and the underlying health of the Irish banking system at the time. The prediction indicates that the Prime Minister would choose a higher containment level than his ideal preference when preferences diverge. We then show how the case closely matches the predictions. Actors with divergent preferences were actively engaged in a signalling game in the run up to the Government's containment decision. We find evidence, using primary and secondary documentation, that the signallers can be placed into two groups. One group, primarily civil service staff at the Department of Finance (DoF), expressed concern about the potential costs of State intervention given the size of the problem and were reportedly against a full guarantee. Conversely, the Financial Regulator did not appear concerned with potential problems in the banks, instead preferred to restore financial stability and so did not communicate that the recovery value of bank assets was relatively low. Bank officials also signalled that the recovery value would be high as part of a push for a full guarantee. The two groups therefore sent conflicting signals. We further demonstrate the plausibility of our argument by comparing

it to major alternatives from the political economy literature, many of which assume perfect information in this type of case.

Predictions We will predict what containment policy level that the Irish Prime Minister would choose, assuming he relied on information from two signallers, one with a preference for a high level and one for a low level. Assuming that the Prime Minister has a preference for a ‘costless’ containment in that $g_k - \alpha_i = 0$. We further assume that actors with a high containment preference, for example troubled banks with high proportions of non-performing loans, would like $g_k - \alpha_i = 0.05$. Because very troubled banks’ individual balance sheets had more non-performing loans, that are likely to have a lower recovery value than the banking system average, they need the overall level of banking system support to be larger, in order to prevent insolvency. $g_k - \alpha_i = 0.05$ is likely to actually be an under-estimated preference for the most troubled banks. For example, Anglo Irish Bank had an NPL ratio of just under 15 percent in 2010, rising to almost 35 in 2012 (Fitch Ratings, 2013). We assume that other actors have a preference for a smaller containment policy, such that $g_k - \alpha_i = -0.05$. As we will see, these preferences are more than far enough apart to lead to uninformative signals in the Irish case.

To understand this we will look at the last assumption we need to make: the range of the uniform distribution of the recovery value of Irish banking system assets. To determine the range, let’s first consider the likely non-performing loans range. In the seven years before the crisis, Ireland had a mean NPL ratio of 0.86 percent without much variation. We assume that this is the lowest end of the distribution. It would be a situation where the crisis was entirely a short-term liquidity crisis, where the realisation value of the banking system assets did not change. By 2012 the ratio increased to 18.7 percent (World Bank, 2013).¹² We assume that 19 is the maximum NPL ratio, as it is larger than the NPL ratios in almost

¹²Indicator number: FB.AST.NPER.ZS.

every other Eurozone country in 2012- including Greece, Spain and Portugal. Secondly, we assume that the recovery value of non-performing assets is 50 percent.¹³ So the range of the distribution of recovery values expressed as a proportion of the pre-crisis book value of assets is 0.905 to 0.9957, with a mean of 0.9537.

In a two signaller game, where one signaller wanted a containment policy of only about $g_k - \alpha_i = 0.025$ or more and the other wanted about $g_k - \alpha_i = -0.025$ or less, all signals would be uninformative, as the signallers would send different values. The Prime Minister would then choose a policy of $g_k = 0.9537$ regardless of the true recovery value of the assets (see the right-most column in Figure 3.1 for a similar situation). Because the true recovery value in the Irish case happened to be at the minimum possible value, the Prime Minister would end up choosing a containment level much higher than what he wanted.

How well does the model's prediction fit the sequence of events in the 2008 Irish banking crisis containment case?

The Events Multiple national and international shocks from 2007 through 2008 considerably undermined policymakers' understanding of the Irish banking system's health. Starting in March 2007, the Irish house price index began to decline for the first time in five years. The emergence of the sub-prime mortgage crises in the United States in mid-2007 resulted in a tightening of the market for short-term wholesale funding in August 2007. Hedge-funds in the United States began to short Irish banks in Summer 2007 and the collapse of Bear Stearns investment bank in March 2008 created a global credit-crunch with major ripple effects for the Irish banking system. Irish banks found it increasingly difficult to rollover the debt that they used to make property-based loans and Anglo Irish Bank's share price fell by

¹³The overall discount that the Irish National Asset Management Agency (NAMA) applied when it acquired assets from five banks, including the most troubled ones, was 58 percent from when it became operational, more than one year after the containment policy choice, into January 2010 (European Commission, 2011b, 14). We assume that the assets NAMA acquired were not the most troubled, so we further discount the recovery percentage to 50 percent.

18% over one week, due to concerns over property exposure.

On September 20th, the Irish Government began its response to the crisis by increasing the deposit guarantee scheme limit. It was initially raised from €20,000 to €100,000.¹⁴ However, these moves had little effect on slowing corporate deposit withdrawals.¹⁵ By the end of September, a number of key Irish banks, such as Anglo Irish Bank, were finding it very difficult to roll over the wholesale funds that they had borrowed and did not have adequate collateral to refinance with the European Central Bank.

On 30th September 2008, the Government announced a guarantee of all deposits (retail, commercial, institutional, and interbank), covered bonds, senior debt and dated subordinated debt (lower tier II), at the six main Irish banks (Irish Department of Finance, 2008).¹⁶ This amounted to €365 billion or 2.5 times Gross National Product (Honohan, 2010, 19). The figure is fairly close to the total value of banking system assets as, for example, when measured against just domestic credit to the private sector, which was almost 2.4 times Irish GDP in 2009 (World Bank, 2013).¹⁷ This does not include, for instance, the banks' significant operations in the United Kingdom and United States. In hindsight, we have seen that "although international pressures contributed to the timing, intensity and depth of the Irish banking crisis, the essential characteristics of the problem were domestic and classic" (Honohan, 2010, 22). However, in Autumn 2008 the real nature of the problem was less clear to policymakers and they had to rely on other actors for information.

A full account of the events surrounding the decision to issue such a 2008 guarantee has not yet emerged. We can however piece together the preferences and signals of the main actors from the independent reports, transcripts of the committee hearings, released

¹⁴The previous guarantee only covered 90 percent of an account under €20,000. The later guarantee covered 100 percent of the first €100,000.

¹⁵See data from the Central Bank of Ireland (2011).

¹⁶The guarantee covered Allied Irish Banks, Bank of Ireland, Irish Life and Permanent, Educational Building Society, Anglo Irish Bank, and Irish Nationwide Building Society.

¹⁷Indicator number: FS.AST.PRVT.GD.ZS.

documents on the crisis and telephone recordings. The Irish PM from May 2008 was Mr. Brian Cowen. He became Prime Minister after serving as the MoF from 2004 until 2008. In political debates, many accusations of cronyism were levelled at the political party of which he was a member, Fianna Fáil, and the PM. Although it is impossible to fully rule out the possibility that decision-makers were not crony capitalists, we found no substantive evidence that the PM or MoF had a preference for insolvent institutions to continue operating. Rather, it appears that the government were relying heavily on signals from Department of Finance civil servants, the FR, the Central Bank¹⁸ and the banks themselves, to make a policy decision that would contain the crisis at a low cost to taxpayers, thus warranting the approach in this paper.

The Department of Finance civil service staff in general, appear to have had a preference for a lower containment level and sent a signal that the recovery value of assets might be relatively low. In 2008, they gave a policy presentation stating that “open-ended/legally-binding State guarantees which would expose the Exchequer to the risk of very significant costs are not regarded as part of the tool-kit for successful crisis management and resolution” (Houses of the Oireachtas, 2008*a*, emphasis in the original). This position was qualified in the full scoping paper that the presentation was based on. It defined what were likely to be situations with a high “risk of very significant costs”. It noted that solvent, but illiquid institutions, should be treated differently from illiquid and insolvent institutions. The former would likely be given guarantees early, to avoid failure and avoid contagion (Houses of the Oireachtas, 2008*c*).¹⁹ Insolvent institutions, assuming that they were not systemically important, were not seen as eligible for guarantees. Overall, this suggests that the Department of Finance had a somewhat low containment level preference. At a meeting

¹⁸The officials at the Central Bank of Ireland however, largely concurred with the FR’s view (Nyberg, 2011, 79).

¹⁹The document cites the Northern Rock experience, where a ‘bank run’ was precipitated by the Bank of England, giving the bank liquidity assistance. This quickly undermined confidence in the bank. The run ended when the UK Government guaranteed 100 percent of its deposits.

with all of the major policymakers and information providers on the 25 September 2008, just days before the decision to issue the guarantee, civil service officials from the Department of Finance expressed great concern with the potential cost of the guarantee. They noted that the “Government would need a good idea of the potential loss exposures within Anglo [Irish Bank] and INBS [Irish Nationwide Building Society]—on some assumptions INBS could be €2 billion after capital and Anglo could be €8.5 billion” (Houses of the Oireachtas, 2008*e*). Capital in Anglo Irish Bank at the time was claimed to be €7.1 billion (see Houses of the Oireachtas, 2008*d*) and they were therefore warning of potentially large exposures to the State and large losses in the banks. Nyberg (2011, 81) indicates that the Department of Finance civil servants may have had a preference for the nationalisation of Anglo Irish Bank with costs imposed on creditors. While McWilliams notes that officials in the Department of Finance “were dead set against a full guarantee” (2009, 25).

Conversely, the Financial Regulator appears to have had a preference for a higher containment level and sent signals—conflicting with the DoF civil service staff’s—that the assets’ recovery value was in fact high. Their information came primarily from un-obtrusive evaluations of bank’s own positions. Private bank officials had a clear preference for a higher containment level. Honohan (2010, 124) notes that Bank of Ireland and Allied Irish Bank pushed for an immediate general guarantee (including sub-ordinated debt) and the nationalisation of Anglo Irish Bank (and possibly INBS) at a meeting with the PM and MoF on September 29. Anglo Irish Bank made a presentation to the Department of Finance on the 18 September 2008 forecasting pre-tax profits of €1.4 billion for 2008 and €1.1 billion for 2009.

It has been shown that the Financial Regulator had very little independent knowledge of the underlying exposures of the banks in Ireland. This is because the Financial Regulator had a deferential approach to financial institutions, whereby there was an acceptance that the system was working (Honohan, 2010, 9). This led them to have an unintrusive supervisory

model which placed a large amount of trust in the banks themselves and focused on processes and verification rather than attempting independent assessments (Honohan, 2010, 8). Leaked internal recordings of telephone conversations between Anglo Irish Bank employees made in September 2008 are particularly informative in this regard.²⁰ In one conversation between the head of retail banking Peter Fitzgerald and the head of the capital markets division John Bowe, they discuss a meeting John Bowe had with the Financial Regulator.²¹ In this conversation John Bowe claims that, when asked how much Anglo Irish Bank needed and if it would be enough, he told the officials that Anglo Irish Bank required €7 billion in funding. He told Peter Fitzgerald that this was in fact significantly lower than the actual amount of financing that the bank needs and that he had picked the €7 billion estimate “out of [his] arse”.

At that same meeting on the 25 September 2008, where the DoF staff warned of potential losses, the Financial Regulator stressed that “there is no evidence to suggest that Anglo is insolvent ... it is simply unable to continue on the current basis from a liquidity point of view” (Houses of the Oireachtas, 2008*e*).²² A post-crisis commission investigating the banking crisis in Ireland, states that discussions surrounding the long-term risks of the guarantee were discarded and that the FR “supported the assessments of the major banks, the attention of the Ministers became concentrated on how to avoid the short term risk of insufficient funding in the morning” (Nyberg, 2011, 79). This suggests the FR was a key actor pushing for a broad guarantee, partially by providing information that the banks’ assets recovery value

²⁰The recordings are available from the Irish Independent (<http://www.independent.ie/business/irish/inside-anglo-the-secret-recordings-29366837.html>), accessed Summer 2013.

²¹The head of the central bank was also present.

²²This position was reaffirmed by Merrill Lynch, who were hired to provide options to decision-makers at the time. On 29 September 2008—the day before the full guarantees were made, a report issued by them stressed that

“at present, liquidity concerns aside; all of the Irish banks are profitable and well capitalised. However, liquidity for some could run out in days rather than weeks.” (Houses of the Oireachtas, 2008*b*, 2)

was high. Although some have argued that a consensus had emerged amongst all officials, that no Irish bank should be allowed to fail (Honohan, 2010, 119), we have evidence of clear divergent preferences in terms of the signals provided and the preferred level of containment support needed among the financial bureaucrats and banks.

DoF civil service staff, the Financial Regulator and bank officials had divergent preferences and sent conflicting signals to the Prime Minister. With conflicting information, the PM chose a higher containment policy level than what he ideally had wanted. Our model also aligns with the findings of the Report of the Commission of Investigation into the banking sector in Ireland, which concludes that “the discussions for alternative measures before and on September 29, 2008, were conducted on the basis of very deficient information . . . If more relevant information on and analysis of the underlying position of some of the banks had been available, discussions and policy recommendations may have been very different” (Nyberg, 2011, 93).

The Alternatives How well does the Irish narrative fit the signalling argument relative to alternative explanations? Were Irish decision-makers simply crony capitalists? The documents we have found do not indicate that the PM had high guarantee preferences or that he wanted insolvent institutions to continue operating, as would be the case if he was a crony capitalist. The Financial Regulator, the actor primarily tasked with gathering financial sector information, appears to have had very little capacity to actually gather its own information, relying instead on the banks’ assessments. He also had very similar preferences to the banks regarding the guarantee. As such bureaucratic incapacity could be endogenous to the signalling game.

It does not appear that the number of veto players influenced policy choices. The governing parliamentary coalition supported the decision to issue the guarantee. Even among the opposition, there seems to have been a general consensus that, as a senior opposition

politician commented: “when the government comes to you with emergency legislation, you have a duty to support them”.²³ In a sense, this situation is similar to Rodrik’s (1999) view, that if veto players are arranged to manage conflict, then responses will be quick. Though it may be better to describe it as a situation where coalition veto players gave up their power in order to hasten decision-making, which was the outcome of a signalling game. Ireland had competitive elections, but the outcomes were nonetheless very costly to the public. This is the opposite of Keefer’s (2007) prediction.

We did not find evidence that international actors like the International Monetary Fund, or another external actor with low guarantee preferences, were relevant information-providers or directly involved in the decision-making process. The European Central Bank had provided substantial liquidity to the Irish banking system leading up to the guarantee decision (Honohan, 2010, 117), but does not appear to have supported the decision to issue the guarantee (see for example European Central Bank, 2008*a,b*).

3.9 Conclusion

The model and findings in this paper have important implications for crisis containment policymaking as well as financial supervision, even in countries with sophisticated financial markets. Our model and evidence indicate that when responding to banking crises, policymakers greatly benefit from having as close to full information as possible about their countries’ banking system. This initially seems like a trivial point, but our model and case study have indicated that good information may be purposefully hard to come by during crises, even in advanced democratic economies. When strategically-minded signallers’ preferences diverge from decision-makers’ preferences they can have incentives to give inaccurate information.

²³From interview with a former senior government politician.

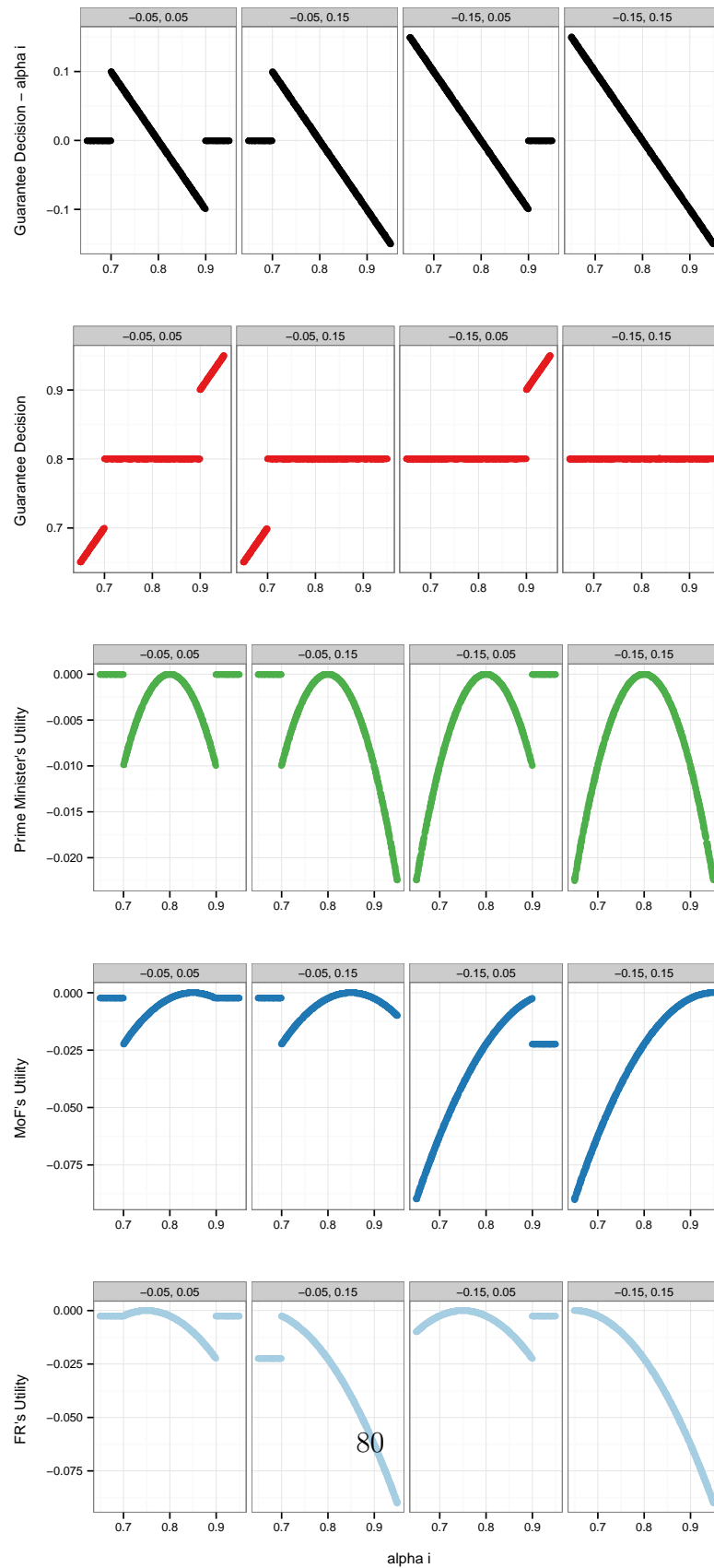
Much of the recent research on the optimal design of financial supervisors and economic policymaking generally has been aimed at tying the hands of strategic elected policymakers. The typical solution, as with central banking, has been to grant regulators *de facto* operational independence from elected policymakers (Walter, 2008, Ch. 1). Independence may help shield regulators from the most blatant crony capitalistic pressure that banks can exert on politicians or electoral time-inconsistency problems that elected officials may have. However, our paper suggests that another problem needs to be considered also. Even if elected policymakers have preferences for minimising public crisis management costs, they can be led astray by their bureaucrats, independent or not. Independence does not ensure that they will provide unbiased information to policymakers, because it does not ensure that these strategic actors will have preferences that lead them to do so. Hayo and Hefeker argue that actors' independence does not rule them out from "pursuing a political agenda" of any sort (2002, 123). As strategic actors, they use the tools available to them to pursue these preferences.

Our research does not fully address how institutional design improvements could be made to change bureaucrats' preferences so that they are more inclined to provide accurate information. Some research has been done on this topic, including Persson and Tabellini's (1993) work on targets. Satyanath (2006) argues that politicians should have more discretion to appoint information-providing bureaucrats, and that increasing bureaucratic independence will lead to more accurate information. Hopefully studies in this area will treat decision-makers, financial bureaucrats and other information providers as strategic actors, potentially with divergent preferences.

A crucial assumption of our model is that signallers infer perfectly the potential consequences of a policy choice. Violations of this assumption could further exacerbate the problem of choosing preferred containment policies. In particular, it could be difficult to correctly infer the true distribution of the realisation values of banking system assets. It

may be that policymakers systematically underestimated the distribution's range, as crises are often unusual 'tail risk' events. This may skew beliefs in such a way as to lead even decision-makers with moderate containment preferences to be systematically more likely to choose more expensive crisis responses than they would have liked. Countries need not only have bureaucrats with similar preferences to policymakers, but the model shows the need for an intrusive financial supervisory policy for the banking system, with a strong bureaucratic capacity that can accurately interpret the implications and consequences of policy decisions within that institutional structure.

Figure 3.1: Equilibrium from a two signaller game with a moderate PM and various signaller ideal points.



Chapter 4

The Political Economy of Financial Crisis Policy

Mícheál O’Keeffe and Alessio Terzi

Abstract:¹ Government intervention to stabilise financial systems in times of banking crises are ultimately political decisions. This paper sheds light on how certain political variables condition policy choices during banking crises and hence impact fiscal outlays. We employ cross-country econometric evidence from all crisis episodes over the period 1970-2011 to examine the impact political and party systems have on the fiscal cost of financial sector intervention. Governments in presidential systems are associated with lower fiscal costs of crisis management as they are less likely to use costly bank guarantees, hence reducing the exposure of the state to significant contingent and direct fiscal liabilities. Consistent with these findings we find further evidence that these governments are less likely to use bank recapitalisation and more likely to impose losses on depositors.

¹The authors are listed in alphabetical order. The authors would like to thank Christopher Gandrud, Simon Hix, and Johannes Kleibl. We would also like to thank participants at the DG-Research econometrics workshop on 20th September 2013 and DG-International and European Relations seminar on 20th August 2014 at the European Central Bank, as well as participants at the Crisis, Institutions and Banking Union conference at the German Finance Ministry, Berlin, on 17th June 2014 and the UACES conference, Cork, on 2nd September 2014.

4.1 Introduction

The severity of the recent crises has led to significant analysis of the policies, costs and effectiveness of financial crisis intervention. Such research is warranted given the scale of public support. In the EU, for example, the contingent taxpayer support to stabilise financial institutions has amounted to 40% of GDP (€5.1 trillion) to date (European Commission, 2014*a*). Measures to contain and resolve crises require political decisions. This paper provides a systematic analysis of some of the political dynamics of financial crisis management. Specifically, we analyse the impact political and party systems have on the fiscal cost of financial sector intervention. It thus aims to contribute to the growing literature on the public responses to banking crises (Laeven and Valencia, 2012*a*), as well as draw the relevant policy implications by giving some political, institutional and strategic context to our understanding of financial sector intervention in times of crisis.

Using a data set of 147 systemic banking crises from 1970-2011, our empirical findings suggest that the fiscal costs of financial sector intervention are systematically associated with political economy factors. In particular we show how the institutional setting may condition the policy choice and mix in financial crises. Our empirical evidence also shows the channel by which these variables may interact by examining the policies different governments use in their strategies to manage financial crises.

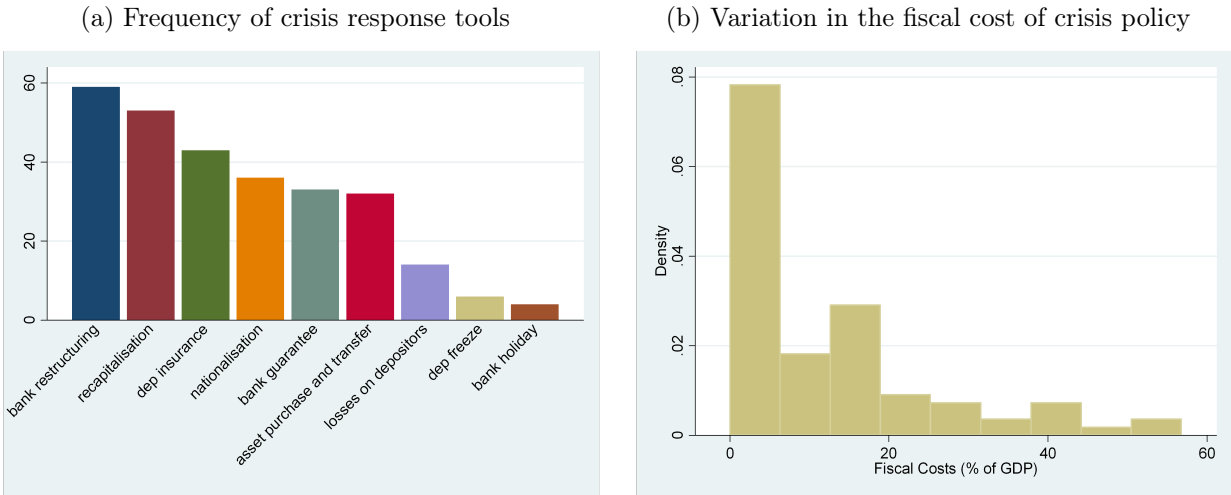
We start the paper by first outlining the policy choices available to governments when managing systemic financial crises. We then review the literature on the political economy of crisis management and present our hypotheses. Following this, we present our data and research design for our analysis. We then discuss our results, after which we analyse the likelihood distinct types of governments adopt different tools in their crisis management strategy.

4.2 Policy choice and financial crisis policy

Financial crises have many causes. A collapse in asset prices can lead to contagion between credit institutions which affects funding, forcing banks to shed assets. This may depress prices further, causing a loss spiral (Brunnermeier et al., 2009). A sudden loss in creditor confidence can lead to deposit runs and widespread disruption to the payments system. Rising losses, higher haircuts and rapid de-leveraging can cause widespread panic. Such dynamics may require government intervention to stabilise financial markets and restore confidence in the financial system. Although no two crises are the same, financial crisis management can broadly be broken down into two stylised phases, containment and resolution (Honohan and Laeven, 2005). During the containment phase governments have a range of policy tools available. These have included *inter alia* liquidity support, deposit freezes and asset or liability guarantees. Once markets have stabilised, governments must move swiftly to the resolution phase and take a number of steps to re-establish debtor-creditor relationships, deal with debt overhangs or undercapitalisation (see Calomiris, Klingebiel and Laeven, 2004). Policies here can include attaching conditionality to public support, early action on impaired assets (e.g. through asset management companies), strengthening resolution regimes to ensure swift resolution, reform of insolvency regimes to establish fast-track procedures, as well as the liquidation or sometimes nationalisation of credit institutions (Claessens et al., 2011). These are often combined in a different sequence and policy mix (Laeven and Valencia, 2010, 2012a, 2008b, Calomiris, Klingebiel and Laeven, 2004).

How governments deal with crisis containment and resolution has varied significantly (see Figure 4.1). Swift restructuring following the Swedish crisis, for example, facilitated “economic adjustment and productivity growth, while in Japan the ‘zombification’ of banks contributed to a decade of stagflation during which productivity hardly improved” (Darvas, Pisani-Ferry and Wolff, 2013). Some suggest that “the more aggressive the government is in

Figure 4.1: Variance in government response to banking crises (1970-2011)



Source: Laeven and Valencia (2012a)

designing a rescue plan, the easier it is to force more restructuring in the financial sector, and the better the chances of leaving the surviving system stronger and less dependent on the taxpayer”(Geithner, 2014). However previous research has found that the use of accommodative policies adds significantly to the fiscal cost of crisis management (Honohan and Klingebiel, 2003, Claessens, Klingebiel and Laeven, 2005). These policy tools are often used in the containment phase to stem the panic from depositor runs, creditor runs (e.g short-term unsecured lending), or margin runs (for collateralised funding markets), in response to a negative shock. Strategies that commit more fiscal resources, however, often lead to worse post-crisis economic performance and delayed recovery (Detragiache and Ho, 2010). This suggests that no trade-off appears to exist between the commitment of large fiscal resources and speedy crisis recovery. “Policies that are bad for fiscal soundness result in lower output growth and delayed recovery” (Detragiache and Ho, 2010, 17). However the domestic political environment may condition the policy choices available to governments when managing financial crises. Therefore, political economy factors, or cross-national differences in political variables should be evident in the policy choice and hence fiscal costs of crisis management.

4.3 The political economy of financial crisis policy: theory

The political economy of finance literature highlights the impact political institutions have on the development of the financial system (Haber and Perotti, 2008, La Porta et al., 1997, Beck and Levine, 2008). Much of the research on banking crises from the fields of economics and finance however does not take political variables into account. Furthermore, political economy and political science have much to understand about banking crises. There is a broad literature on the economic effects of constitutions for policymaking and performance (see Persson and Tabellini, 2005, for an overview). From a political economy perspective, institutions are “the rules of the game in a society or, more formally, the humanly devised constraints that shape human interaction” (North, 1990, 3). Institutional approaches capture the ways in which institutions mediate domestic pressures through the distribution of veto players in the political system, or try to understand how different political regimes select, structure and constrain decision-making. Formal rules translate preferences into policy outcomes and restrain incumbents from acting opportunistically (North and Weingast, 1989).

Banking crises can result in recession, leading to lower investment, lower incomes and higher unemployment. Therefore, how governments choose to intervene in banking crises is quite important for the economic and fiscal cost, as well as the duration and subsequent recovery from the crisis. Containing a crisis can help prevent disorderly de-leveraging and allow time for balance sheet repair. However the use of certain policies to contain crises can also expose the state to significant contingent or direct liabilities. This was dramatically demonstrated by the 2008 decision by the Irish government to guarantee nearly all of the liabilities of the banking system. This ultimately forced them out of the bond markets and into an EU/IMF programme of adjustment. Intervention to contain a crisis, and restructure and resolve financial institutions, means allocating the costs of a crisis to certain groups

in society. Such decisions can lead to distributional conflicts. Distributional conflicts and concerns about the consequences of macroeconomic policy can lead to powerful incentives to deviate from the most economically efficient outcomes (see Walter, 2013, 227). For example a government may step in to guarantee liabilities in a bank or the banking system if they are concerned about capital outflows. However, depending on the location of creditors and the scope of government support, political cleavages can emerge – between domestic debtors and creditors and often more controversially between domestic debtors and foreign creditors (Pepinsky, 2014, 10-13). Moreover, taxpayer support to the financial sector can present an opportunity cost for governments. This can result from an increased cost of borrowing if direct or contingent support results in the state paying higher interest rates on government debt, or a reduction in the provision of public goods from fiscal austerity due to taxpayer support to financial institutions. Finally, intervention may create perverse incentives, aggravate moral hazard and even delay recovery.

Previous empirical research suggests democratic regimes differ from autocratic states in their propensity towards bailouts (Rosas, 2006). That politicians are less likely to engage in bailouts under democratic regimes suggests that electoral accountability is an important determinant of crisis response. Chwioroth and Walter (2010) find financial crises are generally associated with higher rates of political turnover. However, Crespo-Tenorio, Jensen and Rosas (2014) examining the patterns of incumbent survival following banking crises, find that although “democratic governments with several veto players are systematically less secure in their tenure than democratic governments with fewer veto players, both in the presence and in the absence of banking crises”, no differences in survival times of incumbents under banking crises are evident. In explaining this result they propose that although multiple veto players may limit ‘clarity of responsibility’, they may also constrain the ability of governments to enact policies in response to a banking crises. Such constraints are the subject of this paper. The success of financial sector intervention also depends heavily on effective legal,

regulatory and political institutions. Better institutional development (including the quality of institutions, less corruption and efficient judicial systems) are also associated with faster economic recovery (Claessens, Klingebiel and Laeven, 2005).

Veto players

A veto player is an individual or collective of actors that have to agree for a policy to change (Tsebelis (1995)). Tsebelis (1995) seminal analysis explains how every political system has a configuration of veto players either specified in a country's constitution - 'institutional veto players', or by the political system - 'partisan veto players'. From a theoretical perspective a number of models explore why crises and veto players are associated with inaction, delay and sub-optimal outcomes (see Sturzenegger and Tommasi, 1998, Drazen, 2000, Drazen and Easterly, 2001, for an overview). Drazen and Grilli (1993, 2) suggest "crises may be necessary to induce significant reform because of distributional implications of large policy changes. Drastic but necessary policy changes are resisted [however] because economic participants believe someone else can be forced to bear the burden of change". Alesina and Drazen (1991) use a 'war of attrition' model to explain how conflict over the known costs (although information is asymmetric) of macroeconomic stabilisation leads to delays.² Only when one group concedes is the policy adopted. Fernandez and Rodrik (1991) model how uncertainty regarding the distribution of gains and losses from reform can lead to a bias against efficiency enhancing reforms (and towards the status quo) when winners and losers cannot be identified *ex ante*. Laban and Sturzenegger (1994, 273), who model the status quo bias in a dynamic context, conclude that "only an extreme crisis ... may trigger the necessary political consensus for reform".

²"In the basic war of attrition model from biology, two animals are fighting over a prize. Fighting is costly, and the fight ends when one animal drops out, with the other gaining the prize" (Alesina and Drazen, 1991, 9)

MacIntyre (2001) proposes that an intermediate concentration of veto players is optimal in a crisis. He deduces, from his analysis of the response to the Asian financial crisis, that an U-shaped relationship between policy stability and rigidity exists. A smaller number of veto players can lead to a risk of policy volatility, uncertainty and a lack of credibility in the government's response. The larger the number of veto players, the greater the risk of policy rigidity. This can lead governments to be unable to deal with mounting vulnerabilities. Angkinand and Willett (2008) provide some empirical evidence to support this proposition, with regard to the magnitude of output loss for crises in emerging market economies. When controlling for competitive elections, Keefer (2007) however, finds no relationship between veto players and outcomes.

We also test for the impact of veto players in our analysis below. Theory suggests a larger number of veto players will lead to policy rigidity. If policy rigidity occurs due to a larger number of veto players, such governments may not be able to agree on policies which fiscally expose the state when managing financial crises, thus limiting the fiscal burden on the state.

Hypothesis 1: A larger number of veto players are associated with lower fiscal costs of financial crisis management

Veto players theory is an attempt to overcome long classified systems of government, but given the limited evidence to date, we also explore other political factors which may condition policy choice in financial crisis management. In the political economy literature two particular features that have attracted considerable attention are (i) the form of government and (ii) electoral rules. "Politicians make policy choices, but their specific electoral incentives and powers to propose, amend, veto and enact economic policies hinge on the rules for election, legislation, and execution" (Persson and Tabellini, 2005, 11). The next section will discuss these in turn.

Constitutional Rules: Parliamentary vs. Presidential

In modern democracies, two broad forms of government exist: (i) parliamentary systems; and (ii) presidential systems.³ These forms of government define the constitutional relationship between the executive and the legislature and are distinct based on the unification or separation of powers. How both types of institutions shape decision-making and economic outcomes has received much attention in both comparative politics and political economy literatures. Put simplistically, presidential regimes have a stronger separation of powers whereas parliamentary regimes are associated with a greater concentration of powers (Persson and Tabellini, 2005).

Persson, Roland and Tabellini (1997) model this relationship and show that the separation of powers under presidential systems improves the accountability of elected officials. The “separation of powers between executive and legislative bodies ... helps to prevent the abuse of power, but only with appropriate checks and balances. Checks and balances work by creating a conflict of interest between the executive and the legislature, yet requiring both bodies to agree on public policy. In this way, the two bodies discipline each other to the voters’ advantage. Under appropriate checks and balances, separation of powers also helps the voters elicit information” (Persson, Roland and Tabellini, 1997, 1163).

Lijphart (1999, 117) explains this by outlining three key differences between presidential and parliamentary forms of government: (i) in parliamentary systems the head of government is dependent on the confidence of the legislature, whereas in a presidential system the head of government (president) is normally elected for a prescribed period and normally cannot be forced to resign through a vote of no confidence; (ii) presidents are popularly elected directly or by a college, whereas prime ministers are selected by legislatures; and (iii) parliamentary

³Hybrid systems also exist. For example, the Database of Political Institutions (Beck et al., 2001, 2012) also include a category ‘assembly elected President’. However given the similarity in the classification criteria (based on Shugart and Carey (1992)) and the low number of observations, for the purpose of this analysis, we include these in parliamentary systems and limit the categories to parliamentary and presidential.

systems have a collegial cabinet whereas presidential systems effectively have a one-person executive. These crucial features of different forms of government mean that in presidential systems voters can keep more direct control of the executive and it is more accountable. In parliamentary systems the executive is only indirectly accountable to the voters, and is directly accountable to the legislature (see Persson, Roland and Tabellini, 1997, 1167-192). Finally, in parliamentary regimes, both the policy initiative and agenda setting roles rely on the support of the parliament (Persson, Roland and Tabellini, 2000, 1125). Maintaining this power of agenda setting induces ‘legislative cohesion’ in parliamentary systems which further concentrates power (Diermeier and Feddersen, 1998, Huber, 1996).

These dynamics mean the different forms of government are associated with very different policy outcomes. In presidential systems for example, the capacity for change decreases (Tsebelis, 1995). Presidential systems are associated with less rents for politicians (Persson and Tabellini, 1999, Persson, Roland and Tabellini, 2000). “Separation of powers in the congressional regime produces a smaller government, with less waste and less redistribution but also inefficiently low spending on public goods. Intuitively, separation of powers enables the voters to discipline the politicians, and this reduces waste and moderates the tax burden ... legislative cohesion in the parliamentary regime, on the other hand, leads to a larger government, with more taxation and more waste, but also more spending on public goods and redistribution benefiting a broader group of voters. Intuitively, there is now more scope for collusion among politicians, which increases waste and taxation. But policy aims to please a majority group of voters, which increases public-good provision, calls for a more equal redistribution, and makes the majority support a high level of taxation” (Persson, Roland and Tabellini, 2000, 1126). In line with this literature, with respect to financial crisis management, Detragiache and Ho (2010) have found that parliamentary systems are more likely to engage in policies that put more fiscal resources at risk.⁴

⁴Using a sample of 40 crisis episodes, Detragiache and Ho (2010, 7) construct a policy response index

Electoral Rules: Single-Party vs. Coalition Government

Electoral rules shape the number of parties, government formation and hence policy choice. This has been well established in the political science literature (see for example Taagepera and Shugart, 1989). The first key political factor which influences this is the *electoral formula* which translates votes into seats. The two basic classes of electoral formula that are usually considered are: (i) plurality rule, associated with 'winner take all' systems; and (ii) proportional representation, whereby the number of seats (and spoils of office) are, to variant degrees, proportionally allocated according to vote share (see Cox, 1990). Persson, Roland and Tabellini (2007, 1) model how a more fragmented party system and a larger incidence of coalition governments are induced under proportional electoral systems than under plurality rule. Proportional systems, via coalition governments therefore can constrain policy choice.

The second key political factor which influences this is the *district magnitude* which is the number of seats to be filled in a district (Cox, 1990). "One polar case is that all legislators are elected in a single district. Larger districts diffuse electoral competition, inducing parties to seek support from broad coalitions in the populations. Smaller districts steer electoral competition towards narrower geographical constituencies" (Persson and Tabellini, 2005, 22).

Single-party and coalition governments differ in respect to the size of public spending due to an 'electoral common pool problem' because voters can differentiate between parties in a coalition but not between factions of a single-party at the polls (see Persson, Roland and Tabellini, 2007). Persson, Roland and Tabellini (2007) show that "the indirect effects of electoral rules — on the number of parties and the type of government — are essential to the finding that majoritarian elections lead to less public spending than proportional elections."

A significant body of empirical research confirms this (see for example Bräuning, 2005, Lizzeri and Persico, 2001, Rickard, 2012). The difference in the number of parties also impact

(whereby policies that shift the burden of the crisis from bank stakeholders to the government receive a score of one, while policies that do not commit public funds receive a score of minus one) and instrument the political system to measure the effect on output growth and crisis duration.

policy through the accountability channel. “A single party in government is accountable for all of its policy decisions since it must promote the collective interest of a broad support base if it wants to keep its majority ... [p]articipants in multiparty coalition governments, by contrast, are held primarily responsible for only a subset of policy decisions: those in the policy areas in which they have the biggest stake. This difference in electoral accountability ... results in systematic differences in policy decisions” (Bawn and Rosenbluth, 2006, 251).

Putting the constitutional rules and electoral rules together for the purposes of this research, we derive four broad categories of government: (i) single-party parliamentary systems; (ii) multiparty parliamentary systems; (iii) single-party presidential systems; and (iv) multiparty presidential systems. So what could we expect for financial crisis management? Presidential systems are more accountable to the electorate than parliamentary systems due to the separation of powers. This is because even “presidents in multiparty systems who do not have to seek majority party support in congress have a far less incentive to seek and maintain lasting coalitions in congress than do parliamentary executives” (Shugart and Carey, 1992, 33). In financial crisis management, we can deduce that presidential governments are less likely to put fiscal resources at risk, thus resulting in lower losses to the state.

Similarly, because single-party governments are accountable for all policy decisions, multiparty governments may be more likely to strike less efficient decisions in financial crisis management. This, for example, could include providing a guarantee on assets or liabilities which does not immediately draw on fiscal resources of the state, but could end up very costly later on. Multi-party coalitions also have multiple interests to serve so could use other fiscally costly policies such as bank recapitalisation or spare creditors and depositors losses - both resulting in higher cumulative fiscal costs from managing a banking crisis.

Hypothesis 2: Presidential systems with single-party government are associated with less fiscal costs from financial crisis management when compared with other forms of government.

What other political factors could affect the fiscal costs of crisis management?

Electioneering incentives may also play a role in the policy choices in the management of financial crises and thus impact fiscal costs. Nordhaus (1975) presents a simple adaptive-expectations model of inter-temporal choice between economic objectives, which captures well the incentive for opportunistic politicians to manipulate policy. Elections induce a ‘political business cycle’. His model predicts that office seeking politicians will maximise the probability of re-election by stimulating the economy in advance of an election. Similarly, Tufte (1980) proposes that politicians will manipulate policies such as transfer payments or tax cuts prior to an election, as voters reward good economic performance.

A second field of political economy general equilibrium models include rational expectations and predict smaller less regular cycles (Rogoff and Sibert, 1988, Rogoff, 1990). Persson and Tabellini (1990) argue that following an exogenous macroeconomic shock, voters retrospectively rationally evaluate the incumbents’ performance in managing stabilisation, given control of policies and privileged information. Better performance leads to a higher probability of re-election. Whilst empirical evidence for office-seeking electoral cycles is inconsistent, that incumbents benefit from favourable macroeconomic conditions has unequivocal support (Franzese Jr, 2002). We therefore also test for the impact that electoral cycles have in financial crisis management.

Finally partisanship may impact financial crisis policy. Constructivists have shown how discursive practices can generate a narrative structure for policy formation and could shape containment or resolution strategies. “Successful discursive attacks on Asian model practices, coupled with the severe economic effects of the crisis, generated a normative environment for policy formation, that severely constrained resistance to the radical restructuring of the institutional and legal framework of the Korean economy than would otherwise have been

expected” (Hall, 2003, 95). Constructivist approaches to political economy do not accept that beliefs are reducible to *a priori* interests, rather for example, treat party leaders as “ideational entrepreneurs who actively modify agents’ beliefs about what their interests are” (Blyth, 2003, 698). Crises and responses only make sense in terms of the way ideas are used to diagnose the problem and reduce uncertainty (Blyth, 2002, 253). Therefore, the political prominence of certain societal groups may be translated into policy preferences through political parties which ideologically represent them (Stasavage, 2007). This may in turn condition the policy response. Broz (2013), for example, argues that a partisan-policy financial cycle exists whereby right wing (pro-market) governments preside over financial booms, while left-wing governments are left to govern over the crash. Without deriving specific hypotheses, we also test for the impact partisanship may have on financial crisis management.

The following section will explain in detail our data and method of investigation

4.4 Data and research design

Econometric analysis to examine the relationships between political institutions, financial crisis management, and economic outcomes is limited by the number of crises and the availability of detailed policy and outcome data. The recent financial crisis however has led to an increased number of observations, particularly among advanced economies. This larger sample size allows us to more accurately estimate the interplay between political-economy factors and the fiscal cost of financial crisis management. In order to test the hypotheses above, we make use of the updated Systemic Banking Crises database constructed by Laeven and Valencia (2012*a*, 2010, 2008*a*). This database contains detailed information on all systemic banking crises from 1970-2011 - totalling 147 episodes. We merged this dataset with the World Bank database of political institutions 2012 (Beck et al., 2001, 2012), which

is a balanced panel dataset comprising several institutional and political variables for 178 countries over the period 1975-2012.

Laeven and Valencia provide data on several variables describing the various banking crises. Of particular interest to our research question are the fiscal costs associated with a particular crisis episode. Laeven and Valencia define fiscal costs as gross fiscal outlay directed to the restructuring of the financial sector. However, they exclude liquidity assistance from the treasury but this is included in the measure for liquidity support. The focus on gross, rather than net, fiscal costs in our analysis is due to the fact that the former better captures the ‘intensity of the intervention’ (Laeven and Valencia, 2012*a*, 5). The depth of the crisis will likely affect both the policy decisions and the fiscal costs. In order to correct for this aspect, we produced a measure of the crisis depth, defined as the gap between real GDP growth at year $t-1$ (before the crisis) and the local minimum growth rate during the crisis period.

We use our event-based dataset to test whether political characteristics have an impact on the gross fiscal outlay resulting from a banking crisis. Following previous literature we first look at veto players as a raw variable. To do this we take three measures of veto players. Firstly, we use the checks and balances variable *Checks and balances (DPI)* taken from the World Bank database of political institutions (DPI) (Beck et al., 2001, 2012). This is measured on a scale from 1-7 and takes into account the number of veto players and the effectiveness of electoral competitiveness in the political system. A higher value indicates more checks and balances (see appendix III for full description). Secondly, we use an index provided by Henisz (2002) which assigns a score based on effective veto points *Political constraints index*. It also uses a simple spatial model of political interaction to derive the extent to which any one political actor, or their replacement, is constrained in their choice of future policies. Finally, following Keefer (2007), we take the residual of the regression of the checks and balances variable on competitive elections *Checks residual* to isolate the effect of

veto players. This is because the checks and balances variable captures both the extent to which countries have competitive elections and the number of veto players (see Keefer, 2007, 22).

To capture whether the country has a competitive political system, we use the Legislative Index of Electoral Competitiveness *LIEC* provided in Beck et al. (2001, 2012). This is a scale from 1-7 (see appendix III for full construction). On the basis of this scale, and following Beck et al. (2001, 2012), we take democracies as $LIEC > 4$. We then look at the categories of political system defined in section 4.2 above. Taking single-party parliamentary systems as a baseline, we create dummy variables for *Presidential system - single-party*, *Presidential system - multi-party*, and *Parliamentary system - multi-party*. To explore possible effects of other political variables, we measure the *Years to the next election* and examining the role of partisanship, our variable *Government orientation* refers to the governing parties ideological orientation with respect to economic policy. Left captures parties that are defined as communist, socialist, social democratic, or left-wing. Centrist parties cover those that, for example, advocate strengthening private enterprise in a social-liberal context. Whereas right captures those defined as conservative, Christian democratic, or right-wing. Political variables, which we use from the World Bank database of political institutions (Beck et al., 2001, 2012), are taken at time t , the first crisis year. This might seem somewhat reductive, as crises protract for several years, with variables such as government partisanship changing throughout. However, because accommodative policies associated with large fiscal costs (such as asset or liability guarantees for example) are usually employed during the containment phase (see discussion above), we think that this is not an unreasonable assumption.

We control for a range of macroeconomic and political variables. *Liquidity support* captures in percentage points the increase in central bank claims on financial institutions over deposits and foreign liabilities. *Monetary expansion* is computed as the change in the monetary base between its peak during the crisis and its level one year prior to the crisis as a

percentage of GDP. *Credit* is a measure of domestic credit as a share of GDP, averaged over three pre-crisis years, and, in line with the literature, here used as a proxy for the size of the financial sector. *Credit boom* is a dummy which takes the value of 1 if there was a credit boom before the crisis, as defined by Dell’Ariccia, Igan and Laeven (2012)). We also control for *GDP per capita*, and whether the country is a member of the *OECD*. Banking crises often do not happen in isolation. We therefore control for a *Concurrent currency crisis* and *Concurrent sovereign debt crisis* (see appendix V for a full list and construction of variables used).

Aside from determining which political characteristics are associated with higher fiscal costs, as a second step, we exploit the data to try and determine the channel through which this effect takes place. In this regard, the Laeven and Valencia database provides detailed information on many of the policies employed during a crisis for a subset of 65 episodes. *Bank guarantee*, for example, indicates whether or not the authorities introduced a blanket guarantee on deposits (and possibly other liabilities). *Depositor losses* tells us whether the country imposed losses on depositors when managing their crisis. Similarly, *Bank recapitalisation* further tells us if the governments in question recapitalised their banks as part of their strategy for financial crisis management.

Before turning to the results of our quantitative analysis, we assembled some descriptive statistics of our institutional variables. Table 4.1 below details the number of observations, mean, standard deviation, minimum and maximum, for the set of selected political variables which fed into our quantitative exercise. It shows that although single-party presidential systems represent a majority of crisis episodes (44.8%), our sample is not excessively skewed, and this will be particularly important for our econometric analysis below. 37 governments are characterised as left-wing, 35 as right-wing and 17 as centrist. Non-OECD members represented a majority, with 117 observations, against 29 OECD-member banking crises. In general, looking at the time distribution of the financial crises we see that they present an

unprecedented spike in 2008. A large number of the OCED members form part of the latest 2008 financial crisis.

Table 4.1: Institutional characteristics - descriptive statistics

	Obs	Mean	Std. Dev.	Min	Max
Checks and balances	139	2.697	0.890	1	7
Political constraints index	147	0.250	0.230	0	0.7069
Years to next election	139	1.916	1.611	0	7
Snap election	142	0.309	0.620	0	3
Government orientation	89	2.022	0.904	1	3
Legislative Index of Electoral Competition	142	5.306	2.177	1	7
Presidential-single-party	147	0.448	0.499	0	1
Presidential-multiparty	147	0.170	0.376	0	1
Parliamentary-multiparty	147	0.156	0.364	0	1

This analysis however is necessarily limited by the data. Firstly, turning to crisis duration, we highlight a major limitation of the Laeven and Valencia database. Whilst a systemic banking crisis is deemed over whenever the conditions are no longer fulfilled (detailed in Appendix II), a crisis is also considered terminated after 5 years, regardless of economic or financial circumstances. This is depicted in Table 4.2 below, with a spike in the 5-year crises. Whereas fiscal costs may protract further over time, the most severe contractions in GDP tend to be experienced in the early years of a crisis. Therefore we expect this to be less of a problem and not to directly encroach on the robustness of our analysis.

Table 4.2: Frequency distribution of crisis duration

Crisis Duration	Frequency
1	38
2	16
3	19
4	10
5	64

Secondly, and connected to the first point, the crisis is still on-going in some of the countries in our sample. However, our unit of analysis is gross (rather than net) fiscal

cost to capture the ‘intensity of the intervention’ associated with political economy factors. Therefore it should reasonably estimate the impact political economy factors have on gross fiscal costs for on-going crises. Thirdly, fiscal cost is but one measure of the ‘costs of crises’. Our analysis does not capture the output a country loses from a crisis, or indeed the social cost associated with the crisis or the fiscal intervention. These may be more effectively captured using other metrics. Furthermore, whilst our results show relationships between certain political variables and gross fiscal costs, our analysis does not attempt to estimate the effectiveness of the fiscal intervention on economic performance or crisis duration. Despite these limitations, the Laeven and Valencia dataset provides the best comparable data for the fiscal costs of crisis management.

4.5 Empirical evidence

Table 4.3 shows the results of our basic analysis of the effect that veto players have on the gross fiscal cost of financial sector intervention in times of crisis. In line with previous empirical findings (Keefer, 2007, Crespo-Tenorio, Jensen and Rosas, 2014), we do not find any evidence for an effect of veto players on the fiscal costs of crisis management. Therefore, using these raw metrics for checks and balances, no effect on the government response is visible from the data. To better understand how political institutions may impact fiscal costs, we must therefore analyse other political variables.

The main regression results for this paper are given in Table 4.4 . This shows the impact variant political systems, derived above, have on the gross fiscal costs of financial crisis management. We find significant evidence to suggest that both single-party and multiparty presidential systems are associated with lower gross fiscal costs. Given no effect was found for the impact of veto players, this suggests that a deeper comparative analysis of the form of government is necessary to capture how political institutions impact policy choice following

Table 4.3: Regression results for veto players and fiscal costs of banking crises

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Political constraints index		-9.422 (7.229)		-12.09 (8.313)	-18.60 (12.84)	-9.583 (17.54)	-21.61 (13.23)	-16.10 (15.15)	4.285 (11.06)
Drop in GDP					0.448 (0.270)	0.287 (0.325)	0.244 (0.301)	0.235 (0.321)	0.291 (0.332)
Concurrent currency crisis					9.895** (4.736)	7.193 (4.736)	10.34** (4.444)	5.439 (5.032)	2.126 (4.596)
Concurrent sovereign debt crisis					-9.874 (7.157)	-6.953 (8.118)	-9.059 (6.648)	-7.680 (7.921)	
Credit boom						5.863* (3.337)	4.558 (3.610)	6.762* (3.689)	6.363** (3.085)
NPLs					0.102 (0.159)	0.224* (0.127)		0.332** (0.143)	0.498*** (0.138)
Years to the next election						1.699 (1.053)			
LIEC						-2.532 (2.292)			
Credit						-0.000* (0.000)	-0.000** (0.000)	-0.000** (0.000)	
GDP per capita						0.0542 (0.082)	0.0913 (0.118)	0.116 (0.0912)	
Checks and balances DPI	-0.865 (1.039)			-0.007 (0.083)					
Checks residual			0.005 (1.400)						
Government orientation									0.011 (2.262)
Constant	15.29*** (3.909)	15.47*** (3.097)	12.47*** (1.506)	16.87*** (3.392)	10.73 (7.245)	19.42 (13.49)	12.10* (6.045)	4.272 (7.573)	-4.226 (9.178)
Observations	86	87	86	84	59	55	55	53	45
R-squared	0.011	0.023	0.000	0.038	0.309	0.500	0.245	0.360	0.440
Democracies only	NO	NO	NO	NO	NO	NO	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4.4: Regression results for political systems and fiscal costs of banking crises

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Presidential system-single-party	-7.218 (5.396)	-6.735 (5.227)	-10.53** (5.179)	-11.36** (5.453)	-11.18** (5.104)	-13.42** (6.170)	-11.27** (4.816)	-11.29** (5.137)	-11.10** (4.969)	-12.25** (5.150)	-12.79** (5.536)	-8.727* (4.409)
Presidential system-multiparty	-11.36* (5.868)	-11.03* (5.768)	-10.84* (5.903)	-12.25* (6.305)	-11.98* (5.995)	-14.89** (7.289)	-11.27** (5.379)	-11.38* (5.892)	-11.48* (5.622)	-12.23** (5.603)	-11.93* (6.076)	-9.343* (5.463)
Parliamentary system-multiparty	-7.229 (5.048)	-7.246 (5.037)	-6.721 (5.043)	-7.729 (4.979)	-7.615 (5.582)	-6.381 (5.043)	-7.659 (5.187)	-6.687 (5.616)	-8.576 (5.437)	-8.462 (5.558)	-8.864 (5.752)	-5.281 (5.135)
Years to next election		2.300** (0.995)										
Drop in GDP	0.446 (0.281)	0.441 (0.270)	0.275 (0.253)	0.253 (0.257)	0.275 (0.268)	0.206 (0.276)	0.172 (0.295)	-0.033 (0.271)	0.003 (0.300)	0.133 (0.365)	0.224 (0.313)	0.149 (0.313)
Concurrent currency crisis	13.11*** (4.086)	13.71*** (3.856)	11.34*** (3.940)	11.16** (4.275)	11.07*** (4.091)	10.65** (4.239)	11.00** (4.439)	9.744* (5.057)	11.93** (4.625)	10.92* (4.484)	10.19* (4.629)	6.806 (5.342)
Concurrent sovereign debt crisis	-2.698 (6.183)	-2.213 (6.838)	-1.507 (6.015)	-1.358 (6.087)	-1.404 (6.508)	-1.046 (6.060)	-1.870 (5.392)	4.668 (5.106)	-2.363 (5.442)	-1.768 (5.437)	2.482 (4.721)	-2.105 (6.192)
LIEC			-2.918 (2.038)									
GDP per capita			-0.011 (0.0930)									
Credit					-0.000* (0.000)	-0.000* (0.000)						
OECD					-4.808 (5.037)							
Credit boom							3.823 (3.410)	5.574 (3.536)	3.293 (3.549)	3.703 (3.479)	2.688 (3.691)	5.798 (3.663)
Government orientation								-1.949 (2.339)				
Snap election									2.543 (2.574)			
Liquidity support										0.004 (0.061)		
Monetary expansion											-0.177 (0.476)	
NPL												0.279* (0.161)
Constant	10.75** (4.601)	6.399 (4.901)	32.59* (14.88)	13.82** (5.851)	13.49** (4.971)	17.00** (6.863)	12.21** (4.687)	16.50** (6.287)	12.96** (4.970)	13.41** (5.339)	14.21** (6.252)	6.290 (4.793)
Observations	62	61	61	58	58	58	56	46	55	55	51	54
R-squared	0.297	0.383	0.354	0.280	0.284	0.300	0.295	0.285	0.311	0.301	0.300	0.379
Democracies only	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

* p < 0.10, ** p < 0.05, *** p < 0.01

shocks. In line with hypothesis 2, this suggests that the separation of powers leads to less fiscal resources being put at risk, and hence less fiscal costs. Given governments in these systems can be held more easily to account by voters, they may be less likely to use policies which expose the state when managing financial banking crises.

This effect holds when controlling for GDP per capita, liquidity support from the central bank, and size of the financial sector. The coefficients are stable across a number of specifications. The results should also be consistent across banking crises as we also control for the severity of the crisis. Furthermore, all regression specifications are run using standard errors that are robust to heteroskedasticity. These results also confirm similar findings which look at the broad impact of political systems on economic performance and crisis duration (Detragiache and Ho, 2010). It is worth recalling that we are not suggesting presidential systems are ‘better’ at managing financial crises. Our analysis does not examine the effectiveness of the intervention which may be better analysed through other metrics such as output loss or crisis duration. We do however show robust results to suggest that political institutions condition policy choice in response to shocks.

Models (4)-(12) use only democracies. This is important as the political economy variables and underlying accountability theory we have outlined can only fully play out in a democratic context. We find no robust evidence for a political-business cycle - the significance of Years to the next election in Model (2) is the result of an outlier (Chile 1982). Excluding this data point no evidence was found. Furthermore, we find no evidence that partisanship affects the fiscal costs of financial sector intervention.

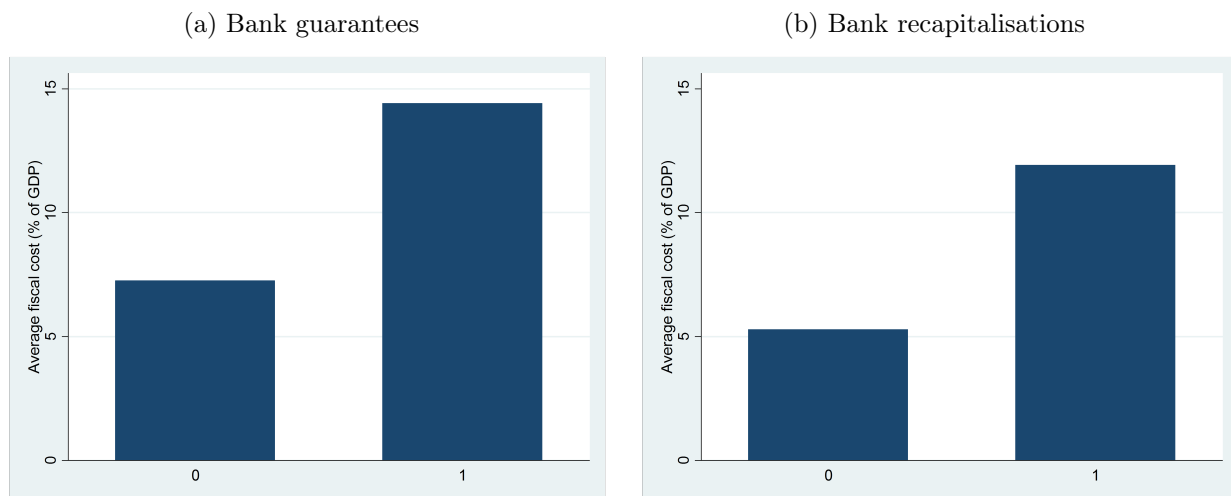
This section has looked at the impact select political variables have on the fiscal costs of crisis management. Finding that certain political characteristics are associated with higher fiscal costs is interesting, but identifying the channel through which this happens bridges an important gap in the literature for our understanding of the political economy of crisis management. To explore our hypotheses and results in more detail we will now look at the

channels by which this might occur. This next section will therefore look at the likelihood that variant governments use policies for crisis management which put public resources at risk.

4.6 Policies for financial crisis management

To identify the channels by which political variables impact fiscal costs, we deploy a two-stage approach. In the first stage we identify the impact of specific policies for crisis management (bank guarantees, losses imposed on depositors, and bank recapitalisations) have on fiscal costs. In the second stage, we run a number of regressions to see whether certain political systems are more conducive to adopting specific policies when managing financial crises. The use of any particular policy to manage crises entails a trade-off for the governments. Certain tools are useful to avoid contagion, stem depositor withdrawals or contain capital flight, cleanse balance sheets of non-performing loans (NPLs), or stimulate credit flow to business. However they each expose the state to direct fiscal costs which they may or may not recoup later, or to contingent liabilities which may be called upon. This is illustrated in Figure 4.2 which shows the variance in fiscal costs associated with the use of two different policies for crisis management.

Figure 4.2: Variance in fiscal costs associated with bank guarantees and bank recapitalisations



Source: Laeven and Valencia (2012a)

Blanket guarantees, if credible, can help restore depositor confidence. However they may increase fiscal costs if called upon, or indirectly by exacerbating the risky behaviour of banks (Laeven and Valencia, 2008b, 15). Using public money to recapitalise a bank can facilitate lending to the real economy. Homar and van Wijnbergen (2013), for example, find that bank recapitalisations substantially reduce crisis duration. However if a recapitalised bank turns out to be insolvent, the state may end up losing its investment. Finally, imposing losses on depositors, whilst politically unpopular, often spares the state from having to bailout a bank. However depositor losses could also lead to further deposit withdrawals without capital controls.

Table 4.5 shows the results for the impact different crisis management policies have on the fiscal costs of financial crisis management. Reasonably robust results show that the use of bank guarantees and bank recapitalisations are significantly associated with higher fiscal costs. This is in line with previous empirical work on the subject (Honohan and Klingebiel, 2003, Laeven and Valencia, 2012b). This data is binary in nature and therefore very imprecise. Nonetheless it is encouraging that we found robust evidence to support our

empirical analysis above. We did not find any significant evidence for an effect of depositor losses on fiscal costs. This could be because only 13 cases in our dataset imposed losses on depositors and half of these losses were considered minor to moderate (Laeven and Valencia, 2008*a*, see table 8).

Table 4.5: The impact of different policies on the fiscal costs of crisis management

	(1)	(2)	(3)	(4)
Bank guarantee	7.512** (3.048)	7.562** (3.103)	8.055* (4.522)	10.01* (5.183)
Depositor losses	2.387 (4.190)	1.490 (4.859)	1.597 (4.842)	0.796 (5.100)
Bank recapitalisation	7.489* (4.147)	5.237* (2.929)	5.279* (2.963)	5.808* (2.879)
Drop in GDP	0.197 (0.315)	0.132 (0.340)	0.134 (0.346)	0.0556 (0.338)
Credit		-0.000*** (0.000)	-0.000** (0.000)	-0.000** (0.000)
Credit boom		4.033 (4.014)	3.808 (4.825)	3.273 (4.591)
NPL		0.339** (0.136)	0.329** (0.142)	0.298** (0.141)
Concurrent currency crisis	12.10*** (3.823)	6.128 (5.221)	6.035 (5.139)	6.753 (5.509)
Concurrent sovereign debt crisis	-5.746 (6.520)	-5.028 (7.583)	-5.199 (7.862)	-5.916 (7.628)
GDP per capita			-0.027 (0.136)	
OECD				-4.311 (5.761)
Constant	-5.726 (5.107)	-8.286** (3.827)	-7.811 (4.670)	-6.577 (4.691)
Observations	59	53	53	53
R-squared	0.292	0.411	0.412	0.424
Democracies only	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Further exploring whether our political economy factors are associated with the use of these policies, Table 4.6 shows the results for a linear probability model for bank guarantees. It shows that presidential systems (both single-party and multiparty) are less likely to use

Table 4.6: Linear probability model for bank guarantees

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	Logit	Probit
Presidential system-single-party	-0.503*** (0.169)	-0.498*** (0.169)	-0.467*** (0.170)	-0.467*** (0.170)	-0.525*** (0.166)	-0.543*** (0.170)	-0.575*** (0.167)	-0.628*** (0.175)	-0.492*** (0.181)	-0.507*** (0.194)	-3.134* (1.652)	-1.677** (0.752)
Presidential system-multiparty	-0.555*** (0.166)	-0.528*** (0.166)	-0.452** (0.194)	-0.452** (0.194)	-0.496** (0.188)	-0.533*** (0.184)	-0.696*** (0.180)	-0.726*** (0.228)	-0.731*** (0.184)	-0.729*** (0.185)	-4.019** (1.813)	-2.226*** (0.855)
Parliamentary system-multiparty	0.0308 (0.152)	0.0188 (0.146)	0.0189 (0.147)	0.0189 (0.147)	-0.0402 (0.145)	-0.0361 (0.142)	-0.0893 (0.130)	-0.0910 (0.135)	-0.107 (0.126)	-0.100 (0.125)	-1.313 (1.274)	-0.659 (0.653)
Drop in GDP		0.014* (0.007)	0.018** (0.008)	0.018** (0.008)	0.016* (0.008)	0.012 (0.008)	0.007 (0.007)	0.008 (0.009)	0.011 (0.007)	0.0132 (0.00912)	0.0485 (0.0617)	0.0240 (0.0336)
Concurrent currency crisis			-0.181 (0.131)	-0.181 (0.131)	-0.175 (0.134)	-0.215 (0.130)	-0.0624 (0.161)	0.0398 (0.172)	0.0118 (0.166)	-0.0165 (0.198)	-0.874 (0.990)	-0.518 (0.569)
Concurrent sovereign debt crisis			0.0693 (0.251)	0.0693 (0.251)								
Credit					4.570 (6.470)	-2.040 (6.400)	1.670 (6.380)	2.880 (7.100)	1.220 (6.350)	3.16e-06 (8.110)	0.014** (0.007)	0.008** (0.004)
Credit Boom						0.178 (0.109)	0.198* (0.106)	0.115 (0.109)	0.207* (0.107)	0.213* (0.110)	2.261** (1.143)	1.221** (0.522)
NPL							-0.003 (0.00536)	-0.003 (0.006)	-0.0051 (0.005)	-0.004 (0.005)	-0.016 (0.040)	-0.005 (0.020)
Government orientation								-0.014 (0.083)				
Snap election										-0.041 (0.114)		
Constant	0.769*** (0.121)	0.656*** (0.139)	0.665*** (0.137)	0.665*** (0.137)	0.739*** (0.129)	0.722*** (0.135)	0.816*** (0.136)	0.891*** (0.267)	0.793*** (0.137)	0.788*** (0.138)	0.285 (1.386)	0.153 (0.784)
Observations	62	62	62	62	61	57	55	46	53	53	55	55
R-squared	0.300	0.335	0.357	0.357	0.377	0.403	0.436	0.457	0.446	0.447		
Democracies only	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO	NO

Robust standard errors in parentheses
* p < 0.10, ** p < 0.05, *** p < 0.01

public guarantees when managing financial crises. These findings contribute to explaining the results found in Table 4.4 above, which show that presidential systems are associated with less fiscal costs of crisis management. We also test for alternative specifications (Probit and Logit models) and our main results hold, suggesting the significance of our results does not rest on the choice of econometric model. Our results are also robust to a battery of macroeconomic controls including *Credit boom* and *GDP per capita*.

Table 4.7: Linear probability model for depositor losses

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	LPM	LPM	LPM	LPM	LPM	Probit	Logit
Presidential system-single-party	0.0337 (0.144)	0.0264 (0.143)	0.129 (0.141)	0.0557 (0.117)	0.0546 (0.128)	0.548 (0.970)	1.414 (2.516)
Presidential system-multiparty	0.346** (0.173)	0.327* (0.172)	0.409** (0.191)	0.413** (0.197)	0.417** (0.191)	1.755* (1.045)	3.448 (2.830)
Parliamentary system-multiparty	-0.053 (0.124)	-0.045 (0.128)	0.079 (0.120)	0.075 (0.129)	0.125 (0.120)	0.895 (1.013)	1.929 (2.883)
Drop in GDP		-0.010 (0.009)	-0.003 (0.009)	-0.007 (0.008)	-0.011 (0.010)	-0.017 (0.043)	-0.034 (0.078)
Credit			2.970 (5.180)	4.230 (5.35e0)	-2.980 (6.280)	-0.002 (0.003)	-0.003 (0.008)
Concurrent currency crisis			0.105 (0.126)	0.086 (0.137)	0.033 (0.127)	0.103 (0.544)	0.129 (1.030)
Credit boom			-0.075 (0.097)	-0.089 (0.096)			
NPL			0.008* (0.005)	0.008 (0.005)	0.009** (0.004)	0.050*** (0.018)	0.089** (0.036)
Snap election					0.031 (0.078)	-0.271 (0.477)	-0.441 (1.072)
Constant	0.154 (0.103)	0.233* (0.125)	-0.101 (0.126)	-0.0444 (0.125)	-0.0781 (0.109)	-2.646** (1.053)	-4.939* (2.701)
Observations	63	63	55	53	56	59	59
R-squared	0.134	0.158	0.364	0.381	0.392		
Democracies only	NO	NO	NO	YES	YES	NO	NO

Robust standard errors in parentheses

* p< 0.10, **p< 0.05, ***p< 0.01

Table 4.7 and Table 4.8 show the results of linear probability models for depositor losses and bank recapitalisations respectively. Here, consistent with our main regression results in Table 4.4 and the subsequent analysis on the use of guarantees, presidential systems with multi-party governments are more likely to impose losses on depositors and less likely to use

Table 4.8: Linear probability model for bank recapitalisations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	LPM	LPM	LPM	LPM	LPM	Logit	Probit	Probit
Presidential system-single-party	-0.188* (0.102)	-0.240* (0.126)	-0.248* (0.125)	-0.255* (0.129)	-0.178 (0.119)	-18.10*** (1.836)	-5.510*** (1.027)	-5.677*** (1.357)
Presidential system-multiparty	-0.071 (0.071)	-0.077 (0.072)	-0.005 (0.073)	-0.012 (0.075)	-0.017 (0.107)	-15.89*** (1.753)	-4.244*** (0.875)	-4.026*** (1.303)
Parliamentary system-multiparty	9.720 (0.00207)	0.002 (0.00702)	0.002 (0.0226)	0.006 (0.0263)	0.019 (0.0312)			
Drop in GDP	-0.000 (0.002)	-0.003 (0.003)	-0.000 (0.003)	-0.000 (0.003)	0.000 (0.003)	-0.009 (0.053)	-0.005 (0.030)	-0.080 (0.115)
Concurrent sovereign debt crisis			-0.137 (0.085)	-0.141 (0.089)	-0.113 (0.129)	-2.037 (2.394)	-1.214 (1.159)	-3.100** (1.249)
Credit					-1.630 (4.44)	0.003 (0.007)	0.002 (0.003)	0.023* (0.013)
Credit boom					-0.0118 (0.085)	-0.206 (1.967)	-0.0974 (0.812)	0.160 (0.941)
NPL					0.001 (0.001)	-0.013 (0.046)	-0.006 (0.023)	0.017 (0.026)
GDP per capita				-0.000 (0.000)				
Government orientation								1.404** (0.644)
Constant	1.001*** (0.019)	1.024*** (0.025)	1.032*** (0.028)	1.044*** (0.038)	1.000*** (0.052)	20.42*** (2.524)	6.823*** (1.454)	4.225*** (2.009)
Observations	63	60	59	58	53	35	35	29
R-squared	0.101	0.139	0.204	0.204	0.131			
Democracies only	NO	YES	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses

* p< 0.10, **p< 0.05, ***p< 0.01

bank recapitalisations in the crisis management strategy.

The results of our econometric investigation show that political factors indeed condition policy choice and hence impact the fiscal costs of financial crisis management. Our analysis suggests that this is not due to the difference in the number of veto players in the political system, but rather to other elements such as the fact that in presidential systems, the executive is directly accountable to voters. This enhanced accountability to the electorate is clearly visible in both the policies that different governments use, and the fiscal costs associated with banking crises.

4.7 Conclusion

There is significant variance in how different countries deal with banking crises. Both theory and experience have led to ambiguous recommendations regarding ‘optimal’ policy responses because crises involve many coordination problems and are aggravated by institutional weaknesses (Claessens, Klingebiel and Laeven, 2005). Empirical research has largely focused on the ‘effectiveness’ of specific policy tools with respect to their effect on output, or duration of crises (see for example Honohan and Klingebiel, 2003, Homar and van Wijnbergen, 2013). However, intervention in financial crises requires political decisions. Whilst seemingly obvious, we know very little about how politics conditions policy choice in banking crises. Cross-country econometric analysis of how domestic institutions mediate pressures in times of crises, or shape policy responses, can help decipher the constraints which decision-makers are under when designing strategies and responding to crises.

In this paper we attempted to quantitatively estimate the impact that select political variables have on policy choice and hence the fiscal costs of banking crises. We find that both single-party and multi-party governments in presidential systems are associated with lower fiscal costs of crisis management. Looking at crisis containment strategies, we further

show that these governments are less likely to use guarantees which would expose the state to significant contingent and direct fiscal liabilities and less likely to use bank recapitalisations in their crisis management strategy. Not using these tools in their banking crisis management strategy limits the state's fiscal exposure. Finally we show presidential systems with multiparty governments are more likely to impose losses on depositors.

Our results raise many questions for future research. The limitations outlined in section 4.4 clearly show the need for better data to enhance our understanding of the links between systemic financial crisis and political variables. More in-depth analysis of the link between policy choice and fiscal cost resulting from a crisis, as well as the channels through which our findings occur, could be interesting to explore.

Nonetheless, our empirical results have important implications for the understanding of financial crisis policy-making. Decision-making during financial crisis occurs under a lot of uncertainty and it is clear that financial crises upset old political economy equilibria. Therefore, a greater understanding of the impact that institutions and politics have on policy choices may allow us to better understand and predict decision-making in times of financial stress.

Chapter 5

Reform of the Framework for Financial Crisis Management in the EU

Abstract¹: The financial crisis dramatically exposed the weaknesses of the frameworks for crisis management across the EU. In response, the co-legislator has agreed to establish a harmonised set of policy tools, legislative powers and institutional framework for crisis prevention, early intervention and bank resolution, as well as a Single Resolution Mechanism for euro area Member States and others wishing to join the banking union. This paper analyses the economic rationale for reform of the framework for crisis management and the politics surrounding the policy response. It explains how the limitations of coordination and unprecedented public support for the financial sector led to the push for greater harmonisation. However, the distributional consequences of financial sector support and the establishment of the Single Supervisory Mechanism led to a push to complete the Economic and Monetary Union (EMU) and agreement on the Single Resolution Mechanism. It analyses the negotiations on the financing structure for resolution, decision-making procedures and crisis management tools and emphasises how the power of certain Member States and distributive conflict, with regard to legacy issues, shaped the new architecture. It also highlights the important role the European Parliament played in the negotiations, as well as the different conceptions the negotiators had regarding the role of the State in crisis management.

¹I would like to thank Simon Hix for his helpful comments.

5.1 Introduction

The shift toward regulatory governance in the EU resulted from greater ‘negative integration’ in the single financial market for financial services.² The financial and sovereign debt crisis, however, running against the economic externality of financial risk and uncertainty, demonstrated that financial markets were capable of rapid fragmentation, with sharp increases in liquidity and credit risk and led to a consensus around the need for financial stability.³ Widespread public support to banks and weak coordination in crisis management changed the political economy equilibrium, requiring a ‘positive’ policy response with a more activist role for EU agencies. The banking union emerged as a direct response to the crisis.

Whilst historical institutionalist processes may explain the dynamics leading to the new architecture for the supervision of credit institutions in the euro area – the Single Supervisory Mechanism (SSM) (see for example McPhilemy, 2014), such an approach cannot explain agreement on the second pillar of banking union, the Single Resolution Mechanism (SRM), or the new legislative framework on which it is based. This paper analyses the emergence of the legislative framework, policy tools and the new institutional architecture for bank resolution from a political economy perspective. This encompasses the provisions provided for in the Bank Recovery and Resolution Directive (BRRD), the SRM Regulation, the Intergovernmental Agreement (IGA) on the Single Resolution Fund (SRF) and the related tools provided for in the Deposit Guarantee Scheme Directive (DGSD), and the European

²‘Negative integration’ refers to the removal of barriers, whereas ‘positive integration’ refers to the establishment of common rules (Scharpf, 1996).

³Financial stability can be characterised as, “maintaining the smooth functioning of the financial system and maintaining the system’s ability to facilitate and support the efficient functioning and performance of the economy; and having in place the mechanisms to prevent financial problems from becoming systemic or from threatening the stability of the financial and economic system, but without undermining the economy’s ability to sustain growth and perform its other functions” (Schinasi, 2005, 100).

Stability Mechanism’s Direct Recapitalisation Instrument (ESM-DRI).

The paper will first give an overview of the political economy approaches to financial market reform and the politics of financial integration. It then explains how heterogeneous frameworks for crisis management in the EU and the widespread public support led to the push for reform and the BRRD. It also highlights how the distributional consequences of financial sector support and the establishment of the SSM led to agreement on the SRM. Following this, it analyses the politics surrounding the adoption of the new financing structure, decision-making procedures and crisis management tools. Thereafter it explains how agreement on the BRRD and SRM facilitated agreement on other key instruments in the new architecture for crisis management in the EU.

5.2 Crises, reform, and the politics of financial integration

Political economy approaches to reform rely on the assumption of the unity of the economic and political domains to explain the emergence and outcomes of different regimes (Rodrik, 1996, Drazen, 2000, Williamson, 1994, Alesina, Ardagna and Trebbi, 2006). This approach is useful in the analysis of the incentive structures for various forms of regulation given certain preferences. “Rather than take regulations as a given, the political economy approach attempts to provide a positive analysis of how and why regulations evolve as they do and what forces lead to their durability as well as potential for change” (Kroszner and Strahan, 2001, 233). Organisational development and much of the institutional literature often relies on a punctuated equilibrium model which distinguishes between long periods of stability followed by an exogenous shock and revolutionary institutional upheaval (Gersick, 1991). However, the contention that reform follows a crisis is somewhat tautological and virtually unfalsifiable

(Rodrik, 1996). Therefore, to explain the emergence of new governance structures, we must look at the particular dynamics of reforms following a crisis.

For the purposes of this analysis, this paper will assess the European case against a framework of analysis outlined by Kroszner (1998, 1999). Studying banking and regulatory reform in emerging markets, he explains four reasons why crises upset the old political economy equilibrium and hence lead to reform. Firstly, crises can affect the bureaucratic incentives for regulatory change. Crises can expose weaknesses in the framework for crisis management which give regulators and politicians an incentive to reform. Secondly, the implicit subsidy the financial sector receives from the State becomes clearly evident when large amounts of public money are committed by governments in response to financial crises. This more explicit accounting reveals the costs of policies and serves as an educational role for the public, leading to old regimes becoming unsustainable. Thirdly, governments often take large stakes in financial institutions or commit State resources in the form of contingent liabilities to stabilise the financial sector. Governments may have to raise taxes and sell bonds in order to pay for the bail-out. The distributional consequences associated with bailouts upset the relative position of competing interests leading to reform. Finally, crises change the relative costs and benefits of regulation, leading to the likelihood of ambitious reforms being accepted. This is particularly important in the euro- area context, where the crisis has led to deeper integration and the delegation of competences for financial supervision (the SSM), a strengthening of the fiscal and macroeconomic framework (with the so-called ‘six-pack’, ‘two-pack’ and ‘fiscal compact’), as well as the establishment of the of the European Stability Mechanism (ESM).

In the EU, the politics of financial integration has received much attention in the literature. The shaping of regulatory and supervisory space has always involved conflicts of interests between Member States, the Commission, the European Parliament (EP) and not least market participants. Underhill (1997) for example, emphasises the inter-governmental character

of integration during the seventies, eighties and nineties and highlights the three-way role of the negotiations between the mostly northern European ‘universal banking countries’ led by Germany, the ‘Roman-law’ countries headed by France and finally the UK, with its ‘Common Law’ system. Similarly, Story and Walter (1997) argue a ‘battle of the systems’ took place for hegemonic influence over the European financial area. This, they argue, is due to different responses by governments to the internationalisation of business and banking and the configuration of their domestic financial systems. Quaglia (2010) suggests that this competition has its roots in different ‘belief systems’ of financial regulation. These ideational approaches, she argues, emerged from a tension between a ‘market-making’ principle-based approach from a northern coalition (UK, Ireland and Scandinavian Member States) and a ‘market-shaping’ rule-based approach from a southern coalition (France, Belgium and the Mediterranean Member States), with Germany in between. The outcomes came down to the bargaining power of the members. Other explanations have emphasised the role of the private sector. Mügge (2006), for example, argues that emerging preferences among firms for harmonisation led to the drive for a transnationalisation of policymaking.

More recent contributions on the crisis response have focused on the expansion of the institutional architecture for financial supervision, often explained using the framework of historical institutionalism. McPhilemy (2014), for example, explains that change in the regulatory and supervisory policy space has occurred incrementally, with supranationalisation of different phases occurring at different times from the introduction of the Single Market, through the Lamfalussy framework which relaunched the financial market integration with the Financial Services Action Plan, to the establishment of the European Supervisory Authorities (ESA) following the de Larosiere proposals, and culminating in the Banking Union. “Opened cycles of agenda-setting, regulatory reform and behavioural change” underpinned the transformation and integration of financial regulation and supervision (McPhilemy, 2014, 1486-1487). Other recent contributions focus on the intergovernmental character of the ne-

gotiations around the broad move towards banking union (Howarth and Quaglia, 2013).

Building on Howarth and Quaglia (2014), who analyse how national preference formation shaped the dominant position of Germany in the SRM negotiations, and following Hennessy (2014) who analyses the framework for supervision, this paper emphasises how the power of Member States and distributive conflict with regard to legacy issues shaped the new framework for crisis management. It also highlights the important role the European Parliament played in the negotiations for the new framework, as well as the different conceptions regarding the role of the State in crisis management. It does this by analysing in detail the comparative positions each negotiating party took on each of the key pieces of legislation with respect to the original proposals and eventual outcome. It also draws on the many press releases, documents from public institutions released during the negotiations and press articles which document the positions of the various parties, as well as other academic and policy research on the subject. It therefore aims to contribute to development of positive analysis of policymaking in political science and political economy and to understand the patterns of institutional design and regulatory policy in the EU.

5.3 Crisis management in the EU and the political economy of reform

This section will assess in more detail the reform of the architecture for crisis management in the EU, as against the framework proposed by Kroszner (1998, 1999).⁴

⁴Kroszner (1998) focuses primarily on private sector interests. However, this paper focuses more on the economic rationale and politics surrounding the public policy response. Nonetheless, the framework is useful in analysing why crises are associated with reform and the particular dynamics of reform following financial crises.

5.3.1 Bureaucratic incentives and the limits of coordination

One of the key factors which leads to reform of banking regulation following a crisis is bureaucratic incentives for regulatory change (Kroszner, 1998). In the EU, responsibilities throughout the crisis for crisis-prevention, crisis management and crisis resolution remained within the remit of national authorities. However, national regimes for crisis management were very different. The legal powers for crisis management and resolution varied significantly across Member States. In most Member States, only standard corporate insolvency proceedings were available to banks in trouble. These did not however take into account the special role credit institutions play in an economy. In other Member States, powers were derived from specific resolution or insolvency regimes. Given the diverse legal powers, the objectives and mandates for crisis management were different. “Corporate insolvency laws typically have two principal objectives: a fair and predictable treatment of creditors and the maximisation of assets available to satisfy creditors’ claims. By contrast, in a specific regime for bank insolvency, public policy objectives such as financial stability, the continuity of services and the integrity of the payments systems, may take priority” (European Commission, 2009*b*, 9). Domestic authorities in charge of crisis management also varied significantly across Member States and included supervisors, central banks, government ministers, courts, insolvency officials and even deposit guarantee schemes (European Commission, 2009*b*, 8). Different authorities may have heterogeneous preferences in crisis management. Central banks, for example, may have a preference for financial stability in crises (Honohan and Laeven, 2005). On the other hand, officials in departments of finance may be more concerned with the fiscal costs of crisis containment or resolution (see chapter 3).

In this context Member States responded very differently to crisis situations, whereby some authorities preferred a more graduated approach to crisis management while others were geared towards rapid intervention (European Commission, 2009*b*, 9). Furthermore, the crisis management tools at the disposal of each authority varied significantly and the threshold

conditions to use such tools were not harmonised which further hampered coordination efforts. Finally, most Member States lacked any form of private sector financing arrangements for banks when they got into trouble. Where Member States had such regimes, they were lacking adequate funding mechanisms (European Central Bank, 2011*b*).⁵

At the European level, co-operation in crises between national supervisors, Central Banks and Ministries of Finance, was framed by a Memorandum of Understanding (MoU) on Cross-border Financial Stability.⁶ Cross-Border Stability Groups (CBSGs) were a central element of the MoU. However, these were designed to be established on a voluntary basis and to be applicable only where a ‘common interest’ existed, i.e only relevant parties that shared specific financial stability concerns, such as cross-border financial groups would consider establishing them. They were also designed to be fully flexible, whereby the institutional and operational set-up was left to the relevant parties. Furthermore, they were to act as a ‘complementing nature’, supporting existing crisis management groups (Domestic Standing Groups), rather than a new supranational layer of governance and hence did not have any decision-making powers. Interactions were mostly based on *ad hoc* operational contacts rather than structured arrangements, particularly given the non-binding nature of the instrument. The MoU (and CBSGs) therefore failed to provide an effective basis for co-operation leading to sub-optimal coordination and resolution (European Commission, 2012).

The institutional framework for cross-border crisis management also led to a misalignment of incentives, given the cross-border nature of banking groups. Subsidiaries were the main form of cross-border banking model in the EU holding €4 trillion in assets (European

⁵Germany for example had established an *ex-ante* funded resolution fund. Similarly in Denmark a State-owned Financial Stability Company with a guarantee from the DGS existed. In the Netherlands the DGS was permitted to finance deposit transfers, whereas in the UK the DGS (*ex-post* financed) was permitted to financing resolution (see European Central Bank, 2011*b*, 88)

⁶ These were signed in 2003, 2005 and 2008 and were in line with international guidelines for Cross-border Cooperation on Crisis Management (see Kudrna (2012)).

Commission, 2009*b*, 11). The incentive structure for Member States was to act to minimise damage to their own economic and financial systems and to protect national stakeholders. This led authorities to ring-fence national assets of cross-border groups and apply resolution tools at the level of each entity rather than at the group level.⁷ Member State authorities aimed to maximise assets available to the creditors of national entities, protect national DGS and limit the exposure of taxpayers in each individual Member State (see European Commission, 2009*b*).

This resulted in negative spill-overs in the form of contagion, confidence, and competitive distortions following the collapse of Fortis and Dexia and the collapse of the Icelandic banking sector, which had entered the EU market through branches and subsidiaries in the UK, the Netherlands, Belgium, and Germany (see Stolz and Wedow, 2010, Kudrna, 2012, European Central Bank, 2011*a*). Therefore clear bureaucratic incentives for reform of the framework for crisis management existed.

In response to these challenges and in the absence of any specific mandate in the Treaties for the authorities to act in a coordinated way to manage financial crises, in June 2009, the ECOFIN Council called on the Commission to bring forward proposals for a comprehensive ‘cross-border framework to strengthen the EU financial crisis management systems’ (Council of the European Union, 2009). Crisis management however, was to remain a national based competence with a harmonised framework and enhanced coordination mechanisms.⁸

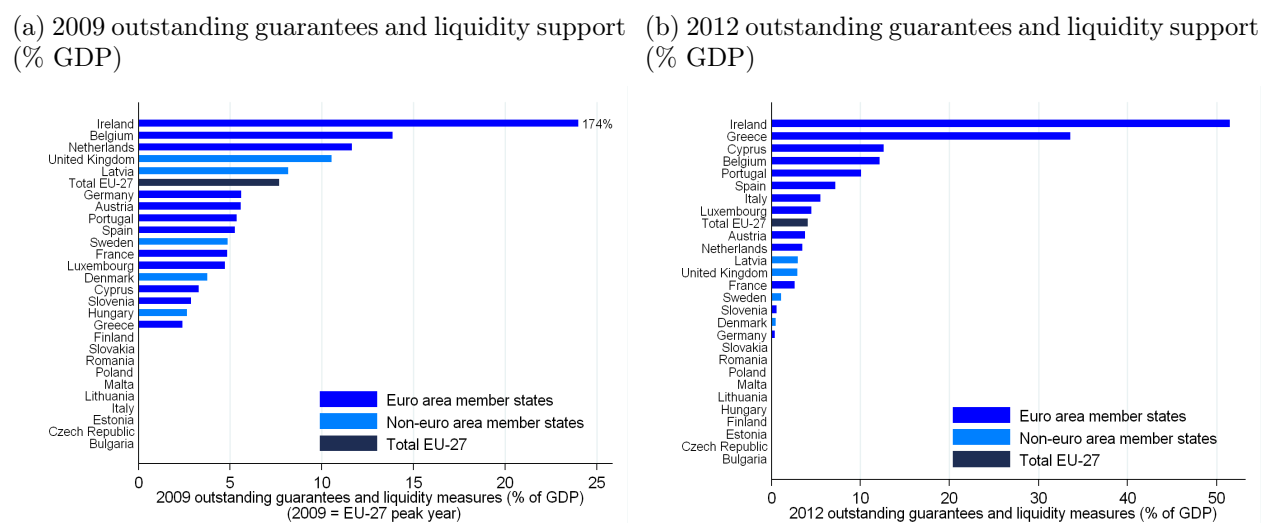
⁷This was reinforced by the many legal barriers to the transfer of collateral and other assets within cross-border banking groups from both EU and national law (see European Central Bank (2010, Annex))

⁸New European Supervisory Authorities (ESAs) were established in January 2011 to replace the former supervisory committees. There was originally disagreement amongst the ECOFIN regarding the role these would play. Whereas in June 2009 the Commission was invited to ‘explore how the ESA’s could coordinate supervisors in crisis situations’ (namely the exchange of information and facilitation of cooperation), they always had to fully respect the responsibilities of national authorities in preserving financial stability and in crisis management in relation to potential fiscal consequences (Council of the European Union, 2009).

5.3.2 Public support to the financial sector

The second key factor which upsets the political economy equilibrium leading to reform is the educational role the enormous costs of financial crises create (Kroszner, 1998, Kane, 1996). Failures of banks “may heighten the public’s awareness of the costs of regulation and may make it more difficult, that is more costly in terms of votes, to maintain the old regulatory regime” (Kroszner, 1998, 23). Given the pre-crisis framework in the EU described above, it is perhaps un-surprising that Member States used large amounts of public money to bail out their banks. However, the scale of public support was unprecedented.

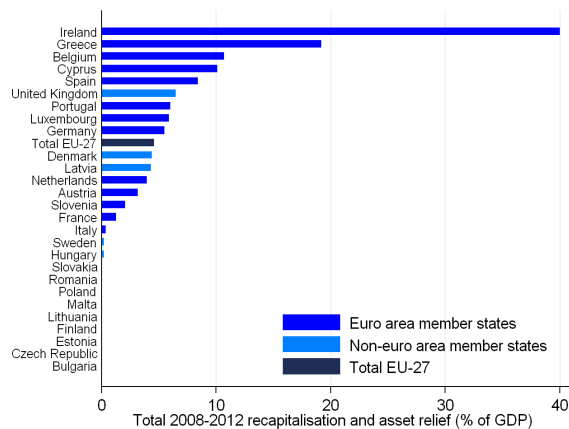
Figure 5.1: 2009, 2012 guarantees and liquidity support in the EU (%GDP)



Source: European Commission (2014b)

Figure 5.1 shows the use of guarantees and other forms of liquidity support to banks across the EU. In 2009 Member States provided the equivalent of 7.68% of EU GDP (€905.8 billion) in support to the financial sector. This represented a peak year. It gradually reduced to 4.1% of EU GDP (€534.48 billion) by 2012. Ireland stands out beyond any other Member State in terms of the relative support it provided to the financial sector following the far reaching 2008 decision to guarantee all liabilities and deposits.

Figure 5.2: 2008-2012 recapitalisation and asset relief (% GDP)



Source: European Commission (2014b)

Beyond liquidity and guarantees Member States also directly supported credit institutions. Credit ratings downgrades and losses on credit portfolios put pressure on the capital positions of banks and uncertainty about the value of some assets resulted in a reluctance to lend in the interbank market (Stolz and Wedow, 2010, 29-32). Therefore governments complemented guarantees with direct equity injections to bolster the capital positions of banks, asset insurance to facilitate lending and asset removal schemes (i.e. bad banks) to ‘cleanse’ balance sheets. Figure 5.2 shows that between 2008 and 2012, Member States provided capital support in the form of recapitalisation amounting to 4.6% of EU GDP. This was composed of €413.2 billion in recapitalisation measures and €178.71 billion asset relief measures. Figures 5.1 and Figure 5.2 show both the significant divergence of interests and national policies concerning the use of public funds in response to the crisis. These dynamics severely hampered the preservation of financial stability in the EU as a whole (De Larosière, 2009, Turner, 2009).

In many cases such support led to the effective nationalisation of banks. This changed the political economy equilibrium leading to a push for further reform of the framework for crisis management to limit the exposure of governments in resolution cases. Ireland, for example,

spent the equivalent of 38.38% of its GDP (€62.78 billion) re-capitalising its banks over the period (2008-2012), in particular putting €32 billion into Anglo Irish Bank. Other Member States also heavily supported their banks with capital and asset relief measures. Germany (€144.4 billion) “even organised a shareholder squeeze-out to take full control of Hypo Real Estate, after having granted more than €100 billion in guarantees to the bank” (Stolz and Wedow, 2010, 30). Recapitalisation and asset relief measures in the United Kingdom (UK) amounted to €122.8 billion, in particular with Royal Bank of Scotland costing the State €46 billion. Also Spain (€88.14 billion) injected €22 billion of capital into Bankia (European Commission, 2014*b*).

These dynamics led to the inclusion, in the proposals for reform, of *ex-ante* financed bank resolution funds to limit the exposure of the taxpayer to failing institutions. In their May 2010 communication on bank resolution funds, the Commission highlighted that “political support is growing for the so-called ‘polluter pays’ principle...so that those responsible for causing it will pay for the costs of any possible future financial crisis” (European Commission, 2010*a*, 3). The widespread public support also prompted the reformed framework to include a bail-in tool to write-down classes of debt of a failing bank and to ensure that creditors bear losses in resolution (European Commission, 2010*b*, 2011*a*). Therefore, in line with the Kroszner’s (1998) framework, the widespread public support clearly changed the political economy equilibrium leading the reforms to focus on measures which limited the exposure of the State to banks in resolution.

Following multiple conferences, consultations and communications, the Commission came forward with their proposal in June 2012. The BRRD proposed improved and harmonised preventative, early intervention and resolution tools (with harmonised triggers for intervention), clearly defined authorities and a legislative framework, to allow financial institutions to fail in an orderly manner. The clear objectives for resolution were to safeguard both the financial stability in individual Member States and in the EU as a whole and to limit

economic disruption. It also included the proposal for a bail-in tool and establishment of national resolution funds where burden-sharing by shareholders and creditors would not be sufficient.

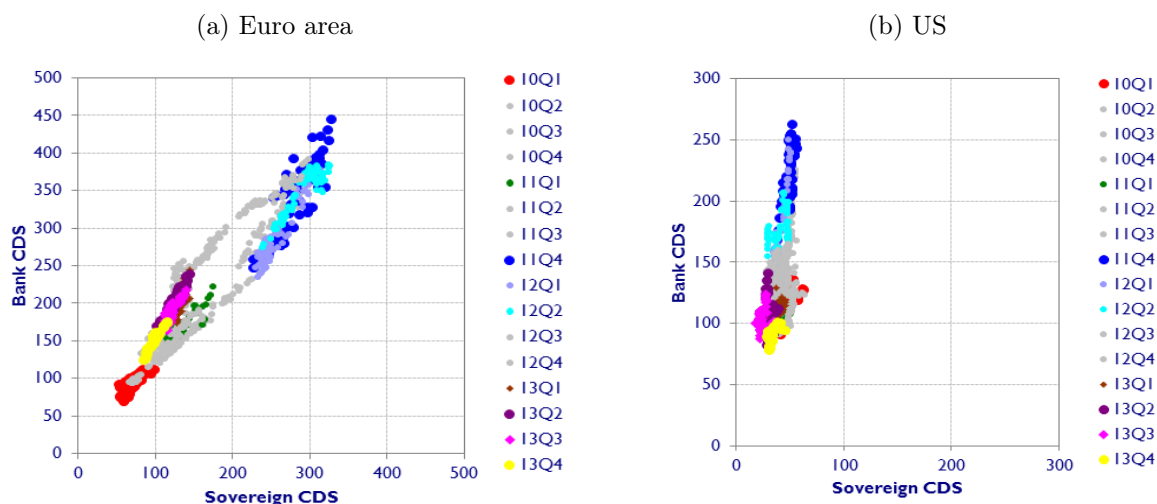
5.3.3 Distributional consequences of financial support

The third key factor which upsets the political economy equilibrium is that crises rarely affect all parties similarly and hence have significant distributional consequences (Kroszner, 1998, Pepinsky, 2014, Walter, 2013). “Powerful groups or coalitions may fragment as their interests diverge during economic trouble and new constituencies may be created” (Kroszner, 1998, 22). The unprecedented support to the financial sector in the EU had significant distributional consequences for many Member States, particularly when it mutated into a sovereign debt crisis in 2010. This manifested itself through the so-called ‘bank-sovereign nexus’ and most dramatically for Member States who were forced into an IMF/EU programme of adjustment as a result of being unable to tap bond markets, given the scope of their financial sector support.

Since the start of the financial crisis, concerns about the strength of financial institutions had been affecting the sovereign ratings of certain Member States. Nearly all banks in the EU had reduced their domestic exposures prior to this. However as a consequence of the crisis, banks resumed purchases creating a home-bias in domestic holdings of sovereign bonds (Angelini, Grande and Panetta, 2014). The relationship between banks and sovereigns is captured in Figure 5.3 and shows a strong correlation between bank credit default swaps (CDS) and sovereign CDS, when, for example, compared to the U.S, for example.

Ailing balance sheets of stressed banks who were reliant on short-term inter-bank financing increased the burden faced by governments. The subsequent large direct and contingent financial support provided to banks was financed through an increase in government debt. This, in turn, was mostly purchased by domestic banks. The support however, weighed on

Figure 5.3: 2010-2013 correlation between bank and sovereign CDS in the euro area and the US



Source: Thomson Reuters and ECB calculations. Latest observation: Q4 /2013.
Notes: Sovereign CDS euro area average calculated as country CDS weighted by ECB capital key. Banks CDS euro area average is calculated taking the largest bank of each available country and aggregating using ECB capital key. Each dot represents the pair (av. sovereign CDS, av. bank CDS) at a certain day in the respective quarter. Greece is excluded from the sovereign CDS average. Colour-coded dots correspond to 2010Q1, 2011Q4, 2013Q2, 2013Q3 and 2013Q4 respectively.

national fiscal authorities and rising sovereign risk affected banks' credit risk through their exposures.

The causality ran both ways as a re-pricing of risk escalated throughout the eurozone. Whereas Ireland and Spain had run fiscal surpluses prior to the crisis, a collapse in the property market led to a sovereign debt crisis. However in Greece, problems with public finances were transmitted to the banking sector, whereby sovereign downgrades in the wake of deteriorating economic and fiscal conditions exacerbated the stress on the balance sheets of banks given their significant domestic sovereign holdings. Furthermore, in both cases the expectation of default led to contagion, giving uncertainty about counterparty status, further exacerbating the tension and financial market fragmentation across the euro area.

The political economy dynamics of the bank-sovereign nexus banks are interesting. Bat-

tistini, Pagano and Simonelli (2013) investigate the home bias of sovereign holdings and decompose the country risk and the common risk components in sovereign spreads. They find that domestic banks' response to country risk was primarily a peripheral phenomenon and suggest that this may be because of sovereign issuers exerting 'moral suasion' on banks in their jurisdiction to support demand. Their analysis suggests that home bias in 'core' banks was a response to systemic re-denomination risk, rather than country risk factors.⁹

Whereas previously many Member States were opposed to deeper integration, the emergence of the sovereign debt crisis spurred the reform process. Whilst the tools for burden-sharing and resolution financing were already proposed in the BRRD, the banking union suggested a much deeper risk-sharing framework for Member States which would allow costs of resolution to be spread across the eurozone, thus helping to break the bank-sovereign nexus. "The fact that the costs of any bank rescue will fall less on the sovereigns should lift expectations of government debt sustainability, thus improving asset quality for banks exposed to their governments" (Draghi, 2014).

In March 2013, the European Council committed to completing the banking union. They prioritised the conclusion of the legislative process for the SSM, after which the ESM could recapitalise banks directly. They stressed that an agreement urgently needed to be found on the BRRD and the accompanying DGS Directive and that once the Commission submitted a proposal for the SRM it would be made a matter of priority to be adopted within that parliamentary cycle (European Council, 2013). On 10 July 2013, the Commission proposed a Single Resolution Mechanism for the banking union to complement the SSM (European Commission, 2013a). It was designed to "allow bank crises to be managed more effectively in the banking union and to contribute to breaking the link between sovereign crises and ailing banks" (*ibid*).

⁹'Core' countries here include Austria, Belgium, Germany, France the Netherlands. The peripheral countries are Spain, Greece, Ireland, Italy and Portugal.

5.3.4 The SSM and the changing costs and benefits of deeper integration

Kroszner (1998) suggests that a final driver of reform is that crises change the relative costs and benefits of regulation. Interestingly, during the first consultation on the new framework for crisis management in 2009, the Commission floated the (then ambitious) idea of “a single authority to be responsible for the resolution of a particular group” or “European Resolution Authority (ERA)” (European Commission, 2009*d,a*). They argued that a harmonised framework, even with coordinated but separate entity resolution, would “not necessarily allow the most efficient re-organisation... these concerns could only be fully addressed by greater structural integration of a resolution framework, possibly by designating a lead authority” (European Commission, 2009*b*, 13-14). However a majority of Member States were strongly opposed to the idea and argued that “national authorities were closer to the markets and that it would have fiscal implications with potential impacts on national budgets” (European Commission, 2009*d*).

Similarly, in 2010, in their communication on bank resolution funds (for the BRRD), the Commission argued that “in principle, pooling resources into a single pan EU resolution fund would deliver clear benefits... [and] ... better reflect the pan- EU nature of banking markets, in particular for cross border banking groups” (European Commission, 2010*a*, 6). However they recognised that, at that time, it would be difficult to create a single resolution fund in the absence of an integrated EU supervisory and crisis management framework. Therefore, the shift in supervisory powers to the supranational level was pivotal in making the leap to integration of the second pillar of banking union.

When political agreement was reached in the Council on the SSM, the political economy equilibrium changed, with a concerted effort to ‘deepen EMU’ (European Council, 2013). In December 2012, the European Council concluded that “in a context where bank supervision

is effectively moved to a single supervisory mechanism, a single resolution mechanism will be required... It should safeguard financial stability and ensure an effective framework for resolving financial institutions, while protecting taxpayers in the context of banking crises” (European Council, 2012).

In July 2013, the Commission came forward with a proposal which provided for: (i) an institutional framework encompassing a Single Resolution Board (SRB) which would centralise decision-making, have broad powers to analyse and define the approach for resolving a bank, to produce efficient decisions and to contribute to minimising the costs of resolution; (ii) a financing structure to ensure the availability of medium-term funding support while the bank was restructured in the form of a Single Resolution Fund (SRF), and (iii) a tool-kit for resolution, replicating much of what was provided for in the BRRD (European Commission, 2013*c*).

5.4 The politics of crisis management in the EU

The previous section has sought to explain how the heterogeneous powers, objectives, authorities and tools for crisis management limited effective domestic resolution and co-ordination in cross-border cases. It showed how this resulted in negative spillovers leading the ECOFIN Council to request a comprehensive framework to strengthen the EU framework for financial crisis management. It then analysed how the widespread use of public support led to the push for deeper reform and the inclusion of ex-ante bank financed resolution funds and a bail-in tool which would limit the exposure of taxpayers to future resolution cases. Finally it showed how, although the ambitious proposals for a SRM and SRF were initially floated by the Commission as early as 2009, it was only after the emergence of the sovereign debt crisis and following agreement on the SSM that deeper integration in the second pillar of banking union became politically feasible. The framework of analysis outlined by Kroszner

(1998) therefore is very applicable to the European case.

Whilst bureaucratic incentives, public support, distributional consequences and changing costs and benefits lead to reform, these dynamics also shape the policy response. This section examines the politics of the policy response in particular, by analysing the comparative positions both the EP and the Council took in the negotiations of three specific aspects of the new framework, namely: (i) the financing structure for resolution, (ii) decision-making procedures, and (iii) crisis management tools. It emphasises how distributive conflict with regard to legacy issues and the power of certain Member States shaped the new architecture. However it also highlights the important role the European Parliament played in the negotiations. The different positions negotiators took also reveals the different conceptions that they had regarding the role of the State in crisis management.

5.4.1 Resolution financing

A central element of the new framework for crisis management in the EU is that the banking system would pay for the resolution of credit institutions, rather than the taxpayer. Included in the Commission proposal for the SRM was the establishment of an *ex-ante* financed Single Resolution Fund (SRF) which would be raised from levies on the banking system and amount to 1% of covered deposits (approximately €55bn). It was proposed that this would be built up over ten years (see European Commission (2013c, 14)). The SRF could then be used to make loans, to guarantee the assets or the liabilities of the institution under resolution, its subsidiaries, a bridge institution or an asset management vehicle, to purchase assets of the institution, or contribute capital to a bridge institution or an asset management vehicle. Furthermore, it could be used to pay compensation to shareholders or creditors if they would have received less than under normal insolvency proceedings.

The legal basis for the SRM and hence the SRF, which is established under the SRM Regulation, is Article 114 of the Treaty (TFEU). This however gave rise to both political and

legal concerns in Germany in particular, which argued that levies could not be transferred to the SRF under this legal basis (Howarth and Quaglia, 2014). Therefore the Council (on 18 December 2013) proposed a separate Intergovernmental Agreement (IGA) to provide for the transfer of levies to the SRF. This provoked severe criticism from the EP (Schulz, 2014, Giegold, 2014, European Parliament, 2014*b*), who argued that it infringed on the principle of sincere co-operation (Art. 4(3) TFEU), as it opened up entirely separate negotiations (to the SRM trilogue negotiations). They were also highly critical of the Council building an “intergovernmental chapter into the system, especially if there are no sound legal grounds for it” (European Parliament, 2014*e*).

Rather than immediately establishing a single fund, the IGA allowed the Council to establish a hierarchy of resolution financing and a prolonged mutualisation schedule with respect to resolution financing. Germany’s central concern was that it did not want the SRF to end up paying for the legacy issues that Member States had incurred during the crisis. They stated that “we do not want banks’ toxic legacy assets in individual countries transferred to the taxpayers of other countries. Hence a gradual process of mutualisation and continuing responsibility on the part of the member states represents a fair compromise” (BMF, 2014).

The IGA established a compartmentalised structure for the SRF, whereby each Member State (MS) will collect their respective contributions in a national compartment. The national compartments will be progressively mutualised over a transitional period of eight years as shown in Table 5.1.

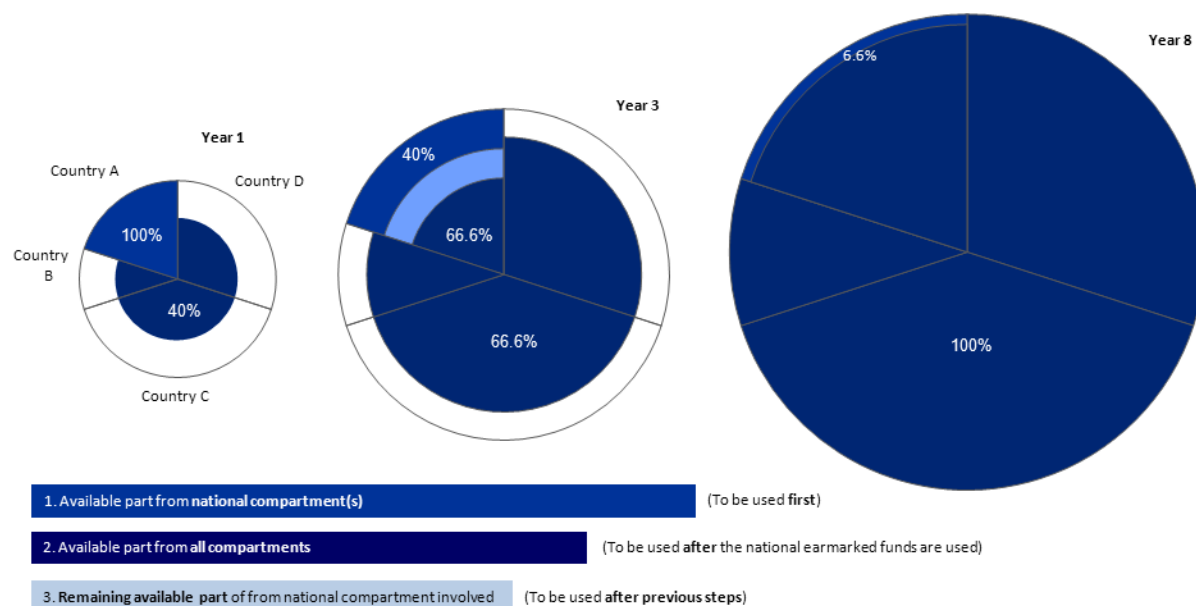
Table 5.1: Mutualisation schedule for the Single Resolution Fund

Year	1	2	3	4	5	6	7	8
% of compartment of MS concerned	100%	60%	40%	33.3%	26.6%	20%	13.3%	6.6%
% of all compartments available	40%	60%	66.6%	73.3%	80%	86.6%	93.3%	100%

Resolution financing will be strictly accorded to a pre-defined hierarchy and limited

during the transition period, as outlined in the IGA. This is portrayed in Figure 5.4. In the first step, costs will be borne by national compartments of the Member State(s) of the institution(s) under resolution. If the financial means are not sufficient, recourse will be had to the compartments of all participating Member States. Thereafter, any further financial means left in the national compartment will be used. In a fourth step, extraordinary *ex-post* contributions can be raised from the institutions in the Member States where the resolution is taking place. Finally, if these financial means are still insufficient, the SRF may contract borrowings or make temporary transfers between compartments (European Central Bank, 2014).

Figure 5.4: Hierarchy of resolution financing for the Single Resolution Fund



Source: European Central Bank, European Commission

Although the EP was not formally involved in the negotiations, they insisted that they could not “accept to sign up to a system which could fail its first tests because this [would] keep taxpayers at the forefront of paying for bank risks and develops a system of privileged and under-class banks based on national affiliation, thereby undermining the essence of the single market” (European Parliament, 2014*d*). Therefore they insisted on a seat at the negotiating table for the IGA and even reflected on whether “no deal would be better than a very bad one” (European Parliament, 2013*c*). The original mutualisation schedule was to be linear and over ten years. Table 5.1 showing how the EP ensured that the mutualisation schedule would be 60% mutualised after two years, with equal progressive mutualisation thereafter. They also negotiated to shorten the mutualisation schedule to eight years (see Merler and Wolff, 2014). Furthermore, the EP text on the SRM Regulation had included that the SRB should be able to contract a loan facility for the Fund, preferably using a “European public instrument”, to ensure that the immediate availability of adequate financial means to be used, whenever the amounts raised through *ex-ante* and *ex-post* contributions would not be sufficient (European Parliament, 2014*a*, Art. 69*a*). They succeeded in including in the final compromise that the SRB can contract financial arrangements, including where possible, from ‘public financial arrangements’ (Article 74 SRM Regulation). Furthermore, a recital (107) obliges the SRB and Member States to develop an enhanced borrowing capacity for the SRF. This inclusion represented a significant success for the EP (European Parliament, 2014*e*).

The outcome on resolution financing shows the dominance of Member States, in particular Germany, during the negotiation process. However, it also displays the central role the EP played in pushing for a ‘European solution’, despite formally not being party to the IGA negotiations (European Parliament, 2014*c*). It also elucidates how distributional conflict and concern with regard to legacy issues shaped the financing structure for the new framework.

5.4.2 Decision-making

Similar dynamics are evident from the negotiating positions that the relevant parties took on the decision-making procedures. The SRM regulation establishes a Board (SRB) to take decisions on resolution cases. It is composed of a Chair, four independent members and of representatives of national resolution authorities.¹⁰ The SRB will convene in two different compositions: executive and plenary. When deliberating on a specific resolution case, the representatives of the relevant national resolution authorities will also be included in the executive session.

The Commission originally proposed that in the plenary session, the SRB would only take all decisions of a general nature, whereas in its executive session, SRB would take decisions in respect of individual entities or banking groups. However the Council pushed for an enhanced role for the plenary session, to ensure a stronger role for their respective Member State representatives. Comparatively, the EP was highly critical of the complexity of the decision-making process and argued that “decision- making on individual resolution cases must be credible, efficient and predictable” (European Parliament, 2014*d*). They favoured a lean and swift decision- making process which preserved ‘the European interest’ and would not be ‘single only in name’ (European Parliament, 2013*c*).¹¹

In the end it was agreed that the executive session will take any resolution decision up to €5bn. The plenary session of the Board will take decisions on: (i) the necessity to raise extraordinary *ex-post* contributions, (ii) borrowing between financing compartments, (iii)

¹⁰The Commission and the ECB will act as permanent observers on the SRB.

¹¹They therefore agreed that the executive session should be entrusted with the key responsibilities whereas the plenary would be mainly responsible for decisions regarding borrowing. However they amended the appointment procedure by adding an approval role for themselves prior to any involvement of the Council. Furthermore, they added a new set of principles to govern the activity of the Board. The principles are to: (a) act independently (b) have the necessary expertise on bank restructuring and insolvency (c) be able to deal with large banking groups (d) be able to act swiftly and impartially (e) ensure that appropriate account is taken of national financial stability, financial stability of the European Union and the internal market, and (f) be accountable to the European Parliament and the Council (see European Parliament, 2014*a*, Art. 43a).

alternative financing means (e.g. contracting borrowings), (iv) the mutualisation of national financing arrangements, and (v) investments. Furthermore, once the net accumulated use of the SRF in the previous 12 months reaches a threshold of €5bn, the plenary will evaluate the application of the resolution tools, in particular the use of the Fund, and provide guidance which the executive session shall follow in subsequent decisions (see European Central Bank, 2014). Distributional concerns, as well as the dominance of the Council, are therefore also clearly visible from the divergent different positions and subsequent outcome of the negotiations on decision-making procedures for the executive and plenary.

The negotiations on decision-making procedures also prompted an inter-institutional battle during the negotiations. Following the ‘Meroni case’, it is prohibited to assign tasks to EU agencies, by way of secondary law, which may curtail the power of EU institutions under the Treaties.¹² The Commission’s original proposal had suggested that the Commission would decide to initiate resolution on a recommendation from the SRB. The EP agreed that the ultimate decision-making powers for resolution should be entrusted to the Commission, as the ‘Meroni institution’. They however proposed to strengthen the role of the SRB vis-à-vis the Commission.

However, the Council considered that it should be for the Council “to exercise effective control over the decisions that entail discretionary powers related to the use of the resolution tools and for the use of the Fund in a specific situation of resolution” and to “decide whether and how the powers to write down or convert capital instruments are used” (Council of the European Union, 2013*b*, recital 15a). They argued that given the impact of resolution decisions on the financial stability of Member States and on the Union, as well as on the fiscal sovereignty of Member States, ‘adequate’ involvement of the Council was required.

The final compromise leaves the Commission as the main ‘Meroni institution’. The agreement provides for Council involvement in decision-making, only at the explicit request

¹²Case 9/56 Meroni [1958] ECR p133 .

of the Commission. Once a resolution scheme is adopted by the Board, it will be sent to the Commission for endorsement. Within 12 hours after adoption of a resolution scheme, the Commission may propose to the Council to object to the scheme (on the grounds that it is not in the ‘public interest, or, object on the basis of a material modification of the amount of the SRF) (see European Central Bank, 2014). This represents a significant success for the EP which feared that the excessive politicisation of decision-making would prompt inefficient delays (European Parliament, 2013*c*). It also displays how the distributional concerns of the Council shaped not only the financing structure, but also the decision-making procedures for the framework.

5.4.3 Crisis management tools

The SRM Regulation replicates most of the tools as provided for in the BRRD which the SRB will use in any resolution case. For example the sale of business tool allows the authorities to sell all or part of a failing bank. The bridge institution tool allows the authorities to identify the good assets or essential functions of a bank and separate to them into a new publicly owned (bridge) bank which would then be sold to another entity. The remaining ‘rump’ bank would then be liquidated under normal insolvency proceedings. The asset separation tool allows the authorities to ‘clean’ the balance sheet of a bank by putting the bad assets into an asset management vehicle (AMV). A number of issues arose in the negotiations between the Council and the EP on crisis management tools. This section looks at three such issues regarding: (i) the precautionary recapitalisation tool (ii) government stabilisation tools, and (iii) bail-in tool.

One of the main sticking points in the six month talks, was the use of public money for banks in a precautionary case - the precautionary recapitalisation tool, and in resolution - government stabilisation tools (GSTs) (Barker, 2013*a*). These provisions were included by the Council and EP respectively in their texts. There was agreement between the EP and

the Council that in exceptional circumstances, for example due to a serious disturbance in the economy or to preserve financial stability, State-backed guarantees of liquidity facilities provided by central banks and newly issued liabilities would not trigger resolution. The Council stressed the importance of including the possibility of public equity injections when a bank is viable (i.e. when it complies with or is marginally below its capital requirements (Council of the European Union, 2013*b*, Art. 27(2)(d)(iii) and recital 24). They argued therefore that precautionary and temporary public recapitalisation should be possible. The EP repeatedly expressed doubts on the rationale for that provision, which in the absence of appropriate safeguards, they argued could be used to bailout banks, prior to triggering resolution.¹³

Such an inclusion posed a challenge to legislators. “On the one hand, the expectation that public support will be available may keep moral hazard alive among bankers... Experience has shown that, especially when a large banking institution is concerned, national regulators are all too willing to protect national champions and forbear their sins. On the other hand, a generalised promise that financial support may always be preceded automatically by activation of the bail-in instrument may be de-stabilising.” (Micossi, Bruzzone and Carmassi, 2013). Question marks were also raised as to whether such a proposal would clash with EU State aid rules (Barker, 2014).

In the final compromise, the precautionary re-capitalisation tool was included in the final text as foreseen by the Council. Interestingly however, the negotiating parties took reverse positions when it came to the inclusion of GSTs. The EP included new Articles (European Parliament, 2013*b*, (Art. 50(a-d)) which provided for the possibility of additional public support for failed banks that have entered into resolution. They argued that Member States

¹³ See for example MEP Lamberts in (Barker, 2013*a*), who argued “bailout is still alive, if somewhat contained”.

should be able to provide guarantees for the liabilities or assets, take a credit institution under temporary public ownership, and provide direct equity support to a bank to avoid systemic contagion effects in the economy. These were introduced by rapporteur Hökmark , who drew comparisons with the Swedish use of GSTs in containing and resolving the Swedish financial crisis in the nineties.¹⁴ Certain Member States in the Council were opposed to the inclusion of such tools, arguing that their inclusion was not compatible with protecting taxpayers money in resolution and “the draft agreement offers too much freedom to governments wanting to bail out banks with public money, rather than impose losses on bondholders” (Barker, 2014). These tools however were also included in the final compromise on the BRRD.

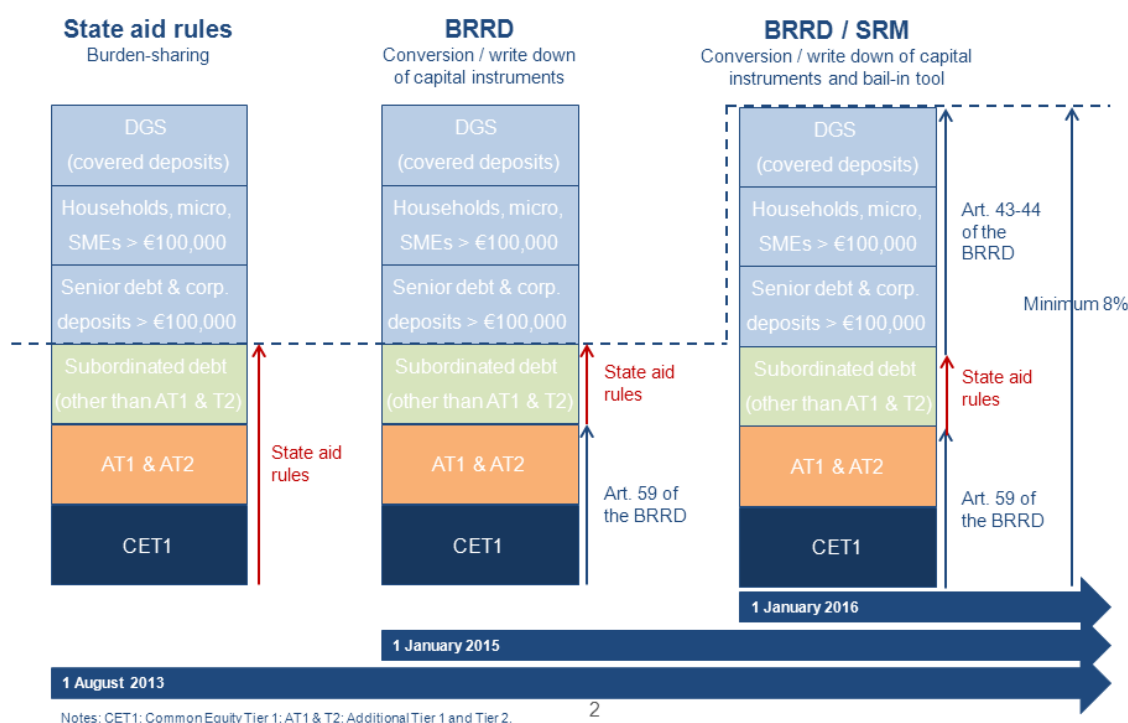
The divergent positions on these two crisis management tools show the different perspectives the negotiating parties took on the role of the State in crisis management. The Council wished to retain a strong role for the State in supporting banks before they entered into resolution, albeit in exceptional circumstances. However once a bank entered resolution, most Members did not wish to allow the State the use of public support in the resolution process, preferring to rely on private sector solutions. Comparatively, the EP wished to limit the role of the State in supporting potentially non-viable banks, but to allow a full range of government tools to aid the resolution process.

Similar dynamics can be seen on the variant positions regarding the bail-in tool. The bail-in tools represent one of the most important innovations in the framework for crisis management. It enables resolution authorities to impose losses on senior creditors by writing down debt or by converting their claims into equity. In August 2013, the European

¹⁴Rapporteur Hökmark, in his presentation of the BRRD to the Committee on Economic and Monetary Affairs noted that “I have, in my draft report, introduced what I call “Government financial stabilisation tools”, including the opportunity for the individual Member State to take, if so deemed necessary as a final resort, the institution fully or partly under temporary public ownership or issuing a guarantee of the liabilities of one or more institutions... I think it is unrealistic to assume all future crises will be resolved without a single cent of tax-payers’ money involved. And if we anyhow go along with that assumption, reality will prove us wrong and we will see situations where Member States will have to resort to various forms of public intervention the day the systemic crisis occurs anyway.” (see presentation 06 November 2012, European Parliament, 2013a).

Commission had revised their State aid rules for financial sector support in the context of the financial crisis. “Before granting any kind of restructuring aid, be it a recapitalisation or impaired asset measure to a bank, all capital generating measures including the conversion of junior debt should be exhausted, provided that fundamental rights are respected and financial stability is not put at risk” (European Commission, 2013*b*, paragraph 19). This is captured in the first column of Figure 5.5 which shows burden-sharing in a stylised balance sheet under the State aid rules. However, the BRRD goes much further.

Figure 5.5: Burden sharing and bail-in under the State aid framework and BRRD/SRM



Source: European Central Bank, European Commission

Under the new framework the Council insisted on a very high threshold for bail-in before any financial support could be given to a bank in the resolution process. This is depicted in

the third column of Figure 5.5. Financing arrangements can only be used after a minimum level of bail-in has been imposed on shareholders and creditors equal to 8% of total liabilities including own funds. This can include a contribution from senior creditors. Thereafter, any contribution of resolution funds would be limited to 5% of total liabilities. Subsequently, all senior unsecured, non-preferred liabilities, other than eligible deposits, will have to be bailed-in before further financing arrangements could be used. The UK Independent Commission on Banking (ICB) studied cumulative losses for a number of historical crises from 1988 onwards. A bail-in of 8% of total liabilities (including own funds), would correspond to approximately 24% of risk-weighted assets. During the recent crisis, cumulative losses peaked with Anglo Irish Bank, which experienced losses of 39% of risk-weighted assets (RWAs). Overall, the study shows that 24% of RWAs of loss-absorbing capacity would have been sufficient to absorb 95% of the banks in the sample (excluding the 5% which had the largest losses) (Vickers et al., 2011). Certain Member States were insistent on the strict application of this new rule in all cases.¹⁵

The EP by comparison, did not specify a bail-in threshold and called on the European Banking Authority (EBA) to draft technical standards in this regard. The Council position succeeded in the final text, again displaying their dominant position in the negotiations, as well as their concern about the distributional consequences of resolution. The EP did however play an important role in advancing the full application of the bail-in tool. The Council had proposed to set the application deadline to four years, following the entry into force of the BRRD (i.e. 2018). The EP text stressed that this introduction date should be brought forward to 2016 to ensure that the full range of tools are available as soon as possible and to provide certainty to markets (European Parliament, 2013*b*, recital 52). This time-gap had important ramifications. If the date of entry into force was to be left until 2018, bail-in

¹⁵Austria, Germany and Finland for example, made a public declaration emphasising “that the bail-in rule is under all circumstances fully respected and in any case, a contribution of shareholders and creditors to the maximum extent possible is ensured” (see Council of the European Union, 2013*a*).

would only amount to junior debt in the creditor hierarchy before public money could be used. The changes are shown in the second and third columns of Figure 5.5. Full bail-in, including senior unsecured debt, will now be available from 1 January 2016. However the conversion or write down of capital instruments (under the BRRD) and the conversion of junior debt (under the State aid rules) will apply until then. This again is consistent with the different conceptions of the role of the State in crisis management. Delaying the introduction of the bail-in tool would have allowed the Member States to continue supporting their banks with public money, only requiring more limited burden-sharing. The insistence of the EP in bringing forward the application of the bail-in tool meant limiting State support to ailing institutions and requiring full private sector participation in the resolution process at an earlier date.

5.5 Deposit Guarantee Scheme Directive and ESM Direct Recapitalisation Instrument

The politics surrounding the negotiations are clearly evident from the analysis in the previous section. It is clear how the Council dominated the negotiations on key aspects of both the BRRD and SRM. In particular we can see how concerns about legacy issues and distributional conflict shaped the financing structure for resolution, decision-making procedures and crisis management tools. The analysis however also shows how the EP played an important role in ensuring a more ‘European’ framework, in particular a faster mutualisation schedule and time period for the build-up of the SRF, a strong executive to take decisions in resolution cases, limited politicisation of decision-making (by limiting the Council’s involvement) and the early introduction of the bail-in tool. Analysis of the negotiations also highlights the different conceptions that the negotiators had regarding the role of the State in crisis management, in particular the role the State can play in financing a

bank in a precautionary scenario and what role governments should play in financing banks in resolution. This section will further explain how the BRRD and SRM interact with two other key instruments in the new architecture for crisis management in the EU, namely: (i) deposit guarantee schemes, and (ii) the ESM's direct recapitalisation instrument.

In June 2012 the Heads of State and Governments of the euro area agreed that “when an effective single supervisory mechanism is established involving the ECB for banks in the euro area, the ESM could, following a regular decision, have the possibility to recapitalize banks directly” (Euro area HoSoG, 2012). Allowing the ESM to directly recapitalise banks was viewed as central to breaking the bank-sovereign nexus, and central to the agreement on the SSM (European Council, 2012, 2013). On the 20 June 2013, the main features of the instrument were agreed: the main eligibility criteria, a €60bn limit and that support would be conditional on appropriate burden-sharing ‘according to the State aid rules and applying the principles of the BRRD’ (Eurogroup, 2013). The agreement on the BRRD allowed the President of the Eurogroup to broker a compromise between euro area Member States to finalise the guideline for ESM-DRI. This included an agreement on the ‘appropriate’ burden-sharing framework and conditions for use of the instrument (Dijsselbloem, 2014).

Firstly, it was agreed that the ESM direct recapitalisation instrument as described above cannot be used as a precautionary instrument as defined in the BRDD (European Stability Mechanism, 2014, 5). Secondly, it was agreed that “for a transitional period until 31 December 2015, a bail-in of 8% of all liabilities will be a precondition for using the instrument, as well as the use of the resources available in the ESM Member’s national resolution fund. From 01 January 2016, bail-in in line with the rules of the Bank Recovery and Resolution Directive, will be required”. Both aspects of the compromise show that Member States wish to use ESM-DRI as a ‘last-resort’ resolution financing instrument. Given the high threshold required for bail-in, an institution receiving ESM-DRI will therefore have to be put into resolution before any direct ESM support is given (European Stability Mechanism, 2014).

Furthermore, excluding the use of the instrument in a precautionary scenario again shows how Member States did not wish to use the new tools to deal with legacy issues in individual Member States (Barker (2013*b*)).

The agreement on the BRRD also facilitated a compromise being reached on the DGS Directive. In July 2010, the Commission had issued a comprehensive review of the DGS. However agreement could not be found and the EP closed the first reading at its sitting of 16 February 2012, “following a long period during which the Council was unwilling to negotiate” (European Parliament, 2012).

The agreement on the BRRD also resolved many of the issues that plagued the DGSD negotiations such as the target level, accumulation period and the use of DGS in resolution financing.¹⁶ This is because the BRRD provides for a ‘super-priority’ for deposits in resolution. As described above the BRRD provides for a clear hierarchy of losses in resolution. Covered deposits will have a preferential ranking above any unsecured claim. Deposits will be subrogated to the Deposit Guarantee Scheme, which covers the losses that would otherwise have been borne by covered depositors (European Central Bank, 2011*a*, 40). Furthermore, eligible deposits (deposits which exceed the coverage level, but are generally eligible for protection from natural persons and micro, small and medium-sized enterprises), are also given preferential treatment but rank below the covered deposits (see Figure 5.5). Therefore, deposits are only losses absorbing in resolution after subordinated and unsecured,

¹⁶ The Commission had proposed a target level, based on eligible deposits, of 1.5% and using a limited amount of DGS funds in order to avoid a bank failure, under strict quantitative limits, to prevent jeopardising the capacity of the DGS fund to pay out depositors and to avoid moral hazard. The Council however, had proposed to set the target level at 0.5%, whereas the Parliament set it at 1.5% of covered deposits. Furthermore, MEPs voted to extend the build-up period from 10 to 15 years, arguing that this “would allow EU banks to remain internationally competitive”. The role of the DGS in resolution financing was also a particularly salient point.

non-preferred creditors have been bailed in, making them much less likely to be used in any specific resolution case.

5.6 Conclusion

Together, the BRRD, SRM, IGA, DGSD and ESM-DRI form the new architecture for crisis prevention, management and resolution in the EU going forwards. This paper has sought to explain both the economic rationale and the politics of reform surrounding the recent agreement on the new framework for bank resolution in the EU. It therefore hopes to contribute to the development of positive analysis of policymaking in the EU by exploring the political-economy factors that lead to and shape the reform process, as well as help researchers understand why the new framework for crisis management in the EU has been designed in such a way.

This paper has shown how the limitations of coordination and unprecedented public support to the financial sector led to the proposal and agreement on a harmonised set of policy tools, legislative powers and institutional framework for crisis prevention, early intervention and bank resolution across the EU. The inclusion of *ex-ante* financed resolution funds and a bail-in, tool represent significant innovations in the new architecture and were included as a direct response to coordination problems and unprecedented public support. However it demonstrates how a deepening of a crisis can lead to the likelihood more ambitious reforms will be adopted. In this case the distributional consequences of such significant financial sector support led to the emergence of a bank-sovereign nexus, ultimately pushing some countries into an EU/IMF programme of economic adjustment. This, as well as the establishment of the SSM, led to a push to complete the EMU and agreement on the second pillar of banking union.

The dynamics which shaped the push for reform also shaped the policy response. Also drawing on the political science literature, this paper analysed the politics surrounding the

negotiations on the financing structure for resolution, decision-making procedures and crisis management tools. It showed how distributive conflict, concern over legacy issues, and the power of certain Member States, shaped central features of the new architecture. However it also highlights the important role the European Parliament played in the negotiations, by ensuring a greater 'European' solution.

Chapter 6

Concluding Remarks: Contributions, Policy Implications, & Future Research

The severity of the recent financial and sovereign debt crisis has led to renewed scholarship on the causes, responses and consequences of financial crises. The four papers in this thesis make a number of substantive empirical and theoretical contributions to the study of financial crisis management by exploring different political economy perspectives. In doing so, this thesis employs rigorous empirical analysis using case studies, game theoretic and econometric tools. The new insights provided in the above papers highlight that in addition to economic and financial analysis, a multidimensional approach which incorporates institutional processes and political behaviour is necessary to explain causes, macroeconomic outcomes and reform following crises. This section will summarise the empirical and theoretical contributions of each paper, in addition to discussing some policy implications and avenues for future research.

6.1 Empirical contributions

Failures in financial regulation and supervision are common prior to banking crises. The political economy literature has sought a deeper understanding as to why this occurs, by incorporating political preferences and institutional processes into analyses of banking crises. The first paper (chapter 2) contributes to the study of failures in banking regulation, by analysing the development of the framework for regulation and supervision in Ireland prior to the recent financial crisis. The paper shows how political decisions by successive Irish governments to attract financial services to Ireland and to encourage competition in the provision of credit, led to the establishment of a permissive regulatory and supervisory environment. This occurred through a supervisory philosophy and framework for supervision which was inadequate. Furthermore, the paper shows how this had perverse effects on supervisors which led to a deferential approach toward regulated entities and weak enforcement. This resulted in distortionary effects for the competitive dynamics of the retail banking market in Ireland and for the allocation of capital.

Although this is merely one singular case, the paper highlights how, even in advanced economies with seemingly robust institutional frameworks for regulation and supervision, biases towards domestic political objectives can result in the excessive expansion of banks and can induce risk-taking. Such ‘banking nationalism’ appears to be a general phenomenon in Europe where “governments have nurtured the birth and growth of mega-banks that could act as “national champions” in the competition with foreign banks” (European Systemic Risk Board, 2014).

Moving from the causes of financial crises to financial crisis management, previous research on the public responses to banking crises lack explanations for cases like Ireland’s recent bailout. The new empirical relationships uncovered in the second and third papers enhance our understanding of how politics affects policy during financial crises. The second

paper assesses the crisis management strategy of the Irish government, against our signalling model of financial crisis containment. Our model can explain the Irish Government's 2008 decision to put in place a blanket guarantee of all liabilities of the banking system, ultimately forcing the State out of the sovereign markets and into an EU/IMF programme of economic adjustment on the basis of asymmetries of information and biases. To demonstrate the plausibility of our model we deduced the preferences of key actors in the decision-making process.

The third paper (chapter 4) provides new empirical insights into how political institutions and preferences condition policy choice and affect macroeconomic outcomes during financial crises. Intervention to contain and resolve systemic crises can lead to distributional costs given support means allocating costs to different groups in society. Institutions however shape decision-making and economic outcomes. The global financial crisis has led to an increased number of observations by which to examine the relationships between political institutions and fiscal costs. It has also led to the collection of detailed policy and outcome data, thus facilitating further analysis of the interplay between political economy factors. Whereas previous research explored the differences between autocratic and democratic countries, or that of broad checks and balances, we use cross-country econometric evidence to examine the impact political and party systems have on the fiscal costs of financial sector intervention. We find that presidential systems are associated with lower fiscal costs when managing systemic banking crises. Our empirical results suggest a deeper comparative analysis of political systems, rather than veto players, is necessary to capture how political institutions impact policy choice following systemic crises.

We further examine the channels through which political variables impact fiscal costs by analysing the policy instruments governments use in response to such financial shocks. Consistent with our main results our further empirical analysis shows that governments in presidential systems are less likely to use accommodative instruments such as guarantees on

bank liabilities and bank recapitalisations, which we show are more costly policies for financial crisis management. Furthermore, we show that multi-party governments in presidential systems are more likely to impose losses on depositors.

The final paper (chapter 5) analyses the economic rationale for reform of the framework for crisis management in the EU and the politics surrounding the policy response. It demonstrates how the political economy equilibrium changed, leading to agreement on a harmonised legislative framework, institutional architecture and tools for crisis management across the EU. However, it shows how the distributional consequences of financial sector support, as well as agreement on the SSM, led to deeper integration and the establishment of the SRM. It analyses in detail the negotiations on the financing structure for future resolution, decision-making procedures and crisis management tools that are provided for in the new framework. It shows in particular how the power of certain Member States and distributive conflict with regard to legacy issues, shaped the new architecture. It also highlights the important role which the European Parliament played in the negotiations.

6.2 Theoretical contributions

In addition to the empirical contributions, this thesis also makes a number of theoretical contributions to the study of political economy. The first paper (chapter 2) shows the usefulness of frameworks of analysis such as ‘capture theory’ and the ‘governance nexus’ to examine the complex motivations underlying financial policy and regulatory governance. Further, through an in-depth case study, it shows the impact government policy can have on supervisory performance and ultimately financial stability.

One factor that has been largely ignored in previous work on the public responses to banking crises is the role of information asymmetries. The second paper (chapter 3) shows that when responding to financial crises, close to full information is extremely important

for decision-makers. We provide a formal model to understand the interactions between policymakers, bureaucrats and other actors, when choosing optimal policy responses during financial crises. Our signalling game of financial crisis containment shows that although *de facto* operational independence may ensure protection from blatant crony capitalism, this does not ensure that decision-makers will receive un-biased information from strategically-minded signallers. We show that if the preferences of strategically-minded signallers' differ from those of the decision-maker, incentives may exist to give inaccurate information. The paper again looks at the Irish case and uses comparative statics to demonstrate the plausibility and usefulness of the model, firstly by making predictions about containment levels based on our model and the underlying health of the Irish banking system, and then showing how the case closely matches these predictions. The signalling model also extends the empirical tools that researchers can use, to enhance our understanding how asymmetries and biases affect policy choice in financial crises, thus also making a methodological contribution to research in the field.

The third paper (chapter 4) extends the broad analysis of the economic effects of constitutions to financial crisis management by exploring the impact variant political systems have on the fiscal costs resulting from financial crises. We demonstrate how political institutions may condition policy choice leading to different economic outcomes. Both the second and third papers contribute to the generation of a general understanding of the political economy of financial crises.

The fourth paper (chapter 5) contributes to two theoretical literatures by providing a positive analysis of the reform of the framework for crisis management in the EU. Firstly, through analysis of the economic rationale for reform as well as the politics surrounding the policy response, it confirms many of the theoretical propositions from the political economy of reform literature derived from formal analysis of the reform process. These models try to better understand the factors that lead to reform, as well as the reasons for inaction, delay

or sub-optimal outcomes. Secondly, this paper contributes to the literature on the politics of EU policy which *inter alia* examines the shaping of regulatory and supervisory space, as well as the inter-institutional dynamics of bargaining process.

6.3 Directions for future research and policy implications

The limitations outlined in each paper provide fruitful avenues for further research. The first paper explains how regulatory and supervisory failure must be analysed in the context of the politics of financial services policy. Hopefully, future research will include analysis of the political context of such failure, given the important role that governments have in designing the legislative and institutional framework in which supervisors operate. As the paper shows, this can occur in advanced economies with seemingly robust regulatory and supervisory frameworks.

The second paper shows how future research should focus in greater detail on how improvements in institutional design can change bureaucrats' preferences, so that the correct incentive structures are set to provide more accurate information. This research also lends itself to the broader debate on bureaucratic independence, as well as political discretion in bureaucratic appointments (Persson and Tabellini, 1993, Satyanath, 2006). Such research should treat all such actors as strategic players with potentially divergent preferences.

The third paper highlights the need for better quality data to enhance our understanding of the links between systemic financial crises and politics. Whilst we have shown some important and new empirical relationships, we have not sought to develop an over-arching theory of crisis management. More granular data on institutional and political variables and policy responses will help deepen our understanding of these factors and allow for a more general understanding of the political economy of financial crises.

Finally, the fourth paper explains four reasons why crises upset the old political economy

equilibrium in the EU and therefore led to reform. Broader comparative work could help facilitate a greater understanding of the reform process following crises.

This thesis also points to a number of implications for policy. Whereas the first paper (chapter 2) highlights how a clearer mandate and more independent institutions could have helped to overcome time-inconsistent government objectives, the second paper (chapter 3) stresses how, even with clear mandates and independent institutions, good information on which to take decisions may be very hard to come by during financial crises. Both imply the need for a robust regulatory and supervisory framework and a more intrusive and challenging approach to supervision.

For crisis prevention, a robust regulatory and supervisory framework can ensure that clear objectives can be derived from a mandate, thus reducing the risk of bias towards political objectives. Ensuring a clear institutional architecture which protects ‘agents’ can also reduce the susceptibility to any potential biases. Both a clear mandate and robust institutional framework should be accompanied by a deeper understanding of the risks which banks are taking, their business models and strategies, as well as corporate governance structures. This can be achieved with a more intrusive and challenging approach to supervision.

The mandate and institutional architecture are also central to crisis containment, as these play an important role in shaping the preferences that strategic actors will have when providing information to decision-makers, who may have to step in to stabilise financial markets in times of crises. Similarly, a more intrusive approach to supervision will ensure that more accurate data and valuations are available to key bureaucrats (supervisors, ministries and central banks) and hence decision-makers. This in turn will enable decision-makers to design more effective crisis containment strategies, which can both stabilise financial markets and limit the exposure of the State to such enormous costs which we have seen in the recent financial and sovereign debt crisis.

Although further research is warranted before more direct institutional implications can

be drawn from the results, the third paper (chapter 4) shows how certain institutional and political characteristics are associated with higher fiscal costs in crisis management. This helps us to understand and thus predict, how governments may react to future crises.

The final paper contributes to a deeper understanding as to how, and why, certain factors lead to reform following crises. The analysis in the final paper can help bureaucrats and researchers understand why the new framework for crisis management in the EU has been designed in such a way, as well as to guide further research on the analysis of how future improvements could be realistically achieved, politically.

Bibliography

- Abonyi, George. 2005. Policy Reform in Indonesia and the Asian Development Bank's Financial Sector Governance Reforms Program Loan. Asian Development Bank Working Paper No. 76 Asian Development Bank.
- Aghion, Philippe, Patrick Bolton and Steven Fries. 1999. "Optimal Design of Bank Bailouts: The Case of Transition Economies." *Journal of Institutional and Theoretical Economics* 155:51–70.
- Aikins, Stephen K. 2009. "Global financial crisis and government intervention: a case for effective regulatory governance." *International Public Management Review* 10(2):23–43.
- Alesina, Alberto and Allen Drazen. 1991. "Why are Stabilizations Delayed?" *The American Economic Review* 81(5):1170–1188.
- Alesina, Alberto, Silvia Ardagna and Francesco Trebbi. 2006. Who adjusts and when? On the political economy of reforms. National Bureau of Economic Research Working Paper No. 12049.
- Allen, Franklin and Douglas Gale. 1998. "Optimal financial crises." *The Journal of Finance* 53(4):1245–1284.
- Allen, Linda and Anthony Saunders. 2002. "A survey of cyclical effects in credit risk measurement models. NYU Working Paper No. FIN-02-018."

- Angelini, Paolo, Giuseppe Grande and Fabio Panetta. 2014. The negative feedback loop between banks and sovereigns. Bank of Italy, Questioni di Economia e Finanza, Occasional Papers 213.
- Angkinand, Apanard P. and Thomas D. Willett. 2008. "Political influences on the costs of banking crises in emerging market economies: testing the U-shaped veto player hypothesis." *Macroeconomics and Finance in Emerging Market Economies* 1(2):279–297.
- Baker, Andrew. 2010. "Restraining regulatory capture? Anglo-America, crisis politics and trajectories of change in global financial governance." *International Affairs* 86(3):647–663.
- Bakker, Bas B. and Leslie Lipschit. 2014. Conventional and Insidious Macroeconomic Balance-Sheet Crises. International Monetary Fund Working Paper WP/14/160.
- Barker, Alex. 2013a. "EU reaches landmark deal on failed banks." Financial Times. 12 December 2013. Date last accessed 24 August 2014.
URL: <http://www.ft.com/cms/s/0/555f3ade-6303-11e3-a87d-00144feabdc0.html>
- Barker, Alex. 2013b. "Germany hardens stance on common eurozone safety net for banks." Financial Times. 15 October 2013. Date last accessed 24 August 2014.
URL: <http://www.ft.com/cms/s/0/9533f236-35b7-11e3-b539-001feabde7de.html\#axzz3BLe0nF1V>
- Barker, Alex. 2014. "EU deal on bank failures risks unravelling." Financial Times. 7 April 2014. Date last accessed 24 August 2014.
URL: <http://www.ft.com/cms/s/0/39890e4c-be6c-11e3-a1bf-00144feabdc0.html\#axzz3BLe0nF1V>
- Barth, James R., Gerard Caprio and Ross Levine. 2004. "Bank Regulation and Supervision: What Works Best?" *Journal of Financial Intermediation* 13:205–248.

- Barth, James R., Gerard Caprio and Ross Levine. 2006. *Rethinking Banking Regulation: Till Angels Govern*. Cambridge: Cambridge University Press.
- Battistini, Niccolò, Marco Pagano and Saverio Simonelli. 2013. Systemic risk and home bias in the euro area. *European Economy, Economic Papers* 494.
- Bawn, Kathleen and Frances Rosenbluth. 2006. "Short versus long coalitions: electoral accountability and the size of the public sector." *American Journal of Political Science* 50(2):251–265.
- Baxter, Lawrence G. 2010. "Capture in financial regulation: Can we channel it toward the common good." *Cornell Journal of Law and Public Policy*. 21:175.
- Beck, Thorsten. 2011. The Role of Finance in Economic Development: Benefits, Risks, and Politics. European Banking Center Discussion Paper No. 2011-041.
- Beck, Thorsten, George Clarke, Alberto Groff, Philip Keefer, and Patrick Walsh. 2001, 2012. "New Tools in Comparative Political Economy: The Database of Political Institutions." *World Bank Economic Review* (1).
- Beck, Thorsten and Ross Levine. 2008. *Legal institutions and financial development*. Springer Berlin.
- Becker, Gary S. 1983. "A theory of competition among pressure groups for political influence." *The Quarterly Journal of Economics* pp. 371–400.
- Blankart, Charles B and Gerrit B Koester. 2006. "Political Economics versus Public Choice." *Kyklos* 59(2):171–200.
- Blyth, Mark. 2002. *Great transformations: Economic ideas and institutional change in the twentieth century*. Cambridge: Cambridge University Press.

- Blyth, Mark M. 2003. "Structures Do Not Come with an Instruction Sheet: Interests, Ideas, and Progress in Political Science." *Perspectives on Politics* 1(4):695–703.
- BMF, Bundesfinanzministerium. 2014. "Starting the banking union with healthy banks." Press Release. 5 March 2014. Date last accessed 24 August 2014.
URL: <http://www.bundesfinanzministerium.de/Content/EN/Interviews/2014/2014-03-05-boersenzeitung-banking-union.html?view=renderPrint>
- Bonfim, Diana. 2009. "Credit risk drivers: Evaluating the contribution of firm level information and of macroeconomic dynamics." *Journal of Banking & Finance* 33(2):281–299.
- Borio, Claudio and Philip Lowe. 2002. Asset prices, financial and monetary stability: exploring the nexus. Bank for International Settlements Working Paper 114.
- Borio, Claudio and Piti Disyatat. 2011. Global imbalances and the financial crisis: Link or no link? Bank for International Settlements Working Papers 346.
- Bräuninger, Thomas. 2005. "A partisan model of government expenditure." *Public Choice* 125(3-4):409–429.
- Broz, Laurence J. 2013. Partisan financial cycles. In *Politics in the New Hard Times: The Great Recession in Comparative Perspective*, ed. Miles Kahler and David A Lake. Cornell University Press chapter 3.
- Brunnermeier, Markus K., Andrew Crockett, Charles A. E. Goodhart, Avinash Persaud and Hyun Song Shin. 2009. The Fundamental Principles of Financial Regulation. Geneva Reports on the World Economy 11 Centre for Economic Policy Research and International Centre for Monetary and Banking Studies.
- Bryant, John. 1980. "A model of reserves, bank runs, and deposit insurance." *Journal of Banking and Finance* 4(4):335–344.

- Buiter, Willem H. 2008. Central Banks and Financial Crises. Financial Markets Group Discussion paper, London School of Economics and Political Science 619.
- Burnham, James B. 2003. "Why Ireland Boomed." *Independent Review* 7(4):537–556.
- Byrne, Elaine. 2012. *Political Corruption in Ireland 1922-2010: A Crooked Harp?* Manchester: Manchester University Press.
- C&AG. 2007. The Financial Regulator. Special report Comptroller and Auditor General of Ireland.
- Calomiris, Charles W., Daniela Klingebiel and Luc Laeven. 2004. A Taxonomy of Financial Crisis Resolution Mechanisms: Cross-Country Experience. World Bank Policy Research Working Paper No. 3379 World Bank.
- Calomiris, Charles W. and Stephen H. Haber. 2014. *Fragile By Design*. Princeton, NJ: Princeton University Press.
- Carpenter, Daniel and David A. Moss. 2013a. Detecting and Measuring Capture. In *Preventing Regulatory Capture: Special Interest Influence, and How to Limit It*, ed. Daniel Carpenter and David Moss. Cambridge: Cambridge University Press chapter 3.
- Carpenter, Daniel and David A Moss. 2013b. *Preventing regulatory capture: special interest influence and how to limit it*. Cambridge: Cambridge University Press.
- Carswell, S. 2011. *Anglo Republic, Inside the Bank that Broke Ireland*. London: Penguin.
- Central Bank of Ireland. 2011. "Business Credit Deposits.". Date last accessed 22 October 2011.
- URL:** <http://www.centralbank.ie/polstats/stats/cmab/Pages/BusinessCredit.aspx>

- Choi, Stephen J. and Adam C. Pritchard. 2003. "Behavioral Economics and the SEC." *Stanford Law Review* 56(1):1–73.
- Chwioroth, Jeffrey M and Andrew Walter. 2010. Financial crises and political turnover- a long run panoramic view. Technical report.
- Čihák, Martin, Asli Demirgüç-Kunt, María Soledad Martínez Pería and Amin Mohseni-Cheraghlou. 2012. Bank regulation and supervision around the world: A crisis update. World Bank Policy Research Working Paper No. WPS 6286.
- Claessens, S., C. Pazarbasioglu, L. Laeven, M. Dobler, F. Valencia, O. Nedelescu and K. Seal. 2011. Crisis Management and Resolution, Early Lessons from the Financial Crisis. International Monetary Fund Staff Discussion Note SDN/11/05.
- Claessens, Stijn, Daniela Klingebiel and Luc Laeven. 2005. Crisis resolution, policies, and institutions: empirical evidence. In *Systemic Financial Crises: Containment and Resolution*, ed. Patrick Honohan and Luc Laeven. Cambridge: Cambridge University Press chapter six.
- Claessens, Stijn and M Ayhan Kose. 2013. Financial Crises Explanations, Types, and Implications. International Monetary Fund Working Paper WP/13/28.
- Congleton, Roger D, Arye L Hillman and Kai A Konrad. 2008. *40 Years of Research on Rent Seeking 2: Applications: Rent Seeking in Practice*. Vol. 2 Springer Science & Business Media.
- Council of the European Union. 2009. "2948th Council meeting Economic and Financial Affairs, 10737/09 (Presse 168)". Press Release. 9 June 2009. Date last accessed 24 August 2014.
- URL: http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ecofin/108392.pdf

Council of the European Union. 2013*a*. Council of the European Union proposal for a Directive establishing a framework for the recovery and resolution of credit institutions and investment firms (BRRD), approval of the final compromise text (declaration for the minutes), declarations to the minutes of 20 December Permanent Representatives Committee (part 2) circulated by AT/DE/FI, BG, SE and the UK. Council Proposal EF 275, ECOFIN 1173, DRS 226, CODEC 3010 1 Council of the European Union.

Council of the European Union. 2013*b*. Council of the European Union proposal for a Regulation of the European Parliament and of the Council establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Bank Resolution Fund and amending Regulation (EU) No 1093/2010 of the European Parliament and of the Council-General Approach. Council Proposal (COM(2013)0520, C7-0223/2013, 2013/0253(COD) Council of the European Union.

Cox, Gary W. 1990. "Centripetal and centrifugal incentives in electoral systems." *American Journal of Political Science* 34(4):903–935.

Crawford, Vincent P and Joel Sobel. 1982. "Strategic Information Transmission." *Econometrica* 50(6):1431–1451.

Crespo-Tenorio, Adriana, Nathan M Jensen and Guillermo Rosas. 2014. "Political Liabilities Surviving Banking Crises." *Comparative Political Studies* 47(7):1047–1074.

Dal Bó, Ernesto. 2006. "Regulatory Capture: A Review." *Oxford Review of Economic Policy* 22(2):203–225.

Darvas, Zsolt, Jean Pisani-Ferry and Guntram B. Wolff. 2013. Europe's growth problem (and what to do about it). Bruegel Policy Brief No. 2013/03.

- Das, Udaibir, Marc Quintyn and Kina Chenard. 2004. Does Regulatory Governance Matter for Financial System Stability? An Empirical Analysis. International Monetary Fund Working Paper WP/04/89.
- Davy, J., R. Kelleher and C. McCarthy. 1984. The Control of Banking in the Republic of Ireland. A Study Prepared on behalf of the Irish Banks Standing Committee Davy Kelleher McCarthy Economic Consultants.
- De Larosi re, Jacques. 2009. The High-Level Group on financial supervision in the EU. Report.
- Dell’Ariccia, Giovanni, Deniz Igan and Luc Laeven. 2012. Policies for macrofinancial stability: How to deal with credit booms. International Monetary Fund Staff Discussion Note SDN/12/06.
- Demirg  -Kunt, Asli and Enrica Detragiache. 1997. The determinants of banking crises in developing and developed countries. International Monetary Fund Working Paper WP/97/106.
- Demirg  -Kunt, Asli and Enrica Detragiache. 1998. Financial liberalization and financial fragility. International Monetary Fund Working Paper WP/98/83.
- Demirg  -Kunt, Asli and Enrica Detragiache. 2000. “Monitoring banking sector fragility: a multivariate logit approach.” *The World Bank Economic Review* 14(2):287–307.
- Detragiache, Enrica and Giang Ho. 2010. Responding to Banking Crises: Lessons from Cross-Country Evidence. International Monetary Fund Working Paper WP/10/18.
- Diamond, Douglas W. and Philip H. Dybvig. 1983. “Bank Runs, Deposit Insurance, and Liquidity.” *Journal of Political Economy* 91(3):401–419.

Diermeier, Daniel and Timothy J Feddersen. 1998. "Cohesion in legislatures and the vote of confidence procedure." *American Political Science Review* 92(3):611– 621.

Dijsselbloem, Jeroen. 2014. "Statement by the President of the Eurogroup on the ESM direct recapitalisation instrument.". Date last accessed 24 August 2014.

URL: <http://www.eurozone.europa.eu/newsroom/news/2014/06/statement-by-the-president-of-the-eurogroup-on-the-esm-direct-recapitalisation-instrument>

Djankov, Simeon, Rafael La Porta, Florencio Lopez-de Silanes and Andrei Shleifer. 2002. "The regulation of entry." *Quarterly Journal of Economics* 117(1,):1–37.

Downs, George W. and David M. Rocke. 1994. "Conflict, Agency, and Gambling for Resurrection: The Principal-Agent Problem Goes to War." *American Journal of Political Science* 38(2):362–380.

Draghi, Mario. 2013. "Opening speech at the European Banking Congress -The future of Europe, Frankfurt am Main.". Date last accessed 24 August 2014.

URL: <http://www.ecb.europa.eu/press/key/date/2013/html/sp131122.en.html>

Draghi, Mario. 2014. "Financial Integration and Banking Union, Speech at the conference for the 20th anniversary of the establishment of the European Monetary Institute, Brussels.". Date last accessed 24 August 2014.

URL: <http://www.ecb.europa.eu/press/key/date/2014/html/sp140212.en.html>, month =February, note =Date last accessed 24 August 2014,

Drazen, Allan and Vittorio Grilli. 1993. "The Benefit of Crises for Economic Reforms." *American Economic Review* 83(3):598–607.

Drazen, Allan and William Easterly. 2001. "Do crises induce reform? Simple empirical tests of conventional wisdom." *Economics & Politics* 13(2):129–157.

Drazen, Allen. 2000. *Political Economy in Macroeconomics*. Princeton University Press.

EIU. 2011. Review of the Regulatory Environment in Ireland. report Economist Intelligence Unit. Commissioned by the Department of the Taoiseach, Ireland.

Euro area HoSoG. 2012. “Euro Area Heads of State or Government Summit Statement - 29 June 2012.”. Date last accessed 24 August 2014.

URL: <https://www.ecb.europa.eu/ssm/pdf/statement/Euroareasummitstatement2012-06-29EN.pdf>

Eurogroup. 2013. “ESM direct bank recapitalisation instrument -Main features of the operational framework and way forward.”. Date last accessed 24 August 2014.

URL: <http://www.eurozone.europa.eu/media/436873/20130621-ESM-direct-recaps-main-features.pdf>

European Central Bank. 2008a. “Opinion of the European Central Bank of 3 October 2008 at the request of the Irish Minister for Finance on a draft Credit Institutions (Financial Support) Bill 2008.”. Date last accessed 24 August 2014.

URL: https://www.ecb.int/ecb/legal/pdf/en_con_2008_44.pdf

European Central Bank. 2008b. “Recommendations of the Governing Council of the European Central Bank on government guarantees for bank debt.”. Date last accessed 24 August 2014.

URL: http://www.ecb.int/pub/pdf/other/recommendations_on_guaranteesen.pdf

European Central Bank. 2010. “European Central Bank Reply to the Public Consultation on Commission Communication on an EU framework for Cross-border Crisis Management in the Banking Sector.”. Date last accessed 24 August 2014.

URL: <https://www.ecb.europa.eu/pub/pdf/other/euframeworkcrisismanagementbankingsector201002en.pdf>

European Central Bank. 2011*a*. Financial Integration In Europe. ECB Publication May European Central Bank.

European Central Bank. 2011*b*. Monthly Bulletin. ECB Publication 07/2011 European Central Bank.

European Central Bank. 2014. Financial Integration In Europe. ECB Publication April European Central Bank.

European Commission. 2009*a*. Commission Staff Working Document Accompanying the Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee, the European Court of Justice and the European Central Bank : An EU Framework for Cross-Border Crisis Management in the Banking Sector. Commission Staff Working Document SEC(2009) 1407 European Commission.

European Commission. 2009*b*. Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee, the European Court of Justice and the European Central Bank : An EU Framework for Cross-Border Crisis Management in the Banking Sector. Commission Communication COM(2009) 561 final European Commission.

European Commission. 2009*c*. Communication from the European Commission on the Treatment of Impaired Assets in the Community Banking Sector. Commission communication European Commission.

European Commission. 2009*d*. Overview of the results of the public consultation on an EU framework for Cross-border crisis management in the banking sector. Commission

Communication 03/2010 European Commission.

URL: *http://ec.europa.eu/internal_market/consultations/docs/2009/banking_crisis_management/replies_summary_en.pdf*

European Commission. 2009*e*. “State aid: Commission provides guidance for the treatment of impaired assets in the EU banking sector.”. Press Release. 25 February 2009. Date last accessed 24 August 2014.

URL: *http://europa.eu/rapid/press-release_IP-09-322_en.htm?locale=en*,

European Commission. 2010*a*. Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee, and the European Central Bank: Bank Resolution Funds. Commission Staff Working Document COM(2010) 254 final European Commission.

European Commission. 2010*b*. Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee, the Committee of the Regions, and the European Central Bank: An EU Framework for Crisis Management in the Financial Sector. Commission Staff Working Document COM(2010) 579 final European Commission.

European Commission. 2011*a*. “Commission seeks views on possible EU framework to deal with future bank failures.”. Press Release. 6 January 2011. Date last accessed 24 August 2014.

URL: *http://europa.eu/rapid/press-release_IP-11-10_en.htm?locale=en*

European Commission. 2011*b*. The Economic Adjustment Programme for Ireland. European Economy Occasional Papers 76.

European Commission. 2012. Summary of the Impact Assessment, Accompanying the document Proposal for a Directive of the European Parliament and of the Council estab-

lishing a framework for the recovery and resolution of credit institutions and investment firms and amending Council Directives 77/91/EEC and 82/891/EC, Directives 2001/24/EC, 2002/47/EC, 2004/25/EC, 2005/56/EC, 2007. Commission Staff Working Document SWD(2012) 167 final European Commission.

European Commission. 2013*a*. “Commission proposes Single Resolution Mechanism for the Banking Union.”. Press Release. 10 July 2013. Date last accessed 24 August 2014.

URL: *http://europa.eu/rapid/press-release_IP-13-674_en.htm*

European Commission. 2013*b*. Communication from the Commission on the application, from 1 August 2013, of State aid rules to support measures in favour of banks in the context of the financial crisis. Commission Communication (2013/C 216/01) European Commission.

European Commission. 2013*c*. Proposal for a Regulation of the European Parliament and of the Council establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Bank Resolution Fund and amending Regulation (EU) No 1093/2010 of the European Parliament and of the Council. Commission legislative proposal COM(2013) 520 final European Commission.

European Commission. 2014*a*. Staff Working Document Impact Assessment, Accompanying the document Proposal for a Regulation of the European Parliament and of the Council on structural measures improving the resilience of EU credit institutions and the Proposal for a Regulation of the European Parliament and of the Council on reporting and transparency of securities financing transactions. Commission Staff Working Document SWD(2014) 30 final European Commission.

European Commission. 2014*b*. State Aid Scoreboard 2013- Aid in the context of the

ectives 77/91/EEC and 82/891/EC, Directives 2001/24/EC, 2002/47/EC, 2004/25/EC, 2005/56/EC, 2007/36/EC and 2011/35/EC and Regulation (EU) No 1093/2010. European Parliament Report (COM(2012)0280, C7-0136/2012, 2012/015(COD) European Parliament.

European Parliament. 2013c. “Single resolution system for struggling banks: MEPs adopt negotiating position.”. Press Release. 17 December 2013. Date last accessed 24 August 2014.

URL: <http://www.europarl.europa.eu/news/en/news-room/content/20131216IPR31004/html/Single-resolution-system-for-struggling-banks-MEPs-adopt-negotiating-position>

European Parliament. 2014a. European Parliament report on the proposal for a Regulation of the European Parliament and of the Council establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Bank Resolution Fund and amending Regulation (EU) No 1093/2010 of the European Parliament and of the Council. European Parliament Report (COM(2013)0520, C7-0223/2013, 2013/0253(COD) European Parliament.

European Parliament. 2014b. “Letter from European Parliament negotiating team to Greek Presidency: Letter on the Intergovernmental Agreement on the Single Resolution Fund.”. Date last accessed 24 August 2014.

URL: <http://www.europarl.europa.eu/document/activities/cont/201401/20140116ATT77594/20140116ATT77594EN.pdf>

European Parliament. 2014c. “Parliament negotiators rescue seriously damaged bank resolution system.”. Press Release. 20 March 2014. Date last accessed 24 August 2014.

URL: <http://www.europarl.europa.eu/news/en/news-room/content/20140319IPR39310/html/Parliament-negotiators-rescue-seriously-damaged-bank-resolution-system>

European Parliament. 2014*d*. “Single bank resolution mechanism and fund: Key principles for successful negotiations.”. Press Release. 17 February 2014. Date last accessed 24 August 2014.

URL: <http://www.europarl.europa.eu/news/en/news-room/content/20140217IPR36239/html/Single-resolution-mechanism-and-fund-Key-principles-for-success>

European Parliament. 2014*e*. “Winding up banks: EP reconfirms mandate and criticises Council for timewasting.”. Press Release. 6 February 2014. Date last accessed 24 August 2014.

URL: <http://www.europarl.europa.eu/news/en/news-room/content/20140203IPR34504/html/Winding-up-banks-EP-reconfirms-mandate-and-criticises-Council-j>

European Stability Mechanism. 2014. FAQ on the preliminary agreement on the future ESM direct bank recapitalisation instrument. . Date last accessed 24 August 2014.

URL: <http://www.esm.europa.eu/pdf/FAQPreliminaryDRIJune2014.pdf>

European Systemic Risk Board. 2014. Is Europe Overbanked? Reports of the Advisory Scientific Committee No. 4/June 2014.

Fama, Eugene F. 1970. “Efficient capital markets: A review of theory and empirical work.” *The Journal of Finance* 25(2):383–417.

Fernandez, Raquel and Dani Rodrik. 1991. “Resistance to reform: Status quo bias in the presence of individual-specific uncertainty.” *The American Economic Review* 81(5):1146–1155.

Fitch Ratings. 2013. “Fitch Ratings’ Report: Peer Review: Irish Banks.”. Date last accessed 24 August 2014.

URL: http://www.fitchratings.com/creditdesk/reports/report_frame.cfm?rpt_id=708766

Forfas. 2000. International Trade and Investment Report. Report to the Trade Advisory Forum and the Foreign Earnings Committee of Ireland 12/2000 Forfas. Date last accessed 24 August 2014.

URL: http://www.forfas.ie/media/forfas001220_trade_and_investment.pdf

Franzese Jr, Robert J. 2002. "Electoral and partisan cycles in economic policies and outcomes." *Annual Review of Political Science* 5(1):369–421.

Frydl, Edward J. and Marc Quintyn. 2006. The Benefits and Costs of Intervening in Banking Crises. In *Bank Restructuring and Resolution*, ed. David S. Hoelscher. New York: Palgrave Macmillan pp. 24–96.

Gandrud, Christopher and Mark Hallerberg. forthcoming. "Does Banking Union Worsen the EU's Democratic Deficit? The need for greater supervisory data transparency." *Journal of Common Market Studies* .

Geithner, Timothy F. 2014. "The Paradox of Financial Crises: Aggressive government intervention will lead to a stronger financial system less dependent on the taxpayer." The Wall Street Journal. Date last accessed 24 August 2014.

URL: <http://online.wsj.com/news/articles/SB1000142405270230488540457955243084206183>

Gersick, Connie J.G. 1991. "Revolutionary change theories: A multilevel exploration of the punctuated equilibrium paradigm." *Academy of Management Review* 16(1):10–36.

Gibbons, Robert. 1992. *A Primer in Game Theory*. Harlow, Essex: Pearson Education Limited.

Giegold, Sven. 2014. Short Study: An intergovernmental treaty on the SRM violates European law and can be challenged in the court. Report by The Greens and EFA in the European Parliament 01/2014. Date last accessed 24 August 2014.

URL: <http://www.sven-giegold.de/wp-content/uploads/2014/01/short-study-IGA-v-EU-law.pdf>

- Gilligan, Thomas and Keith Krehbiel. 1987. "Collective Decision Making and Standing Committees: An Informational Rationale for Restrictive Amendment Procedures." *Journal of Law, Economics, and Organizations* 3:287–335.
- Green, David. 2012. Political Capture and the Regulatory Cycle: How Should it be Addressed. In *Making Good Financial Regulation: Towards a Policy Response to Regulatory Capture*, ed. S. Pagliari. London: Grosvenor House Publishing chapter 7.
- Haber, Stephen and Enrico Perotti. 2008. The political economy of financial systems. *Tinbergen Institute Discussion Paper* TI 2008-045/2.
- Hall, Peter A. and Rosemary C. Taylor. 1996. "Political science and the three new institutionalisms." *Political Studies* 44(5):936–957.
- Hall, Rodney Bruce. 2003. "The Discursive Demolition of the Asian Development Model." *International Studies Quarterly* 47(1):71–99.
- Hancock, Diana and Wayne Passmore. 2010. An Analysis of Government Guarantees and the Functioning of Asset Backed Securities Markets. Finance and Economics Discussion Series Federal Reserve Board Washington DC 2010-46.
- Hardy, Daniel C. 2006. Regulatory capture in banking. *International Monetary Fund Working Paper* WP/06/34.
- Hayo, Bernd and Carsten Hefeker. 2002. "Reconsidering Central Bank Independence." *European Journal of Political Economy* 18:653–674.
- Hein, John. 1967. Institutional Aspects of Commercial and Central Banking in Ireland. The Economic and Social Research Institute (ESRI) Working Paper No. 36.

- Hellman, Joel S, Geraint Jones and Daniel Kaufmann. 2000. Seize the state, seize the day. World Bank Policy Research Working Paper No. 2444.
- Henisz, Witold J. 2002. "The political constraint index (POLCON) dataset."
URL: <http://www-management.wharton.upenn.edu/henisz/>,
- Hennessy, Alexandra. 2014. "Redesigning financial supervision in the European Union (2009–2013)." *Journal of European Public Policy* 21(2):151–168.
- Henrich, Joseph and Francisco J. Gil-White. 2001. "The evolution of prestige: Freely conferred deference as a mechanism for enhancing the benefits of cultural transmission." *Evolution and Human Behavior* 22(3):165–196.
- Hertig, Gérard. 2000. "Regulatory Competition for EU financial services." *Journal of International Economic Law* 3(2):349–375.
- Hobza, Alexandr and Stefan Zeugner. 2014. The imbalanced balance and its unravelling: current accounts and bilateral financial flows in the euro area. European Commission Economic Papers No. 520.
- Homar, Timotej and Sweder van Wijnbergen. 2013. On Zombie Banks and Recessions after Systemic Banking Crises: Government Intervention Matters. Tinbergen Institute Duisenberg School of Finance Working Paper 13-039/IV/DSF54.
- Honohan, Patrick. 2010. The Irish Banking Crisis Regulatory and Financial Stability Policy 2003-2008. Report to the Minister for Finance and the Governor of the Central Bank 05/2010. Date last accessed 24 August 2014.
URL: <http://www.bankinguquiry.gov.ie/The%20Irish%20Banking%20Crisis%20Regulatory%20and%20Financial%20Stability%20Policy%202003-2008.pdf>

Honohan, Patrick and Daniela Klingebiel. 2003. "The fiscal cost implications of an accommodating approach to banking crises." *Journal of Banking and Finance* 27(8):1539–1560.

Honohan, Patrick and Luc Laeven, eds. 2005. *Systemic Financial Crises: Containment and Resolution*. Cambridge: Cambridge University Press.

Houses of the Oireachtas. 1983. "Insurance Bill Second Stage Debate Vol. 345 No.1.". Date last accessed 24 August 2014.

URL: <http://debates.oireachtas.ie/dail/1983/10/19/00026.asp>

Houses of the Oireachtas. 1998*a*. Joint Committee on Finance and the Public Service. Report on review of banking policy, the regulation and supervision of financial institutions Dail Eireann. Date last accessed 24 August 2014.

URL: http://193.178.2.84/test/R/1998/REPORT_01071998_0.html, day=26

Houses of the Oireachtas. 1998*b*. "Written Questions, Departmental Strategy Groups, Dail Eireann Debate Vol. 491 No. 3.". Date last accessed 24 August 2014.

URL: <http://historical-debates.oireachtas.ie/D/0491/D.0491.199805260065.html>, day=26,

Houses of the Oireachtas. 2001. Parliamentary Inquiry into D.I.R.T. Final Report- Examination of the Report of the Comptroller and Auditor General of Investigation into the administration of Deposit Interest Retention Tax matters during 1 January 1986 and 1 December 1998 Committee on Public Accounts, Dail Eireann. Date last accessed 24 August 2014.

URL: <http://www.oireachtas.ie/viewdoc.asp?DocID=26967&CatID=180>,

Houses of the Oireachtas. 2008*a*. "Department's Powerpoint presentation re Overview of Financial Stability Resolution issues.". Date last accessed 3 January 2011.

URL: <http://www.oireachtas.ie/documents/committees30thdail/pac/reports/documentsregruarantee/document36.pdf>

Houses of the Oireachtas. 2008*b*. “E-mail from Merrill Lynch to Department with attached Memorandum examining various options.”. Date last accessed 19 October 2011.

URL: <http://www.oireachtas.ie/viewdoc.asp?fn=/documents/Committees30thDail/PAC/Reports/DocumentsReGruarantee/document3.pdf>

Houses of the Oireachtas. 2008*c*. “Financial Issues–Scoping paper 24/01/2008.”. Date last accessed 18 October 2011.

URL: <http://www.oireachtas.ie/documents/committees30thdail/pac/reports/documentsregruarantee/document37.pdf>

Houses of the Oireachtas. 2008*d*. “Presentation from Anglo Irish Bank.”. Date last accessed 19 October 2011.

URL: <http://www.oireachtas.ie/viewdoc.asp?fn=/documents/Committees30thDail/PAC/Reports/DocumentsReGruarantee/document15.pdf>

Houses of the Oireachtas. 2008*e*. “Transcript of handwritten note of meeting with Financial Regulator, Merrill Lynch, Central Bank, PwC, Arthur Cox, Attorney General, Taoiseach, Department of Taoiseach, Minister for Finance, Department of Finance, NTMA, Goldman Sachs (for part) Thursday.”. Date last accessed 19 October 2011.

URL: <http://www.oireachtas.ie/documents/committees30thdail/pac/reports/documentsregruarantee/document6.pdf>, *day = 25*

Howarth, David and Lucia Quaglia. 2013. “Banking Union as Holy Grail: Rebuilding the Single Market in Financial Services, Stabilizing Europe’s Banks and Completing Economic and Monetary Union.” *Journal of Common Market Studies* 51(S1):103–123.

- Howarth, David and Lucia Quaglia. 2014. "The Steep Road to European Banking Union: Constructing the Single Resolution Mechanism." *Journal of Common Market Studies* 52:125–140.
- Huber, John D. 1996. "The vote of confidence in parliamentary democracies." *American Political Science Review* 90(2):269–282.
- Irish Department of Finance. 2008. "Government Decision to Safeguard Banking System." Date last accessed: 18 October 2011.
- URL:** <http://www.finance.gov.ie/viewdoc.asp?DocID=5475&CatID=1&StartDate=01+January+2008>
- Kaminsky, Graciela L. and Carmen M. Reinhart. 1999. "The twin crises: the causes of banking and balance-of-payments problems." *American Economic Review* 89(3):473–500.
- Kane, Edward J. 1977. "Good intentions and unintended evil: The case against selective credit allocation." *Journal of Money, Credit and Banking* 9(1,):55–69.
- Kane, Edward J. 1989. *The S & L insurance mess: how did it happen?* The Urban Institute.
- Kane, Edward J. 1992. "The savings and loan insurance mess." *Society* 29(3):4–10.
- Kane, Edward J. 1996. "De Jure interstate banking: Why only now?" *Journal of Money, Credit and Banking* 28(2,):141–161.
- Keefer, Philip. 2007. "Elections, Special Interests, and Financial Crisis." *International Organization* 61(3):607–641.
- Kelly, John and Mary Everett. 2004. Financial Liberalisation and Economic Growth in Ireland. Central Bank and Financial Services Authority of Ireland, Quarterly Bulletin, Autumn Autumn 2004.

- Keynes, John Maynard. 1936. *The General Theory of Employment, Interest, and Money*. New York: Harcourt Brace.
- Kindleberger, Charles P. and Robert Z. Aliber. 2011. *Manias, panics and crashes: a history of financial crises*. Palgrave Macmillan.
- Kroszner, Randall S. 1998. "On the Political Economy of Banking and Financial Reform in Emerging Markets." *Research in Financial Services* 10:33–51.
- Kroszner, Randall S. 1999. Is the Financial System Politically Independent?: Perspectives on the Political Economy of Banking and Financial Regulation. Prepared for the Swedish Government Inquiry on the Competitiveness of the Swedish Financial Sector 1.
- Kroszner, Randall S and Philip E Strahan. 1998. What drives deregulation? Economics and politics of the relaxation of bank branching restrictions. National Bureau of Economic Research Working Paper No. 6637.
- Kroszner, Randall S. and Philip E. Strahan. 2001. Obstacles to optimal policy: the interplay of politics and economics in shaping bank supervision and regulation reforms. In *Prudential Supervision: What Works and What Doesn't*. University of Chicago Press pp. 233–272.
- Krueger, Anne O. 1974. "The political economy of the rent-seeking society." *The American economic review* pp. 291–303.
- Krugman, Paul. 2010. "An Irish Mirror." The New York Times. Date last accessed 24 August 2014.
URL: http://www.nytimes.com/2010/03/08/opinion/08krugman.html?_r=0
- Kudrna, Zdenek. 2012. "Cross-Border Resolution of Failed Banks in the European Union after the Crisis: Business as Usual." *Journal of Common Market Studies* 50(2):283–299.

- Kwak, James. 2013. Cultural Capture and the Financial Crisis. In *Preventing Capture: Special Interest Influence in Legislation, and How To Limit It*, ed. Daniel Carpenter and David A. Moss. Cambridge: Cambridge University Press.
- La Porta, Rafael, Florencio Lopez-de Silanes, Andrei Shleifer and Robert W. Vishny. 1997. "Legal determinants of external finance." *The Journal of Finance* 52(3):1131–1150.
- Laban, Raul and Federico Sturzenegger. 1994. "Distributional conflict, financial adaptation and delayed stabilizations." *Economics & Politics* 6(3):257–276.
- Laeven, Luc and Fabian Valencia. 2008*a*. "Systemic Banking Crisis: A New Database." pdf, Excel.
- Laeven, Luc and Fabian Valencia. 2008*b*. The Use of Blanket Guarantees in Banking Crises. International Monetary Fund Working Paper WP/08/250.
- Laeven, Luc and Fabian Valencia. 2010. Resolution of Banking Crises: The Good, the Bad, and the Ugly. International Monetary Fund Working Paper WP/10/146.
- Laeven, Luc and Fabián Valencia. 2012*a*. Systemic Banking Crises Database: An Update . International Monetary Fund Working Paper WP/12/163.
- Laeven, Luc and Fabián Valencia. 2012*b*. "The use of blanket guarantees in banking crises." *Journal of International Money and Finance* 31(5):1220–1248.
- Laffont, Jean-Jacques and Jean Tirole. 1991. "The politics of government decision-making: A theory of regulatory capture." *The Quarterly Journal of Economics* pp. 1089–1127.
- Laffont, Jean-Jacques and Jean Tirole. 1993. *A Theory of Incentives in Procurement and Regulation*. Boston, M.A.: MIT press.

- Lastra, Rosa. 2003. "The Governance Structure for Financial Supervision and Regulation in Europe." *Columbia Journal of European Law* 10(1):49–68.
- Lijphart, Arend. 1999. *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries*. New Haven: Yale University Press.
- Lindgren, Carl-Johan, Tomáš J.T. Bali no, Charles Enoch, Anne-Marie Gulde, Marc Quintyn and Leslie Teo. 1999. Financial Sector Crisis and Restructuring: Lessons from Asia. International Monetary Fund Occasional Paper 188.
- Lizzeri, Alessandro and Nicola Persico. 2001. "The Provision of Public Goods under Alternative Electoral Incentives." *American Economic Review* 91:225–239.
- London Economics. 2009. "The Importance of Wholesale Financial Services to the EU Economy." Date last accessed 24 August 2014.
- URL:** <http://www.cityoflondon.gov.uk/business/economic-research-and-information/research-publications/Documents/research-2009/The\%20importance\%20of\%20wholesale\%20financial\%20services\%20to\%20the\%20EU\%20Economy\%202009.pdf>,
- MacIntyre, Andrew. 2001. "Institutions and investors: The politics of the economic crisis in Southeast Asia." *International Organization* 55(01):81–122.
- McDowell, Michael. 1999. Report of the Implementation Advisory Group on the Establishment of a Single Regulatory Authority for the Financial Services Sector. Technical report. Date last accessed 24 August 2014.
- URL:** <http://www.djei.ie/publications/general/2001/sra/>
- McGowan, Pádraig. 1989. "Money and banking in Ireland-origins development and future." *Statistical and Social Inquiry Society of Ireland* XXVI(1).

- McKinnon, Ronald I. and Huw Pill. 1997. "Credible economic liberalizations and overborrowing." *The American Economic Review* pp. 189–193.
- McPhilemy, Samuel. 2014. "Integrating rules, disintegrating markets: the end of national discretion in European banking?" *Journal of European Public Policy* (ahead-of-print):1–18.
- McWilliams, David. 2009. *Follow the Money: The Tale of the Merchant of Ennis*. Dublin: Gill & MacMillan, Limited.
- Mendoza, Enrique G and Ceyhan Bora Durdu. 2004. Putting the brakes on Sudden Stops: the financial frictions-moral hazard tradeoff of asset price guarantees. Technical report National Bureau of Economic Research.
- Merler, Silvia and Guntram B. Wolff. 2014. The European Parliament improves banking union but the Single Resolution Mechanism still far from perfect. Bruegel. Date last accessed 24 August 2014.
- URL:** <http://www.bruegel.org/nc/blog/detail/article/1282-the-european-parliament-improves-banking-union/>
- Merton, Robert C. 1974. "On the pricing of corporate debt: The risk structure of interest rates." *The Journal of Finance* 29(2):449–470.
- Micossi, Stefano, Ginevra Bruzzone and Jacopo Carmassi. 2013. The new European framework for managing bank crises. Centre for European Policy Studies Policy Brief No. 304.
- Minsky, Hyman P. 1977. "The financial instability hypothesis: an interpretation of Keynes and an alternative to 'standard' theory." *Challenge* 16:20–27.
- Mueller, Dennis C. 2003. *Public choice III*. Cambridge: Cambridge University Press.

- Mügge, Daniel. 2006. "Reordering the Marketplace: Competition Politics in European Finance." *Journal of Common Market Studies* 44(5).
- Murphy, Laurence. 1995. "Mortgage Finance and Housing Provision in Ireland, 1970-90." *Urban Studies* 32(1):135-154.
- Murphy, Laurence. 1998. "Financial engine or glorified back office? Dublin's International Financial Services Centre going global." *Area* 30(2):157-165.
- Needham, Carol A. 2009. "Listening to Cassandra: The Difficulty of Recognizing Risks and Taking Action." *Fordham Law Review* 78(5):2329-2355.
- Nkusu, Mwanza. 2011. Nonperforming Loans and Macroeconomic Vulnerabilities in Advanced Economies. International Monetary Fund Working Paper WP/11/161.
- Nordhaus, William D. 1975. "The Political Business Cycle." *Review of Economic Studies* 42:169-190.
- North, Douglass C. 1990. *Institutions, institutional change and economic performance*. Cambridge: Cambridge University Press.
- North, Douglass C. and Barry R. Weingast. 1989. "Constitutions and commitment: the evolution of institutions governing public choice in seventeenth-century England." *The Journal of Economic History* 49(4):803-832.
- Nyberg, P. 2011. Misjudging Risk: Causes of the Systemic Banking Crisis in Ireland, Report on the Commission of Investigation into the Banking Sector in Ireland. Technical report. Date last accessed 24 August 2014.
- URL: <http://www.bankinginquiry.gov.ie/Documents/Misjudging%20Risk%20-%20Causes%20of%20the%20Systemic%20Banking%20Crisis%20in%20Ireland.pdf>

- Obstfeld, Maurice and Kenneth S Rogoff. 2009. “Global imbalances and the financial crisis: products of common causes.”. Centre for Economic Policy Research London.
- O’Gráda, Cormac. 1997. *A rocky road: the Irish economy since the 1920s*. Manchester: Manchester University Press.
- O’Reilly, Liam. 2004a. “Financial Regulator Launches Strategic Plan.”. Press Release. 15 January 2004. Date last accessed 21 July 2014.
URL: <http://www.financialregulator.ie/press-area/press-releases/Pages/FinancialRegulatorLaunchesStrategicPlan.aspx>
- O’Reilly, Liam. 2004b. “PWC survey of Irish Financial Services Compliance referenced in ‘The Irish Approach to Financial Services Regulation’. Speech at Finance Dublin Conference, March, 2004.”. Date last accessed: 20 September 2014.
URL: <http://www.financialregulator.ie/press-area/speeches/Documents/31\%20March\%2004\%20-\%20Chief\%20Executive\%20Speech.pdf>
- O’Sullivan, Kenneth Patrick Vincent and Stephen Kinsella. 2013. “Financial and regulatory failure: The case of Ireland.” *Journal of Banking Regulation* 14(1):1–15.
- Pagliari, Stefano. 2012. *Making Good Financial Regulation: Towards a Policy Response to Regulatory Capture*. London: Grosvenor House Publishing.
- Pederzoli, Chiara and Costanza Torricelli. 2005. “Capital requirements and business cycle regimes: Forward-looking modelling of default probabilities.” *Journal of Banking & Finance* 29(12):3121–3140.
- Peltzman, Sam. 1976. “Toward a more general theory of regulation.” *Journal of Law and Economics* 19:211–240.

- Pepinsky, Thomas. 2014. Financial Crises and the Politics of Adjustment and Reform. In *Handbook Of The International Political Economy Of Monetary Relations*, ed. William Kindred Winecoff and Thomas Oatley. Cheltenham: Edward Elgar Publishing.
- Persaud, Avinash, Leonard Seabrooke, Heribert Dieter, Mark Blythe, Anna Gelpern, Stephany Griffith-Jones, Eric Helleiner, Rajiv Kumar, Diery Seck, Injoo Sohn, Mark Taylor and Eleni Tsingou. 2009. *The Warwick Commission on International Financial Reform: In Praise of Unlevel Playing Fields*. Coventry: The University of Warwick.
- Persson, Torsten, Gerard Roland and Guido Tabellini. 1997. "Separation of powers and political accountability." *The Quarterly Journal of Economics* pp. 1163–1202.
- Persson, Torsten, Gerard Roland and Guido Tabellini. 2000. "Comparative politics and public finance." *Journal of Political Economy* 108(6):1121–1161.
- Persson, Torsten, Gerard Roland and Guido Tabellini. 2007. "Electoral rules and government spending in parliamentary democracies." *Quarterly Journal of Political Science* 2(2):155–188.
- Persson, Torsten and Guido Enrico Tabellini. 1990. *Macroeconomic policy, credibility and politics*. Amsterdam: Harwood Academic Publishers.
- Persson, Torsten and Guido Enrico Tabellini. 2002. *Political Economics: Explaining Economic Policy*. Boston, M.A.: MIT Press.
- Persson, Torsten and Guido Enrico Tabellini. 2005. *The Economic Effects of Constitutions*. Boston, M.A.: MIT press.
- Persson, Torsten and Guido Tabellini. 1993. Designing Institutions for Monetary Stability. Carnegie-Rochester Conference Series on Public Policy No. 39.

- Persson, Torsten and Guido Tabellini. 1999. "The size and scope of government: Comparative politics with rational politicians." *European Economic Review* 43(4):699–735.
- Pesola, James. 2005. "Banking fragility and distress: An econometric study of macroeconomic determinants." *Bank of Finland Research Discussion Papers* 13.
- Pierson, Paul. 2000*a*. "Increasing returns, path dependence, and the study of politics." *American Political Science Review* pp. 251–267.
- Pierson, Paul. 2000*b*. "The limits of design: Explaining institutional origins and change." *Governance* 13(4):475–499.
- Pierson, Paul. 2004. *Politics in Time: History, Institutions, and Social Analysis*. Princeton: Princeton University Press.
- Posner, Richard A. 1974. "Theories of economic regulation." *The Bell Journal of Economics and Management Science* 5(2):333–358.
- Quaglia, Lucia. 2010. "Completing the single market in financial services: the politics of competing advocacy coalitions." *Journal of European Public Policy* 17(7):1007–1023.
- Quintyn, Marc. 2007. Governance of Financial Supervisors and Its Effects: A Stocktaking Exercise. SUEF - The European Money and Finance Forum 2007/4.
- Quintyn, Marc and Michael W Taylor. 2002. Regulatory and supervisory independence and financial stability. International Monetary Fund Working Paper WP/02/46.
- Regling, W. and M. Watson. 2010. A Preliminary Report on the Sources of Ireland's Banking Crisis. Technical report. Date last accessed 24 August 2014.
- URL:** *<http://www.bankinginquiry.gov.ie/Preliminary%20Report%20into%20Ireland's%20Banking%20Crisis%2031%20May%202010.pdf>*

- Reinhart, Carmen M. and Kenneth Rogoff. 2010. From Financial Crash to Debt Crisis. National Bureau of Economic Research Working Paper No. 15795.
- Rickard, Stephanie, J. 2012. "Electoral Systems, Voters' Interests and Geographic Dispersion." *British Journal of Political Science* 42(4):855–877.
- Rodrik, Dani. 1996. "Understanding economic policy reform." *Journal of Economic Literature* 34(1):9–41.
- Rodrik, Dani. 1999. "Where Did All the Growth Go? External Shocks, Social Conflict, and Growth Collapses." *Journal of Economic Growth* 4:385–412.
- Rogoff, Kenneth and Anne Sibert. 1988. "Elections and macroeconomic policy cycles." *The Review of Economic Studies* 55(1):1–16.
- Rogoff, Kenneth S. 1990. Equilibrium political budget cycles. National Bureau of Economic Research Working Paper No. 2428.
- Rosas, Guillermo. 2006. "Bagehot or Bailout? An Analysis of Government Responses to Banking Crises." *American Journal of Political Science* 50(1):175–191.
- Rosas, Guillermo. 2009. *Curbing Bailouts: Bank Crises and Democratic Accountability in Comparative Perspective*. Ann Arbor, Michigan: The University of Michigan Press.
- Satyanath, Shanker. 2006. *Globalization, Politics, and Financial Turmoil: Asia's Banking Crisis*. Cambridge: Cambridge University Press.
- Scally, W. 2010. Fixing Finance: the Irish experience. IIEA Publications 06/2010 The Institute of International and European Affairs, Dublin: Ireland.
- Scharpf, Fritz W. 1996. Negative and positive integration in the political economy of European welfare states. In *Governance in the European Union*, ed. Gary Marks, Fritz W. Scharpf, Philippe C. Schmitter and Wolfgang Streeck. London: Sage pp. 15–39.

- Schinasi, Garry J. 2005. *Safeguarding financial stability: theory and practice*. Washington, D.C.: International Monetary Fund.
- Schularick, Moritz and Alan M Taylor. 2009. Credit booms gone bust: monetary policy, leverage cycles and financial crises, 1870–2008. National Bureau of Economic Research Working Paper No. 15512.
- Schulz, Martin. 2014. “Letter from European Parliament President Schulz to European Commission President Barroso.”. Date last accessed 24 August 2014.
URL: <http://www.europarl.europa.eu/document/activities/cont/201401/20140121ATT77977/20140121ATT77977EN.pdf>
- Shugart, Matthew S. and John M. Carey. 1992. *Presidents and assemblies: Constitutional design and electoral dynamics*. Cambridge: Cambridge University Press.
- Sikka, Prem. 2009. “Financial Crisis and the Silence of the Auditors.” *Accounting, Organizations and Society* 34(6-7):868–873.
- Stasavage, David. 2007. “Partisan politics and public debt: The importance of the Whig Supremacy for Britain’s financial revolution.” *European Review of Economic History* 11(01):123 –153.
- Stigler, George J. 1971. “The theory of economic regulation.” *The Bell journal of economics and management science* pp. 3–21.
- Stigler, George J. and Claire Friedland. 1962. “What can regulators regulate-the case of electricity.” *JL & Econ.* 5:1.
- Stolz, Stéphanie Marie and Michael Wedow. 2010. Extraordinary measures in extraordinary times: Public measures in support of the financial sector in the EU and the United States. European Central Bank Occasional Paper No. 117 July 2010.

- Story, Jonathan and Ingo Walter. 1997. *Political economy of financial integration in Europe: The battle of the systems*. Manchester: Manchester University Press.
- Sturzenegger, Federico and Mariano Tommasi. 1998. *The political economy of reform*. Boston, M.A.: MIT Press.
- Sundararajan, Vasudevan and Tomás Baliño. 1991. *Banking Crises: Cases and Issues*. Washington, D.C.: International Monetary Fund.
- Taagepera, Rein and Matthew Soberg Shugart. 1989. *Seats and votes: The effects and determinants of electoral systems*. New Haven: Yale University Press.
- Taylor, George. 2012. “Risk, prudence and the Irish banking crisis: A comment on the Honohan report.” *Administration* 60:97–107.
- Thirkell-White, Ben. 2009. “Dealing with the banks: populism and the public interest in the global financial crisis.” *International Affairs* 85(4):689–711.
- Tirole, Jean. 1986. “Hierarchies and bureaucracies: On the role of collusion in organizations.” *Journal of Law, Economics, & Organization* 2(2):181–214.
- Tollison, Robert D. 1982. “Rent Seeking: A Survey.” *Kyklos* 35:572–602.
- Tresselt, Thierry, Deniz Igan and Prachi Mishra. 2009. A fistful of dollars: lobbying and the financial crisis. International Monetary Fund Working Paper WP/09/287.
- Tsebelis, George. 1995. “Decision making in political systems: Veto players in presidentialism, parliamentarism, multicameralism and multipartyism.” *British Journal of Political Science* 25(03):289–325.
- Tufte, Edward R. 1980. *Political control of the economy*. Chichester, West Sussex: Princeton University Press.

- Tullock, Gordon. 1967. "The welfare costs of tariffs, monopolies, and theft." *Economic Inquiry* 5(3):224–232.
- Turner, Adair. 2009. The Turner Review: A regulatory response to the global banking crisis. Technical report Financial Services Authority, London.
- Underhill, Geoffrey R.D. 1997. The Making of the European Financial Area: Global market integration and the EU Single Market for financial services. In *The New World Order In International Finance*, ed. Geoffrey R.D. Underhill. London: Macmillan pp. 101–123.
- Underhill, Geoffrey R.D. 2006. Theorizing Governance in a Global Financial System. In *The Political Economy of Financial Market Regulation: The Dynamics of Inclusion and Exclusion*, ed. Peter Mooslechner, Helene Schuberth and Beat Weber. Cheltenham: Edward Elgar Publishing.
- Vickers, John, Clare Spottiswoode, Martin Taylor, Bill Winters and Martin Wolf. 2011. Independent Commission on Banking Final Report Recommendations. Technical report. London: Domarn Group.
- Vreeland, James R. 2003. "Why Do Governments and the IMF Enter into Agreements? Statistically Selected Cases." *International Political Science Review* 24(3):321–343.
- Walter, Andrew. 2008. *Governing Finance: East Asia's Adoption of International Standards*. New York: Cornell University Press.
- Walter, Andrew. 2012. Regulatory Implementation and Capture. In *Making Good Financial Regulation: Towards a Policy Response to Regulatory Capture*, ed. S. Pagliari. London: Grosvenor House Publishing.
- Walter, Stefanie. 2013. *Financial crises and the politics of macroeconomic adjustments*. Cambridge: Cambridge University Press.

- Westrup, Jonathan. 2002. Financial Services Regulation in Ireland-the Accountability Dimension. The Policy Institute, Studies in Public Policy No. 10.
- Williamson, John. 1994. *The political economy of policy reform*. London: Institute for International Economics.
- Woo, David and Akihiro Kanaya. 2000. *The Japanese banking crisis of the 1990s: sources and lessons*. Number 0-7 International Monetary Fund.
- World Bank. 2013. "World Development Indicators.". <http://data.worldbank.org/>.

Appendix I : Equilibrium with Two Signallers

Building on Satyanath (2006, 139-140) a Perfect Bayesian Equilibrium for two signallers is a set of strategies $g_k^*(m_{1\alpha}, m_{2\alpha})$, $m_{1\alpha}^*(\alpha_i, m_{2\alpha}, g_k)$, $m_{2\alpha}^*(\alpha_i, m_{1\alpha}, g_k)$, and posterior beliefs, $h^*(\alpha_i; m_{1\alpha}, m_{2\alpha})$ such that;

1. $m_{1\alpha}(\alpha_i, m_{2\alpha}, g_k) \in \arg \max EU_{s1}$, given $g_k^*(m_{1\alpha}, m_{2\alpha})$ and $m_{2\alpha}^*(\alpha_i, m_{1\alpha}, g_g)$
2. $m_{2\alpha}(\alpha_i, m_{1\alpha}, g_k) \in \arg \max EU_{s2}$, given $g_k^*(m_{1\alpha}, m_{2\alpha})$ and $m_{1\alpha}^*(\alpha_i, m_{2\alpha}, g_g)$
3. $g_k^*(m_{1\alpha}, m_{2\alpha}) \in \arg \max EU \int_{0.65}^{0.95} u_c(g_k, \alpha_i) h^*(\alpha_i, m_{1\alpha}, m_{2\alpha}) d\alpha_i$
4. $h^*(\alpha_i; m_{1\alpha}, m_{2\alpha}) = \Pr(\alpha = \alpha_i \mid m_{1\alpha}^*, m_{2\alpha}^*)$, as per Bayes' rule.

Assuming that α is uniformly distributed in $[0.65, 0.95]$, though another range could be used.

Proposition: There exists a Perfect Bayesian Equilibrium in which;

1. $m_{1\alpha}^*(\alpha_i, m_{2\alpha}, g_k) = \alpha_i$ if $\alpha_i = \bar{\alpha} + 2x_{s1}$ or $\alpha_i = \bar{\alpha} + 2x_{s2}$, and s_1 randomises with equal probability over $[\bar{\alpha} + 2x_{s1}, \bar{\alpha} + 2x_{s2}]$ otherwise.
2. $m_{2\alpha}^*(\alpha_i, m_{1\alpha}, g_k) = \alpha_i$ if $\alpha_i = \bar{\alpha} - 2x_{s1}$ or $\alpha_i = \bar{\alpha} + 2x_{s2}$, and s_2 randomises with equal probability over $[\bar{\alpha} + 2x_{s1}, \bar{\alpha} + 2x_{s2}]$ otherwise.
3. $g_k^*(m_{1\alpha}, m_{2\alpha}) = \alpha_i$ if $m_{1\alpha} = m_{2\alpha}$, and $\bar{\alpha}$ otherwise.
4. If $m_{1\alpha} = m_{2\alpha}$, $h^*(\alpha_i; m_{1\alpha}, m_{2\alpha}) = 1$. If $m_{1\alpha} \neq m_{2\alpha}$, $h^*(\alpha; m_{1\alpha}, m_{2\alpha}) = 0$ for all $\alpha_i \notin [\bar{\alpha} + 2x_{s1}, \bar{\alpha} + 2x_{s2}]$

Note that we used a more general notation (s_1 and s_2) than above to denote the two signallers, where s_1 prefers an outcome $x_{s1} < 0$ and s_2 prefers an outcomes $x_{s2} < 0$.

Proof: There are four parts to the proof.

1. To show that s_1 maximises her expected utility given the PM's policy choice and s_2 's optimal signalling strategy, as in part 1 above, we discuss each component of $m_{1\alpha}^*(\alpha_i, m_{2\alpha}, g_k)$:

(a) $m_{1\alpha}^*(\alpha_i, m_{2\alpha}, g_k) = \alpha_i$ if $\alpha_i < \bar{\alpha} + 2x_{s1}$:

i. When $\alpha_i < \bar{\alpha} + 2x_{s1}$ the PM will choose $\bar{\alpha}$ and $x_k > 2x_{s1}$ if $m_{1\alpha} \neq m_{2\alpha}$, as in the proposed equilibrium $g_k^*(m_{1\alpha}, m_{2\alpha}) = \bar{\alpha}$.

ii. When $m_{1\alpha} = m_{2\alpha} = \alpha_i$, $g_k^*(m_{1\alpha}, m_{2\alpha}) = \alpha_i$, and $x_k = 0$ which results in s_1 having a greater utility than $x > 2x_{s1}$.

(b) $m_{1\alpha}^*(\alpha_i, m_{2\alpha}, g_k) = \alpha_i$ if $\alpha_i > \bar{\alpha} + 2x_{s1}$: If $m_{1\alpha} \neq m_{2\alpha}$ the PM chooses $\bar{\alpha}$. This is less utility for s_1 than $x = 0$ because $x < 2x_{s2}$.

(c) s_1 randomises with equal probability over $[\bar{\alpha} + 2x_{s1}, \bar{\alpha} + 2x_{s2}]$ when $\alpha_i \in [\bar{\alpha} + 2x_{s1}, \bar{\alpha} + 2x_{s2}]$:

If $\alpha_i \in [\bar{\alpha} + 2x_{s1}, \bar{\alpha} + 2x_{s2}]$ signaller s_2 will randomise between these two values and therefore s_1 will not be able to match his signal. Her signal will thus have no effect on the PM's decision as she will think that $\alpha_i \in [\bar{\alpha} + 2x_{s1}, \bar{\alpha} + 2x_{s2}]$ regardless.

2. To show that s_2 maximises his utility given the PM's policy choice and s_1 's optimal signalling strategy, as in part 1 above, simply use the same logic as in the previous section, reversing the signaller notation.

3. To show that the PM maximises her utility given her posterior belief about the value of α :

(a) If $h^*(\alpha_i; m_{1\alpha}, m_{2\alpha}) = 1$, which happens when $m_{1\alpha} = m_{2\alpha}$, she can simply choose her optimal strategy $g_k = \alpha_i$ if her ideal point is $x = 0$.

(b) If, however, $h^*(\alpha_i; m_{1\alpha}, m_{2\alpha}) = 0$ for all $\alpha_i \notin [\bar{\alpha} + 2x_{s1}, \bar{\alpha} + 2x_{s2}]$, which happens when $m_{1\alpha} \neq m_{2\alpha}$, she chooses g_k to maximise:

$$\int_{\bar{\alpha}+2x_{s1}}^{\bar{\alpha}+2x_{s2}} -(g_k - \alpha_i)^2 h^*(\alpha_i, m_{1\alpha}, m_{2\alpha}) d\alpha_i$$

which produces $g_k(m_{1\alpha}, m_{2\alpha}) = \bar{\alpha}$.

4. The consistency of $h^*(\alpha_i; m_{1\alpha}, m_{2\alpha})$ was established in 1(c) of the proof.

Appendix II: Definition of banking crises episodes

Following Laeven and Valencia, we define a banking crisis episode if two conditions are met:

1. Significant signs of financial distress in the banking system (as indicated by significant bank runs, losses in the banking system and/or bank liquidations.
2. Significant banking policy intervention measures in response to significant losses in the banking system.

Moreover, significant policy intervention is considered when at least three of the following policies are undertaken:

1. extensive liquidity support (5 percent of deposits and liabilities to non-residents)
2. bank restructuring gross costs (at least 3 percent of GDP)
3. significant bank nationalisations
4. significant guarantees put in place
5. significant asset purchases (at least 5 percent of GDP)
6. deposit freezes and/or bank holidays.

In the past, however, some countries intervened in their financial sectors using a combination of less than three of these measures, but on a large scale (for example, by nationalising all major banks in the country). Therefore, Laeven and Valencia consider a sufficient condition for a crisis episode to be deemed systemic when either:

1. a country's banking system exhibits significant losses resulting in a share of nonperforming loans above 20 percent, or bank closures of at least 20 percent of banking system assets, or

2. fiscal restructuring costs of the banking sector are sufficiently high, exceeding 5 percent of GDP.

Appendix III: Construction of LIEC and Checks and Balances

Legislative and Executive Indices of Electoral Competitiveness (LIEC) (see Beck et al., 2001, 2012, codebook p14)

Legislative IEC Scale:

No legislature: 1

Unelected legislature: 2

Elected, 1 candidate: 3

1 party, multiple candidates: 4

multiple parties are legal but only one party won seats: 5

multiple parties won seats but the largest party received more than 75% of the seats: 6

largest party got less than 75%: 7

Checks and Balances (see Beck et al., 2001, 2012, codebook, p18-19)

Checks and Balances equals one if LIEC OR (the Beck et al, 2012, Executive Index of Electoral Competition) EIEC is less than 6 (5 for CHECKS_LAX) – countries where legislatures are not competitively elected are considered countries where only the executive wields a check.

In countries where LIEC and EIEC are greater than or equal to 6 (5 for CHECKS_LAX):

Checks and Balances is incremented by one if there is a chief executive (it is blank or NA if not).

Checks and Balances is incremented by one if the chief executive is competitively elected (EIEC greater than six).

Checks and Balances is incremented by one if the opposition controls the legislature.

In presidential systems, Checks and Balances is incremented by one:

for each chamber of the legislature UNLESS the president's party has a majority in the

lower house AND a closed list system is in effect (implying stronger presidential control of his/her party, and therefore of the legislature).

for each chamber of the legislature UNLESS the president's party has a majority in the lower house AND a closed list system is in effect (implying stronger presidential control of his/her party, and therefore of the legislature).

In parliamentary systems, Checks and Balances is incremented by one

for every party in the government coalition as long as the parties are needed to maintain a majority (the previous version of CHECKS – Checks3 in DPI3 – incremented by one for each of the three largest parties in the government coalition, regardless of whether they were needed for a legislative majority).

for every party in the government coalition that has a position on economic issues (right-left-center) closer to the largest opposition party than to the party of the executive.

In parliamentary systems, the prime minister's party is not counted as a check if there is a closed rule in place – the prime minister is presumed in this case to control the party fully.

Appendix IV: Banking Crises 1970–2011

Table 6.1: Banking Crises, Dates 1970- 2011

Country	Start	End	Country	Start	End	Country	Start	End
Albania	1994	1994	Equatorial Guinea	1983	1983	Nicaragua	2000	2001
Algeria	1990	1994	Eritrea	1993	1993	Niger	1983	1985
Argentina	1980	1982	Estonia	1992	1994	Nigeria	1991	1995
Argentina	1989	1991	Finland	1991	1995	Nigeria	2009	ongoing
Argentina	1995	1995	France	2008	ongoing	Norway	1991	1993
Argentina	2001	2003	Georgia	1991	1995	Panama	1988	1989
Armenia	1994	1994	Germany	2008	ongoing	Paraguay	1995	1995
Austria	2008	ongoing	Ghana	1982	1983	Peru	1983	1983
Azerbaijan	1995	1995	Greece	2008	ongoing	Philippines	1983	1986
Bangladesh	1987	1987	Guinea	1985	1985	Philippines	1998	2001
Belarus	1995	1995	Guinea	1993	1993	Poland	1992	2001
Belgium	2008	ongoing	Guinea-Bissau	1995	1998	Portugal	2008	ongoing
Benin	1988	1992	Guyana	1993	1993	Romania	1990	992
Bolivia	1986	1986	Haiti	1994	1998	Russia	1998	1998
Bolivia	1994	1994	Hungary	1991	1995	Russia	2008	ongoing
Bosnia and Herzegovina	1992	1996	Hungary	2008	ongoing	Sao Tome & Principe	1992	1992
Brazil	1990	1994	Iceland	2008	ongoing	Senegal	1988	1991
Brazil	1994	1998	India	1993	1993	Sierra Leone	1990	1994
Bulgaria	1996	1997	Indonesia	1997	2001	Slovak Rep	1998	2002
Burkina Faso	1990	1994	Ireland	2008	ongoing	Slovenia	1992	1992
Burundi	1994	1998	Israel	1977	1977	Slovenia	2008	ongoing
Cameroon	1987	1991	Jamaica	1996	1998	Spain	1977	1981
Cameroon	1995	1997	Japan	1997	2001	Sri Lanka	1989	1991
Cape Verde	1993	1993	Jordan	1989	1991	Swaziland	1995	1999
Central African Republic	1976	1976	Kazakhstan	2008	ongoing	Sweden	1991	1995
Central African Republic	1995	1996	Kenya	1985	1985	Sweden	2008	ongoing
Chad	1983	1983	Kenya	1992	1994	Switzerland	2008	ongoing
Chad	1992	1996	South Korea	1997	1998	Tanzania	1987	1988
Chile	1976	1976	Kuwait	1982	1985	Thailand	1983	1983
Chile	1981	1985	Kyrgyz Republic	1995	1999	Thailand	1997	2000
China	1998	1998	Latvia	1995	1996	Togo	1993	1994
Colombia	1982	1982	Latvia	2008	ongoing	Tunisia	1991	1991
Colombia	1998	2000	Lebanon	1990	1993	Turkey	1982	1984
Congo, Dem Rep	1983	1983	Liberia	1991	1995	Turkey	2000	2001
Congo, Dem Rep	1991	1994	Lithuania	1995	1996	Uganda	1994	1994
Congo, Dem Rep	1994	1998	Luxembourg	2008	ongoing	Ukraine	1998	1999
Congo, Rep	1992	1994	Macedonia, FYR	1993	1995	Ukraine	2008	ongoing
Costa Rica	1987	1991	Madagascar	1988	1988	United Kingdom	2007	ongoing
Costa Rica	1994	1995	Malaysia	1997	1999	United States	1988	1988
Cote d'Ivoire	1998	1992	Mali	1987	1991	United States	2007	ongoing
Croatia	1998	1999	Mauritania	1984	1984	Uruguay	1981	1985
Czech Republic	1996	2000	Mexico	1981	1985	Uruguay	2002	2005
Denmark	2008	ongoing	Mexico	1994	1996	Venezuela	1994	1998
Djibouti	1991	1995	Mongolia	2008	ongoing	Vietnam	1997	1997
Dominican Republic	2003	2004	Morocco	1980	1984	Yemen	1996	1996
Ecuador	1982	1986	Mozambique	1987	1991	Zambia	1995	1998
Ecuador	1998	2002	Nepal	1988	1988	Zimbabwe	1995	1999
Egypt	1980	1980	Netherlands	2008	ongoing			
El Salvador	1989	1990	Nicaragua	1990	1993			

Appendix V: List of variables used

Variable	Source	Note
Crisis duration	Laeven and Valencia (2012)	Years
Fiscal Costs (% of GDP)	WEO, IFS, IMF Staff reports, Laeven and Valencia (2008), and authors' calculation.	Fiscal costs are defined as the component of gross fiscal outlays related to the restructuring of the financial sector. They include fiscal costs associated with bank recapitalizations but exclude asset purchases and direct liquidity assistance from the treasury.
Liquidity support	WEO, IFS, IMF Staff reports, Laeven and Valencia (2008), and authors' calculation.	Percentage points increase in central bank claims on financial institutions over deposits and foreign liabilities.
Monetary expansion	WEO, IFS, IMF Staff reports, Laeven and Valencia (2008), and authors' calculation.	In percent of GDP. Monetary expansion is computed as the change in the monetary base between its peak during the crisis and its level one year prior to the crisis.

Credit	World Bank	Averaged over the three pre-crisis years, domestic credit provided by the banking sector includes all credit to various sectors on a gross basis, with the exception of credit to the central government, which is net. The banking sector includes monetary authorities and deposit taking banks, as well as other banking institutions where data available (including institutions that do not accept transferable deposits but do incur such liabilities as time and savings deposits)
Credit boom	WEO, IFS, IMF Staff reports, Laeven and Valencia (2008), and authors' calculation	As defined in Dell'Ariccia et al. (2012).
Form of government	World Bank - DPI2012	Parliamentary (2), Assembly-elected President (1), Presidential (0)
Government orientation	World Bank - DPI2012	Right (1); Left (3); Center (2); No information (0); No executive (NA)

Legislative Index of Electoral Competitiveness (LIEC)	World Bank - DPI2012	No legislature: 1; Unelected legislature: 2; Elected, 1 candidate: 3; 1 party, multiple candidates: 4; multiple parties are legal but only one party won seats: 5; multiple parties did win seats but the largest party received more than 75% of the seats: 6; largest party got less than 75%: 7.
Years to next election	World Bank - DPI2012	Only full years are counted. Thus, a “0” is scored in an election year.
Degree of checks and balances	World Bank - DPI2012	Degree of checks and balances, from 1 to 7.
Snap elections held during the crisis	World Bank - DPI2015, own calculations.	Cumulative number of snap executive elections held during the crisis years // The executive who formally (de jure) holds power is counted.
GDP per capita	IMF, WEO	Gross Domestic Product divided by midyear population. Data are taken in current U.S. dollars taken at t-1