

The Political Economy of the State-Finance Nexus:
Public Debt, Crisis and Bank Business Models

Inauguraldissertation
zur
Erlangung des Doktorgrades
der
Wirtschafts- und Sozialwissenschaftlichen Fakultät
der
Universität zu Köln

2019

vorgelegt
von

Dipl.-Volksw. Florian Fastenrath

aus

Hückeswagen

Referent: Univ.-Prof. Dr. Christine Trampusch

Korreferent: apl. Prof. Dr. Martin Höpner

Tag der Promotion: 24.04.2019

Acknowledgements

This dissertation would not have been possible without the support of many people, and I would like to take this opportunity to express my sincere gratitude. First of all, I would like to thank my supervisor Christine Trampusch, who has influenced my way in the development of this work in many ways positively. From the beginning, I was inspired by her strong passion for political-economic research and her great curiosity to systematically explore empirical research questions. The untiring scientific discussions with her have given rise to the many ideas that form the basis for the papers we have written together, and which are part of this dissertation. Three of these works were created as part of the DFG-funded project "Municipalities and their Expectations on Pay-offs of Swap Deals", on which I worked from February 2016 to January 2019. At this point I would also like to thank the organizers of the DFG priority program "Experience and Expectation: Historical Foundations of Economic Behaviour", Alexander Nützenadel and Jochen Streb, who made it possible for me to conduct research at Berkeley in 2017 via a fellowship program. The many interdisciplinary workshops within the framework of the priority program, where historians, economists and social scientists met in conversation, delighted me very much. This experience has shown me how fruitful and vital the unbiased exchange between different disciplines is, which is also reflected in this thesis. I am particularly grateful to Agnes Janssen, who was also part of the DFG project, not only for the years of productive brain-storming sessions and the great joint project work, but also for her constantly open ear and advice on problems of all kinds from the beginning of my doctoral studies. There are other chair team members whom I would like to thank for a pleasant time together and many inspiring conversations. These include Marina Hübner, Kimey Pflücke and Dennis Abel, with whom I had the honor of sharing my office for a period of time. I am also grateful to Leon Kanthak, Philip Gross, Dennis Spies, Armin Mertens and Nawid Hoshmand, Michael Kemmerling, Hagen Kruse and Rebecca Wangemann for their valuable feedback on my work and their support. My special thanks go to Michael Schwan, with whom I have walked through thick and thin since our time together as student assistants. In addition to the intensive academic exchange and cooperation, I share with him the joy of the stages achieved, the mutual encouragement and many great common experiences that go far beyond academia. I would also like to thank the members of the dissertation committee: I thank Martin Höpner for his insightful comments on my work and for his uplifting words in the final phase, and Ingo Rohlfing for helpful methodological advice and chairing the disputation. Furthermore, I thank my family and friends that they have always supported and confirmed me to go this way. I am particularly grateful to Aytüre for her comprehensive proofreading. Last but not least, a special big thank you goes to my beloved Tabea, who has kept my back free wherever possible and has always given me strength with her loving and patient nature.

To my parents

Table of Contents

Introduction	1
State of research	5
Overview of studies	12
Overarching contribution of the dissertation.....	26
Normative implications and further research.....	31
Status of studies	38
References	39
Chapter 1: Where States and Markets Meet	45
1.1 Introduction.....	46
1.2 The financialization of SDM: A two-dimensional concept	48
1.3 Governance mechanisms of SDM: From state to financial markets.....	54
1.4 Sensemaking frameworks of SDM: From macroeconomics to financial economics	61
1.5 Discussion and conclusion	65
Notes	69
References	71
Chapter 2: States' Interests as Limits to the Power of Finance.....	78
2.1 Introduction.....	79
2.2 The power of finance and the role of the state's fiscal capacity	81
2.3 The Power of finance and regulatory reforms in the U.S.: The typical case.....	84
2.4 The deviant case: Why the power model fails in the UK.....	90
Notes	101
References	102
Chapter 3: From Economic Gains to Social Losses	106
3.1 Introduction.....	107
3.2 How stories shape expectations	110
3.3.Results.....	118
3.4 Conclusion and discussion	129
Notes	133
References.....	135

Chapter 4: Crisis, Expectations and Policy Change	140
4.1 Introduction.....	141
4.2 Crisis, expectations and policy change	144
4.3 The comparable cases, pre-crisis swap policies and expectations	147
4.4 Transformative policy change in Philadelphia and incremental change in Würzburg.....	152
4.5 Conclusion	160
Notes	163
References.....	165
Chapter 5: Crisis Prone Public Financiers	170
5.1 Introduction.....	171
5.2 The crisis prone business model in German mortgage banking.....	174
5.3. Competition and the embeddedness of economic action	177
5.4. German mortgage banks under increasing competitive pressure (1960s-1974)	184
5.5 The Realkreditreform (1969-1974): Political-institutional embeddedness.....	186
5.6 From risk-aversion to controlled speculation (1975- late 1980s): Cultural embeddedness	189
5.7 The non-mortgage mortgage banks (1987-2000s): Structural embeddedness	193
5.8. Conclusion	198
Notes	202
References.....	204

Abstract

This dissertation aims at advancing our understanding of the state-finance nexus in times of globalized financial market capitalism. It sheds light on the profound changes that have occurred on both sides of this relationship since OECD countries have transitioned into debt states since the 1970s. This is done in a first part by examining the financialization of the state in the area of government debt management. Based on the development of a concept that makes it possible to measure this phenomenon, a discernible trend is shown according to which states have aligned their handling of debt with the financial markets along two dimensions. First, the sense-making frameworks that guide action in debt management, nowadays, originate from financial economics, so that a portfolio view on indebtedness has found its way into the public realm. Second, the financial market has become the predominant governance mechanism in which economic coordination takes place in this area. Thus, states have increasingly adopted financial market logics and practices in public finance, one of the core areas of modern democracies. At the same time, governments have made a decisive contribution to the development of modern financial markets by the increasing orientation towards international investors and marketability of public debt. These interpenetrations of politics and finance are not limited to the national, but also extend to the subnational level. Local governments in Germany, the US and UK have introduced financial derivatives since the 1980s and continue to use them in some cases, even though they suffered major losses from these instruments during the financial crisis. By combining political economy with an economic sociological perspective, the causes that led to the local manifestation of this phenomenon are scrutinized. It is shown that the chronically underfinanced municipalities hoped to regain financial and political leeway through the use of financial innovations, which were strongly promoted and lobbied by financial institutions. The second part of the thesis analyzes the state-finance nexus from the perspective of the financial industry and the business with public debt, which is embodied in the emergence of pure public sector lending banks in the German mortgage banking sector. Unpacking the manifold state-banks relations demonstrates that the historical emergence of this crisis-ridden business model focusing on public finance closely interacts with the different roles played by the state in financial markets as economic policy maker, borrower, regulator and supervisor. The state is deeply involved in the process of coping with competition between banks by enabling change and stabilization of the social structures in which banks' activities play out. Overall, this dissertation reiterates that the relationship between the state and finance is by no means one-sided, but rather characterized by mutual conditionality. It further highlights that the state-finance nexus is a complex configuration that also arises from the multilayered nature of the two entities themselves. Neither the financial sector nor the state are monolithic, but highly differentiated social arenas in which different actors and interests coexist. It is therefore of great importance that intra-state politics and dynamic relations within both entities are taken into account when studying relations between state and finance.

Introduction

Public debt epitomizes the historically grown nexus between states and finance; it is the junction where governments and the financial industry regularly cross and where their interests often mingle. The origins of this mutual relationship reach far back, which over time manifested itself in a dynamic co-evolution of financial markets and states that continues today (Carruthers 1996; Vogl 2017). The transformation of the tax state into the debt state in the OECD world since the 1970s in the wake of the crisis of democratic post-war capitalism has once again made the relationship between public debtors and private lenders a key political issue (Streeck 2013, 2014). States are increasingly reliant on private financial capital and liquid financial markets to meet their growing borrowing requirements, while public debt has become an indispensable integrated part of financial industry's activities in modern financial markets, contributing to stable profit generation.

This latest phase of the state-finance nexus characterized by the states' transition towards the *debt state* and intertwined with the financialization of the economy (Krippner 2011; Davis & Kim 2015), has given rise to two phenomena that have received rather little attention so far. They revolve around both – the demand and the supply side of the public debt market. On the one hand, the way states deal with their accumulated debt has fundamentally changed, i.e. the mechanics of how and from whom governments borrow. This is discussed to a much lesser extent than the sheer level of debt and its consequences. On the other hand, there is little systematic research on the concrete business with public debt. Not much is known about what the increasing need for public sector credit has meant to individual groups in the financial industry that have contributed to its coverage.

With the growing importance of budgetary consolidation since the 1980s, fiscal authorities have also sought to improve their refinancing practices in order to keep borrowing costs as low as possible (Abbas et al. 2010). In the course of this, states have adopted financial market logics and practices to professionalize and optimize their debt management activities. This process of an increasing alignment with financial markets is understood as one crucial area of the financialization of the state (Hendrikse & Lagna 2017). While social science research has so far focused primarily on the role of the state as a producer of conditions conducive to the financialization of the economy (Krippner 2011), here the state itself as a borrower is regarded

as the object being financialized. Complex financial instruments developed in the financial sector to manage financial risk that were subsequently also used extensively by non-financial firms, have increasingly entered the public sector since the 1980s. Thus, state actors have evolved from passive debt administrators to active portfolio and risk managers. These shifts are observable at both the national and the sub-national level, albeit to different degrees. During the recent financial crisis, the use of financial innovations at the local level, which in many cases brought the opposite of the expected outcome, was particularly visible to the public. Instead of giving municipalities the promised financial leeway in times of fiscal austerity, their financial situation was often exacerbated due to unexpected losses from financial derivatives. The first part of this dissertation is devoted to the financialization of public debt management, in which the phenomenon is made conceptually comprehensible in a first step, and in a second step the causes that led to the local manifestation of this phenomenon are examined.

The second part turns to the supply side of the public debt market. Government debt and how it is managed also have a profound impact on the financial industry. As a result of the government's active involvement in developing the financial markets to meet its growing credit needs (Quinn 2017; Braun 2018; Trampusch 2018a), government debt and above all government bonds have become an enormously important element for the functioning of modern financial markets (Gabor & Ban 2015). National as well as transnational regulations, according to which public sector lending only requires a minimal equity base, have prompted and incentivized banks to develop business models in which lending to the state plays an essential role. Furthermore, it is assumed that public debt contributes to social inequality, in which the upper class in particular belongs to the group of creditors and in which the interest payment of the state leads to a redistribution from bottom to top (Hager 2016; Streeck 2017). It is also presumed that banks and other financial intermediaries that regularly recycle, convert and pass on public debt to end-investors are among the profiteers of the drift of OECD countries into debt states. In this vein, the states' indebtedness also made a decisive contribution to the 'rise of finance' (Krippner 2011; Streeck 2017). However, few studies systematically examine whether and how certain banking groups have actually adapted their business models over time to public debt, how exactly this has been done and with what result. The assumption that financial institutions as "merchants of debt" (Minsky 1986: 279) more or less automatically benefit from public borrowing neglects the outstanding powerful role of the state as debtor in the financial markets; in this function it cannot be seen as equal among equals (Häuser 1981). The analysis of the transformation of a specific banking group (the German mortgage banking

industry) by historically tracing how and why banks in this sector have developed into pure “public financiers” – a business model that eventually led them into crisis – shows that the cost-minimization debt management approach of the state required speculative bank activities to make the business with public debt a profitable enterprise.

This thesis shows that the fiscal crisis of the state has brought about significant changes on both sides of the state-finance nexus, with consequences for society which became visible not least in the financial crisis of 2008: not only banks that focused on public-sector financing (German mortgage banks) had to be rescued but also numerous municipalities in many countries suffered heavy losses. Both, local governments and banks, took greater risks to optimize their finances. The former with the aim of reducing the cost of debt, the latter in order to make the business with public debt as profitable as possible. A financialized debt management approach exposes many municipalities to the risk (but also the opportunity) of capital markets by employing complex financial innovations. The state-finance nexus, which is embodied both in newly founded public debt management offices and in the pure public finance banks, has become increasingly technical and speculative due to the uncertainties and volatilities of the financial markets, which have become more pronounced since the end of the Bretton Woods regime.

By way of example: The use of an interest rate swap - a widely used financial instrument - in which interest payments are exchanged from e.g. fixed interest rates into variable interest rates with a market partner (e.g. a bank), is based on the expectation of a future interest rate reduction by the respective debt manager. If the hoped-for interest rate development occurs, he reduces the state's interest payments of an existing underlying credit transaction. However, the state or city runs the risk that interest rates will develop differently than expected. In this case, the taxpayer has to bear additional costs, which are often realized in the course of the financial crisis. German mortgage banks, on the other hand, which concentrated on public-sector lending, were confronted with public debt managers who aimed to borrow as cheaply as possible, resulting in low or no margins for banks at the time of lending. Hence, these banks also took high interest rate risks by granting long-term loans to governments and refinancing them very short-term (maturity transformation), based on the expectation that interest rates would fall overall and that short-term interest rates would remain below long-term interest rates. Similar to the possible savings of the state that concludes an interest rate swap, the occurrence of the anticipated interest rate development results in a higher interest rate spread and thus a larger profit for the banks, as was realized for many years. However, they also run the risk that rates

or other market conditions will go against their expectation, as for example in the case of an inverse interest rate structure in which short-term and long-term interest rates converge, or the former even exceed the latter. In this case, the bank cannot cover its costs, it runs into liquidity problems and produces losses. Put simply, the uncertainties of modern financial markets offering opportunities and risks have become increasingly important on both sides of the public debt market. As a result, the formation of expectations for future market developments is becoming increasingly important for financial decision-making (Beckert 2016).

The relations between states and the financial industry in the area of public debt extend beyond the pure debtor-creditor relationship. Both the industry as well as local governments are, for example, equally dependent on the regulation of financialized practices by national governments. Thus, the respective state-finance relationship can also be shaped by the internal power struggles within the state and the industry. In addition, the financial industry interacts not only with the state as regulator and borrower, but also with banking supervisors and policymakers, where the interests may not necessarily coincide with those of financial institutions. Similarly, as a permanent issuer in the financial markets and in the shape of public banks, the state faces private financial institutions as direct competitors.

To approach this thematic complex, this dissertation consists of an ensemble of five papers, which are divided into the two broad parts just described: the management of public debt by national and subnational governments (**Chapters 1–4**) on the one hand, and the financial industry's business with public debt (**Chapter 5**) on the other.

The next section briefly presents the state of research on the three topics: sovereign debt management, municipal derivatives usage and German mortgage banking. Building on this, an overview of the studies comprised in the cumulative dissertation is given, whereby the summaries of the individual papers contain brief descriptions of the context of the cases studied, the used method, essential results and their central contributions. The following three sections, elaborate the thesis' overall contribution, discuss normative implications, and propose starting points for future research.

State of research

What is public debt management and how has it changed?

While fiscal policy determines how much countries borrow, public debt management (PDM) broadly speaking circumscribes the mechanics of how governments borrow. It subsumes procedures and techniques of how governments fund their budget deficits, how they issue their bonds to financial investors and which possibilities they have to influence the composition of an externally given amount of debt. Thereby the prime channel of influence is seen as the choice between different debt instruments, whereby “(which) instruments policymakers choose depends on the objective they pursue as well as on the circumstances in which the choice is made”(Missale 1999: 1).

As a field of research PDM policy is largely dominated by international organizations (IAs), such as the International Monetary Fund, the World Bank and the Organisation for Economic Cooperation and Development (OECD). This literature shows that PDM activities have been fundamentally reformed in most OECD countries since the 1980s (Sundarajan et al. 1997; Favero et al. 2000; Piga 2001; Currie et al. 2003; IMF & World Bank 2003; Golebiowski & Marchewka-Bartkowiak 2011). It further highlights that growing government borrowing needs, financial deregulation and the internationalization of financial markets have led to a commercially oriented debt management approach as well as “to a stronger role of market principles in this field” (Bröker 1993: 17). The reforms focus primarily on the following principles: 1) creating transparency and accountability, 2) reducing bureaucracy, 3) professionalising and optimising risk management and 4) recruiting qualified personnel with private-sector salary structures (see e.g. Cassard & Folkerts-Landau 1997; IMF & World Bank 2003).

These restructurings have included not only changes in the objectives and instruments, but also massive organisational transformations: Existing organisational and competence structures were reformed, old organisations disempowered and new ones created (Currie et al. 2003). In many cases, new debt agencies were set up, while central banks were deprived of their power in this area. The foundation of new professional debt agencies was often accompanied with an increasing use of currency and interest rate derivatives to help hedge existing positions or generate capital gains through the exploitation of price differences on markets (arbitrage) (Piga 2001). The aim of all this is to design the structure of the debt instruments and their marketability, the form of their emissions, the interest, maturity, redemption and creditor

structure of public debt in such a way that costs are minimised (i.e. interest charges are reduced). Several authors with a background in either international organizations or with practical SDM experience (debt management offices, national treasuries, banks, consulting) promote these reforms as the execution of “best” or “sound practices” (Blommestein 2002; Wheeler 2004; Storkey 2006). The story of fundamental change in PDM began in the 1980s and was accompanied by the active advice of investment banks (Nars 1997).

In political science, debt management until recently was terra incognita. It is only lately that first political economists have begun to examine partial aspects of the reforms in individual country studies. Lemoine (2017) scrutinizes changes in the French debt management from non-market to market debt financing since the mid-1960s, and thereby emphasizes the introduction of specific market mechanisms such as the auction technique as the predominant selling mechanism of government bonds. He further refers to the introduction of inflation-indexed linked bonds (ILBs) and stresses the self-disciplining effect of these government securities to stabilize the country’s inflation. Thus, Lemoine (2017) argues that the focus on low inflation and the corresponding imperative of non-interference in monetary policy played a crucial role for the commodification of public debt in France.

Lemoine (2016) and Trampusch (2015, 2018b) analyze the foundation of new professional debt agencies (debt management offices) in France, Germany, New Zealand and Ireland. Thereby the authors demonstrate that despite the similarities in content (professionalization by imitating the structures and techniques from private financial institutions) the organizational reforms diverged in terms of timing, specific institutional design and their ultimate causes between the countries. Already in the late 1980s New Zealand and Ireland pioneered the establishment of debt management offices (DMOs), staffed by former investment bankers who engage in sophisticated portfolio management based on financial economics, while Germany and France followed suit only in the early 2000s. Regarding the concrete institutional design and legal structure, the German Bundesrepublik Deutschland Finanzagentur GmbH as well as the Irish National Treasury Management Agency (NTMA) were established as separate organizations outside the respective Treasuries in the legal form of government-owned private limited companies. The French Agence France Trésor (AFT) and the New Zealand Debt Management Office (NZDMO), on the other hand, were created as self-contained units of the respective Treasury. Trampusch (2015) demonstrates that the establishment of the German DMO was the result of a power struggle between the Bundesbank, the Bundesrechnungshof (BRH) and the

Bundesministerium der Finanzen (BMF). The main motivation of the BMF was to disempower the Bundesbank in order to implement a change of strategy in debt policy. While the Bundesbank, despite the introduction of the euro, continued to advocate a long-term and conservative debt policy, the BMF was strongly in favour of a short-term bond strategy and risk management through interest rate derivatives. According to Lemoine (2016), the creation of the AFT in France was the result of a process of adaptation of a standard shaped by IAs. Trampusch (2018b) highlights the role of differences in domestic financial markets and in the national civil service systems for these reforms. While in New Zealand financial economists that were already employed in the Treasury and were thus able to determine the perception of the reform, in Ireland powerful financial sector actors successfully exerted instrumental power, so that senior civil servants granted finance interest in the establishment of a separate DMO.

Lagna (2016) focuses on the use of derivatives of the Italian government in the course of renovation of its public debt management in the 1990s. He argues that these financial innovations were central to the Italian government as window dressing techniques in the course of the EMU accession process, which enabled the Italian officials to comply with the Maastricht criteria.

These first case studies show in detail specific reform processes in the respective countries. They point to both, common developments as well as existing differences in the specific design of the reforms. What remains unexposed, however, is a broad international comparison of all these changes at a glance. As the publications of the international organizations demonstrate, several different PDM reforms such as the foundation of DMOs, the use of derivatives, the introduction of the auction technique or indexed-linked bonds can be observed in almost all OECD countries. Such a broad cross-sectional and longitudinal analysis of the transformation of debt management is still lacking. In addition, the existing literature lacks a conceptual framework that allows the individual reforms to be brought to a common social science denominator.

Derivatives use on the local level

Changes in debt management have occurred not only at the national, but also the subnational level. For cities, a modern, active approach to debt management is expressed above all through the use of derivatives, as they often do not have direct access to the financial market, especially in Europe, i.e. they continue to be largely indebted through bank loans, and often do not have the necessary resources to carry out far-reaching organizational reforms. By contrast, it is even possible for the smallest municipality to conclude a derivative transaction with a bank.

While the utilization of financial derivatives by subnational governments have increasingly become a salient topic in both the mainstream media as well as the financial press in the course of the recent financial crisis, there only exist a few systematic empirical analyses on these activities. The existing research in the legal sciences, public administration and economics are narrow in scope and are mostly normative in nature by taking a “best practices”- perspective. This empirical research gap - according to Luby and Kravchuk (2013: 277) can be explained with “the complexity and the somewhat lack of transparency” of municipal derivatives use. However, the recent financial disasters around the world seem to have ended this lack of transparency and have even broken the “the pact of silence” between governments and the financial industry (Macaskill 2010), opening up “an unexpected window into the inner clockwork of financial transactions that would otherwise be closed to public scrutiny”(LiPuma & Lee 2004: 3-4).

However, first empirical studies have emerged during the last decade in Germany and in the US. While the public administration scholars Stewart and Cox (2008) as well as Luby and Kravchuk (2013) present first descriptive explorations about the geographical spread and the concrete composition of the respective derivatives portfolios of US subnational governments, Birkholz (2008) investigates factors associated with the derivative decision in German municipalities through survey research. Although, the interdisciplinary financialization literature considers the financial scandals of Hammersmith and Fulham in the UK (Tickell 1998; DeGoede 2005: 47) and of Orange County in the US (Pryke & Allen 2000) as outstanding but exceptional cases, it has largely overlooked the rapid proliferation and meanwhile systematic usage of financial derivative products by subnational governments. Although, political scientists and sociologists have recently discovered this issue (Pacewicz 2012; Trampusch and Spies 2015; Lagna 2015), it is still perceived as an underexposed topic in the

financialization literature (van der Zwan 2014). Quantitative studies from political science and economics have analyzed cities' derivatives use in France (Pérignon & Vallé 2013), Germany (Trampusch & Spies 2015) and the US (Khumawala et al. 2016). These studies aim to identify the determinants associated with the introduction of derivatives by statistically testing several hypotheses mainly derived from public choice theory or consolidation policy approaches. These studies find both similar and divergent results. In accordance with functionalist notions a growing pressure to act – operationalized by a high degree of indebtedness – correlates in all three analyses positively with the likelihood of joining the swap market: Local governments that are highly indebted tend to use financial innovations more frequently. Besides this common result, there also exist essential differences regarding the effects of political variables. While Trampusch and Spies (2015) do not find any significant political effects on North-Rhine Westphalian municipalities' swap usage, Pérignon and Vallé's (2013) results convey that financial engineering worsens the principal-agents problems between elected politicians and their voters in French municipalities (see also Zingales 2015: 17). In accordance with the theory on the political business cycle (Nordhaus 1975) one of the main findings is that “incumbent politicians from politically contested areas are also more likely to turn to toxic loans” (Pérignon & Vallé 2013: abstract). In addition, their analysis confirms the partisan politics hypothesis (Hibbs 1977), since right-wing politicians tend to use financial innovations with the purpose to consolidate public funds more often than the leftist political opponents. Furthermore, apart from political variables the authors' analysis give indications for herding behavior or diffusion effects. As Spies and Trampusch (2015: 122) conclude these first quantitative analyses have serious restrictions particularly regarding the determination of causal mechanisms, i.e. explaining for what specific reasons local financial officers have joined the swap market. The authors point to qualitative research such as process tracing analyses and comparative case studies of selected municipalities, as part of a solution and to address this research question.

German mortgage banks, public sector lending and crisis

Shifting the focus away from the public debtors and debt managers to the state's creditor banks is clearly not going to get us past the private mortgage banks in Germany. So far, German mortgage banks have been largely overlooked in political economic research, although in the past the specialist banks have played a decisive role in the German banking system and the German economy. The existing literature in political economy (Deeg 1999, 2001; Vitols 2005) generally distinguishes and concentrates on the three “pillars” or banking groups of the German banking system: 1) commercial banks, 2) local and municipally controlled public savings banks

and regional banks (Landesbanken) and 3) cooperative banks. The non-consideration of specialised financial institutions such as mortgage banks results from the predominant research interest in corporate governance, where universal banks were far more important than private mortgage banks, which focused on mortgage and public sector lending. The focus is on the “historically close relationship between large banks and enterprises” (Deeg 2001: 16). This was the main feature of the German bank-based financial system and stakeholder system of corporate governance identified by comparative political economic research (Hall and Soskice 2001). The then widespread institutional change in the German financial system since the 1980s, which was interpreted either as a fundamental change towards a market-based banking model (Deeg 2001) or as a rather modest transformation (Vitols 2005), is much discussed. This literature has dealt little with the role of banks in the financing of government borrowing needs. The few older economic studies that specifically address the relationship between increasing German public debt and credit institutions highlight the decisive role of German mortgage banks in this respect (e.g. Troost 1984, Rehm 2001: 2017).

Furthermore, in recent years there has emerged an increasing literature in political economy on the actual changes in banking and banking systems across coordinated and liberal market economies that aims to describe and explain specific crisis developments (Hardie et al. 2013; Bakir 2012; Hindmoor & Bell 2015; Ertürk 2015; Mayntz 2017). Hardie and Howarth (2013) approach the financial crisis by developing a typology that distinguishes between traditional and crisis prone banking activities. The authors’ descriptive account conceptualizes the tectonic shifts that have taken place in the pre-crisis decades within the US but also European banking industries; broadly described as the change from “relational” towards “market-based” banking with a specific focus on the role of securitization and the corresponding increased capacity of banks to trade and to expose themselves to risks (see also Davis 2009 for the US). The authors argue that the national banking systems, which are characterized by a high degree of market-based banking and thus show a higher willingness to take risks (operationalized e.g. by derivatives trading or internationalization of the banking business), were more unstable and more susceptible to crises. In this literature, mortgage banks are generally described as prudent and traditional, which is often related to their association with the conservative covered bonds (*Pfandbriefe*) they traditionally issue. Mortgage banks grant loans for real estate and public financing and receive funds from the issuance of *Pfandbriefe*. These are marketable long-term securities that are secured either by real estate or public-sector loans. In contrast to market-based financial institutions, mortgage banks hold the assets in their balance sheets. Thus, this

process is understood as a traditional form of securitization compared to its modern market-based form. However, these banks are highly dependent on wholesale financing. Their refinancing has always been carried out exclusively via the capital market (they do not have any deposit business), which is a typical feature of market-based banking. Hardie and Howarth (2013: 115) argue that wholesale financing through *Pfandbriefe* is a more traditional form, but they make banks very vulnerable to the liquidity bottlenecks that emerged during the crisis. This also means that the Hypo Real Estate crisis is treated as an exceptional case in this literature (Hardie & Howarth 2009). The focus on credit risks as the main source of banking crises means that excessive maturity transformation as the main source of profit generation for several mortgage banks, i.e. the deliberate taking of interest rate risks over their balance sheets and the resulting liquidity risks, before the crisis has largely been overlooked.

There is also very little research on what exactly government debt means for credit institutions that grant government loans as a main line of business. Recent studies point to the infrastructural entanglements of public debt and the functioning of financial markets in general. Braun (2018) and Gabor and Ban (2015) show that financial markets depend on public bonds for their activities such as collateralization for repo transactions. However, how the increasing borrowing requirements of the state since the 1970s have changed the business strategies of single banking groups and how this relates to the recent financial crisis is not analysed yet.

Overview of studies

Chapter 1: Where States and Markets Meet: The Financialization of Sovereign Debt Management

The devotion to research questions that aim at explaining a phenomenon, requires a precise definition and description of the said phenomenon. This is the main purpose of this first chapter. Thus, it addresses the following descriptive research questions: which concrete changes in the debt management across national governments are observable between 1980 and 2010? How can this transformation be conceptualized, and what similarities and differences between countries exist? In order to answer these questions, the chapter develops a concept – derived from existing political economic and economic-sociological approaches – that enables distinguishing between the old and new forms of debt management. These transformations are conceptualized as a process of financialization along two dimensions: first, an increasing use of financial markets as the predominant governance mechanism instead of state-hierarchies and networks (Mayntz 2001; Lütz 2003). While in the old PDM mode governments had a greater direct influence on determination of the conditions of their loans, these are now determined by the market mechanism via auctions. These mainly involve a fixed group of creditors (primary dealers), generally consisting of big globally active investment and commercial banks that are selected by state actors to purchase a fixed proportion of government bonds and pass them on to final investors. Another crucial change in governance is the securitization of government debt, i.e. the issuance of marketable debt instruments that are geared to the international investor base instead of borrowing direct from bank through loans.

The second dimension of the concept refers to a shift in the sensemaking framework that guides the actions and decision-making of debt managers, which is now rooted in financial economics rather than macro-economics (Fourcade 2006; Fligstein 2017). This change goes hand in hand with an exclusive focus on the fiscal goal of minimizing costs. In the sense of modern portfolio theories, a financialized debt management is only about a trade-off between risks and costs, while macro-economic considerations no longer play a role. This changed view of government debt as a portfolio is most clearly reflected in the reorganization of debt administration departments or the foundation of new debt management agencies based on private-sector management techniques such as performance-related pay or accruals accounting. Resembling the organization of private sector financial institutions and hiring former financial industry actors, the culture of these agencies is often far removed from that of a state bureaucracy.

Among the most important instruments for optimizing the public debt portfolio are financial derivatives, which are used extensively by the new debt agencies. These include interest rate and currency swaps, which also indicate the focus on risks. Consequently, this two-dimensional concept of financialization of debt management captures shifts in both, the way in which public debt is perceived (sense-making frameworks) and in how economic coordination is achieved (governance mechanism). Appropriate indicators as partially demonstrated above are introduced for both dimensions, making these changes measurable and comparable across countries and time. Confronting this concept with data from 23 OECD countries between 1980 and 2010, in line with Streeck (2012) the analysis illustrates the predominant commonalities in PDM reforms between these different political economies. All countries under study have financialized their debt management. While the commonalities predominate with regard to the broad lines of the transformations, existing differences and nuances between the countries also become visible on closer examination.

The main contributions of the study are: firstly, it opens up an empirical field of research that has been underexposed in political science so far. It thus provides an overview of the major changes in the institutions and behavior of states as debtors since the 1980s, and at the same time it offers many starting points for follow-up studies. Secondly, it represents the first systematic, cross-country and longitudinal study of the currently growing research on state financialization, thus, it contributes to the literature on the state-finance nexus. In accordance the study shows that in the area of public debt, the state has increasingly aligned with financial markets: public debt managers increasingly behave like private financial market actors using complex financial instruments in order to optimize the portfolio of public liabilities. The newly established debt management agencies usually cooperate with a limited number of investment banks, to which they offer privileged access to government bonds and to which they pay a generous commission for the distribution of the bonds. This strengthens the already strong position of these big primary dealers banks vis-à-vis smaller banks. Moreover, we observe the movement of bankers from the private sector into the public sector (debt management agencies); this so called revolving-doors phenomenon is mainly known from finance ministries and central banks. Thus, the nexus between the state and finance is also embodied in this newly established public institutions. Thirdly, the paper points to intra-state relations and possible conflicts of interests between different state actors such as between the regulator, supervisors and debt managers that want to act with as little political interference as possible. In addition, the complexity of the transactions such as financial derivatives calls effective democratic

control into question, as it seems unlikely that the supervisory bodies involved (parliaments, commissions and super audit offices) are able to counter the professional debt managers with appropriate expertise.

The widespread use of financial innovations (such as interest rate swaps) as a key feature of the financialization of debt management is also the vantage point of the next three chapters. These deal with the use of derivatives in municipal debt management in three different countries, the pioneer countries UK and US as well as Germany. The following three papers differ from the former not only with regard to the focused political level, into which the financial logic penetrates, but also with regard to the research objectives. While the first paper deals with the description of the phenomenon, the causes of the financialization of debt management are examined below.

Chapter 2: States' Interests as Limits to the Power of Finance: the Regulation of Municipal Swaps in the UK and US

By examining the early phase of the municipal derivatives use this study compares the US with UK. British local authorities were already using swaps in the early 1980s, whereas individual US cities began using them in the second half of the same decade. The domestic financial industries (especially investment banks) saw early profit potential in these deals with subnational governments. The instruments were, however, also a welcome additional option for municipalities to save money or even to generate additional funds. The national governments in both countries introduced tax reforms in the 1980s that put enormous pressure on municipal budgets (Baldassare 1998). The central government under Thatcher in 1985 constrained UK local authorities' competences to levy taxes independently, so that these entered the derivatives market to produce additional capital gains (The Economist 1989: 128; Millman 1995: 251; Tickell 1998). Similarly, in the US, next to the Proposition 13 tax-reform that was passed in 1978 in California, the Reagan administration implemented a fundamental tax reform in 1986 which also affected the US municipalities, as the tax-exemption of municipal bonds was abolished in many cases (Sbragia 1996; Baldassare 1998). Until the reform local governments primarily depended upon tax-exempt bonds for project or special purpose financing, which were primarily bought by banks due the deduction of interest earned on municipal bonds. As a consequence after the Tax Reform Act of 1986 muni bonds became increasingly unattractive for the financial industry. Thus, one result of the federal tax reform has been to force local

governments to issue taxable bonds by disqualifying certain projects eligibility for tax-exempt financing. In the taxable bond market, municipalities were competing with the private sector for funds, in which financial derivatives were already an important element in many bond issuance programs. So, to compete successfully with the private firms it was crucial that local governments were permitted to use various terms, conditions, and financial devices (derivatives) commonly used in the taxable bond market. However, the legal uncertainty that prevailed with regard to these complex transactions both at the banks and at the municipalities was problematic and obstructive. Thus, it was of enormous importance for the expansion of this market to clarify the question of whether municipalities were allowed to make use of these financial innovations through explicit state authorization. Thus, industries in both countries tried to achieve (de-)regulation in their interest. In the US (California), two laws were passed in 1986/1987 explicitly allowing municipalities to enter into swaps and other derivatives, while contrary to this, British municipalities have been banned from entering into any derivative transactions since 1991. The paper seeks to find an answer to the puzzle of why divergent regulatory outcomes occurred in the two countries.

The explanation is based on concepts of business power from comparative political economy, according to which the state-finance relationship is analyzed as a *direct* power relation. It is deduced that financial institutions – as the regulated – can assert their interests against the state legislators due to their strong instrumental (lobbying) as well as structural power (threat of disinvestment), that reinforce each other, even if there are conflicting positions (Culpepper & Reinke 2014; Culpepper 2015; Fairfield 2015). It is assumed that the state yields to financial interests especially when the financial industry has institutionalized access points to legislators and regulators in the state apparatus. Equally conducive conditions for successful lobbying by the financial industry are seen in a broad alliance between different groups of financial institutions (preference homogeneity) regarding the issue in question, as well as in a low salience of this issue in public. The conducted theory-testing process tracing analysis carried out in the typical case of the US found confirming evidence that the explicit authorization of municipal swap transactions was the result of a successful exercise of power by financial actors (investment bankers) over state government legislators. The UK case deviates from this causal model (deviant case). The exercise and activation of power resources to a comparable extent as in the US do not lead to the state regulator being dominated by financial interests. The main reason, for this, as the paper argues, lies in the state's own interests. The UK central government sees its fiscal and monetary policy impaired by the municipal derivative transactions, which

have already led to considerable losses. Therefore, the domestic state interests become the determining condition for why the power of the finance industry was broken.

The paper's empirical contribution is to analyze the origins of the use and regulation of financial innovations by state actors. British and Californian cities were the first to use complex derivatives in the public sector in the 1980s. A practice that subsequently diffused strongly across US and European cities. This study analyzes the regulation of this practice that led to a strong market expansion in the US on the one hand, and to the end of these transactions in the UK on the other. The study thus also provides an analysis of the roots of the scandals in Californian cities and their absence in British cities in the wake of the financial crisis. While the permission to swap resulted in losses of millions in cities such as Los Angeles and Oakland, British cities were spared such disasters due to the swap ban.

Apart from filling this empirical gap, the study's main theoretical contribution is the refinement of business power concepts, which have been widely discussed since the financial crisis in 2008. By means of the comparative research design the paper highlights the mutual dependence of the financial industry and states (Pacewicz 2012; Quinn 2017). It is not denied that the financial sector holds a special position in the economy and also has an above-average amount of power resources. However, these also reach their limits, whenever the state sees its own central interests endangered such as its fiscal and monetary interests. The paper elucidates that the intergovernmental relations between the different levels of the political system can be highly conflictual, and must be taken into account when analyzing state-finance relations. Central-local government relations are the main drivers for why the British case deviates from the conventional business-power explanation.

Chapter 3: From Economic Gains to Social Losses: How Stories Shape Expectations in Case of German Municipal Finance

While in the US and the UK, cities and local authorities were already using derivatives in the 1980s, this trend only spread to Germany in the mid-1990s. There are different reasons for this. On the one hand, this was due to the fact that many German banks were just lacking the necessary financial market expertise at the time. This occasionally led to situations in which a city wanting to conclude a swap, but this could not be implemented by the German banks

(Bohne 1995: 7). In addition to this “backwardness” of the German financial sector, there was also a certain legal uncertainty at the banks resulting from the ruling in the UK in 1991 (Bücker 1993; Millman 1995). For a long time, at the state level there was no explicit approval for the use of municipal derivatives, as it was achieved in California in 1987. While numerous federal states had already begun to use swaps and other derivatives at the beginning of the 1990s (Heinacher & Tartler 1995), the first large city to conclude a swap transaction was the city of Munich in 1994 after the State of Bavaria legalized it (Müller 1994: 39). After a number of German federal states, especially since the end of the 1990s and the beginning of the 2000s, implemented laws that legalized the use of municipal derivatives, and German banks caught up with international investment banks, so that swaps in smaller tranches became possible (Grunwald 2007: 54) there was also a significant proliferation of use among German municipalities.

The third study examines the introduction of these instruments in German municipalities by way of example in a German federal state (North Rhine-Westphalia) and asks why local governments entered into these transactions, even though they are associated with uncertain outcomes. Four typical cases are examined which were selected on the basis of the timing of the respective swap introduction. Accordingly, two early and two late adopter cities are compared with each other. While in the preceding chapter a purely material causal argument is made according to which the interests of the financial industry do or do not prevail over state interests through the exercise of instrumental and structural power, this paper makes a cognitive argument based on current economic sociological research (Beckert 2016), in order to understand how financial institutions (German public and commercial banks) could persuade cities (city treasurers) to introduce these complex financial products. Accordingly, first, it is assumed that the expectations of city treasurers have a decisive influence on decision-making on the use of the instruments. The second presumption derived from organization theory is that stories influence the expectation formation of treasurers in different ways, depending on when, by whom and how this story is told. In this sense, two different mechanisms are hypothesized as how one and the same story affects expectations.

The story that the banks have been telling municipalities since the mid-1990s relates to the traditional way in which municipalities have dealt with debt over decades; this can be described best as “passive” administration. In practice, long-term fixed interest rates were established for taking out loans, irrespective of the current interest rate structure. This approach has always

been based on the perceived “interest rate security” derived from long-term fixed interest rates. The idea that by fixing the interest rate an economic risk is ruled out and that the municipality is therefore independent of the development of interest rates prevailed. This is where the story of active debt management (the swap story) comes in, which seeks to change the “sense-making framework”, i.e. the frame of reference for the creation of meaning (Weick 1995; Fligstein et al. 2017). City treasurers are to look at debt in a different way: instead of interest rate security, they are now to look at the old practice in terms of opportunity costs and risks. The banks’ narrative is the following: Every borrowing and investment decision by a public entity, no matter whether fixed or variable interest rates are applied, is subsequently associated with opportunity and risk. The eventual realization depends on whether interest rate fluctuations will go in line with or against the decision made by the public entity. Instead of “interest security” that fixed-interest loans are supposed to provide, banks are arguing for the acceptance of uncertain financial market outcomes and corresponding constant risk. Derivatives, and in particular interest rate swaps, are, in the view of banks, instruments that not only allow them to offset and hedge risks, but also to regain lost financial leeway resulting from a high interest burden by not only stuttering debt but actively managing it. Thus, swaps represent the causal link in the story of banks that connects the present (fiscal depression) and the future (regaining political leeway).

The conducted deductive process tracing analysis confirms the two different mechanisms by which this swap-story influences the expectations of city treasurers in the two early and the two late adopter cities regarding swap use, respectively. While an early conviction is primarily linked to anticipated *economic* gains and losses, the dissemination of stories is related to anticipated *social* gains and losses. Initially, economic knowledge in the form of econometric models and forecasts rendered the swap-story rational and increased the perceived control over uncertain outcomes resulting from swaps. Prognoses helped to mask uncertainty and the credible calculation of potential economic gains. While the properties of a story were decisive at an early stage, they lost importance at a later stage. Once a critical number of relevant organizations believed in the swap-story as a success-story, it evolved into a fashion or a “myth” about what is rational and modern in municipal debt management. The main story-tellers became the relevant others in the field (banks, but also early adopter cities as well as state authorities). The two late adopter cities followed the story primarily in anticipation of social gains or losses. The city treasurers perceived a threat from being left behind and hoped to avoid social losses. The expectations of others outweighed economic reasoning and that is why the

presentation of the story mattered less than the number of story followers and their expectations at a later stage.

The key contributions of the paper are, first, of a theoretical nature, in which two mechanisms deduce how stories and expectation formation are causally connected. Thus, this paper contributes to current economic sociological research on fictional expectations (Beckert 2016). So far, a connection between the two have always been emphasized, but how stories concretely translate into expectations has been largely black-boxed. Regarding the state-finance relationship, the paper illustrates how a financial market logic enters the public sector. Banks can push through their interests (sales of swaps) and their logic by influencing the cognitive frame of treasurers as story-tellers. They use their expertise and corresponding cognitive devices, which make the story and ultimately the use of the financial product convincing. This results in a typical seller-buyer relationship in which the buyer (state) must be convinced of the purchase of the product. In conclusion, the banks are concerned with manipulating the expectations of treasurers in a way that serves their interests. Beckert (2016) calls this “the politics of expectation”, by which he means an exercise of power on a cognitive level.

In addition, the late adopter cases show again that intra-state politics are of importance and co-determine the state-finance relationship. This includes the relationship between the city council and the finance department, whereby the former can create pressure on the latter to behave more modernly and more open-mindedly towards financial innovations. Moreover, already financialized or early adopter cities, as well as the higher political level authorities (federal state) from the government or supervisory agencies become further story-tellers recommending the adoption of the practice.

Chapter 4: Crisis, Expectation and Policy Change. U.S. and Germany City Swap Disasters

In many cities on both sides of the Atlantic, the positive expectations of swap transactions have not been fulfilled, or only partially. As experienced in the UK in the late 1980s, many municipalities across Europe and in the US were confronted with unexpectedly high losses from these deals in the wake of the financial crisis, making headlines around the world (Dodd 2010). After initial gains, cities such as Pforzheim or Hagen in Germany made more than 50 million euros in losses (e.g. Hendrikse & Sidaway 2014). This was mainly due to the changed and thus unexpected development of interest rates induced by the crisis. In the US, numerous subnational

governments were heavily affected by swaps that went sour, such as Los Angeles and Detroit, or Jefferson County. In the latter two cases these even contributed to their bankruptcy (Mysak 2012; Kirkpatrick 2016; Bomey 2016). Thus, the promised widened leeway was not obtained, but was painfully further narrowed. These crisis experiences made clear how uncertain these transactions are and called into question a financialized approach to debt. In particular, the public increasingly criticized the use of swaps often equating it with gambling with taxpayers' money.

While the previous chapters deal with the causes of the introduction of financial instruments, this fourth chapter focuses on how municipalities deal with the losses generated and, above all, whether this led to a withdrawal from the derivative business implemented years ago. Not all cities have ceased to terminate swaps due to losses. This paper addresses the question of why some cities stopped using derivatives because of the perceived crisis (high losses), while other cities continued to use them. This difference in debt management policies change (Y) after an experienced policy failure (X) is analyzed in another comparative study of two comparable cities from the US and Germany. Both the US city of Philadelphia and the German city of Würzburg have made unexpected losses of millions from the instruments introduced in the 1990s. In both cases, this led to a huge public outcry and nationwide media attention which emphasized the speculative character of the transactions – it was perceived as a clear policy failure in both cities. How can we explain that Philadelphia then subsequently banned swaps from the debt management toolbox, while the Würzburg treasurer received permission to conclude new derivatives only two years after the emergence of the crisis? It is argued that the cause lies in a differing degree of expectation adjustment (radical vs. incremental). While the previous chapter showed how optimistic expectations (Y) are formed, which then go along with the introduction of swaps, this chapter traces the respective expectation adjustment process (M) after the occurrence of a crisis (X). According to this hypothesized two-step mechanism the perceived crisis (losses), first, leads to uncertainty among local politicians about the costs and benefits of the instruments. Building on this, local politicians and treasurers adjust expectations about the future consequences of swap use that were previously optimistic. In Philadelphia, expectations change radically leading thus to the end of this practice (radical policy change). Although there is uncertainty about the actual loss incurred, it is the city council that is highly politicized in assuming that similar losses are likely to occur again in the future with continued use. This does not change the fact that the city treasurer argues to the contrary and has diametrical expectations. These remain stable here, meaning that the entire finance department

assumes that swaps will benefit the city in future. As a central policy-making body, the city council has decision-making authority and decides in favour of a termination and even advocates a state-wide ban. This radical policy change, attributable to an adjustment of expectations from positive to negative, cannot be observed in Würzburg. Although the losses from derivatives transactions also led to considerable uncertainty here, which was accompanied, as in Philadelphia, by ongoing critical reporting (high salience), neither the city council nor the city treasurer's expectations have changed radically. Rather, a distinction was made between categories of swaps, divided into those that are speculative (causal to the crisis) and thus inappropriate, and those that primarily serve to hedge interest rates and from which one can continue to benefit in the future. This narrative of "good swap, bad swap" was decisively influenced by the new treasurer who was elected in the middle of the crisis and who had a professional background in the financial sector. Unlike the treasurer in Philadelphia, he managed not only to soften the public crisis narrative "swaps are gambling with taxpayers' money" of the media reports, based on his expertise as a former banker, but even to dominate it with his counter narrative. In that way city councilors could be persuaded to continue using swaps of a certain kind in the future. Accordingly, Würzburg continued the swap operation, albeit in a modified form. Thus, the different processes of expectation adjustment (radical vs. incremental) have also led to correspondingly different manifestations of policy change (second order vs. third order) change (Hall 1993).

The most important contributions of this paper are, first, the demonstration of a productive combination of policy research with economic sociological research on uncertainty and expectations (Beckert 1996, 2016). In this sense, the resulting policy-change model consists of a close connection between micro- and macro-level. Thus, it becomes possible to investigate how a phenomenon on the macro level (the swap crisis perceived in society) affects the expectations and activities of individual politicians, and how they solve the problem of uncertainty in the context of these macro structures, resulting in policy change. Second, on the one hand, the paper clarifies how resilient the logic of the financial markets can be (Schmidt & Thatcher 2013), once they have penetrated the public sphere (especially with the city finance departments as bearers of this logic). On the other hand a high degree of politicization of policy-makers prevails against such a kind of technocracy and might leads to a de-financialization process. For the state-finance relationship, the significance of intra-state politics becomes apparent or – as in this context – a struggle for the power of perception within the state, in which elected city councilors (policy-makers) and experts with a background in the financial

sector face each other. The paper shows that not only the interpretation of the causes of the crisis (Boin, Hart & McConnell 2009), i.e. a retrospective view is contested, but that future projections or expectations within the state are fought over as well; this points to the “politics of expectations” again (Beckert 2016).

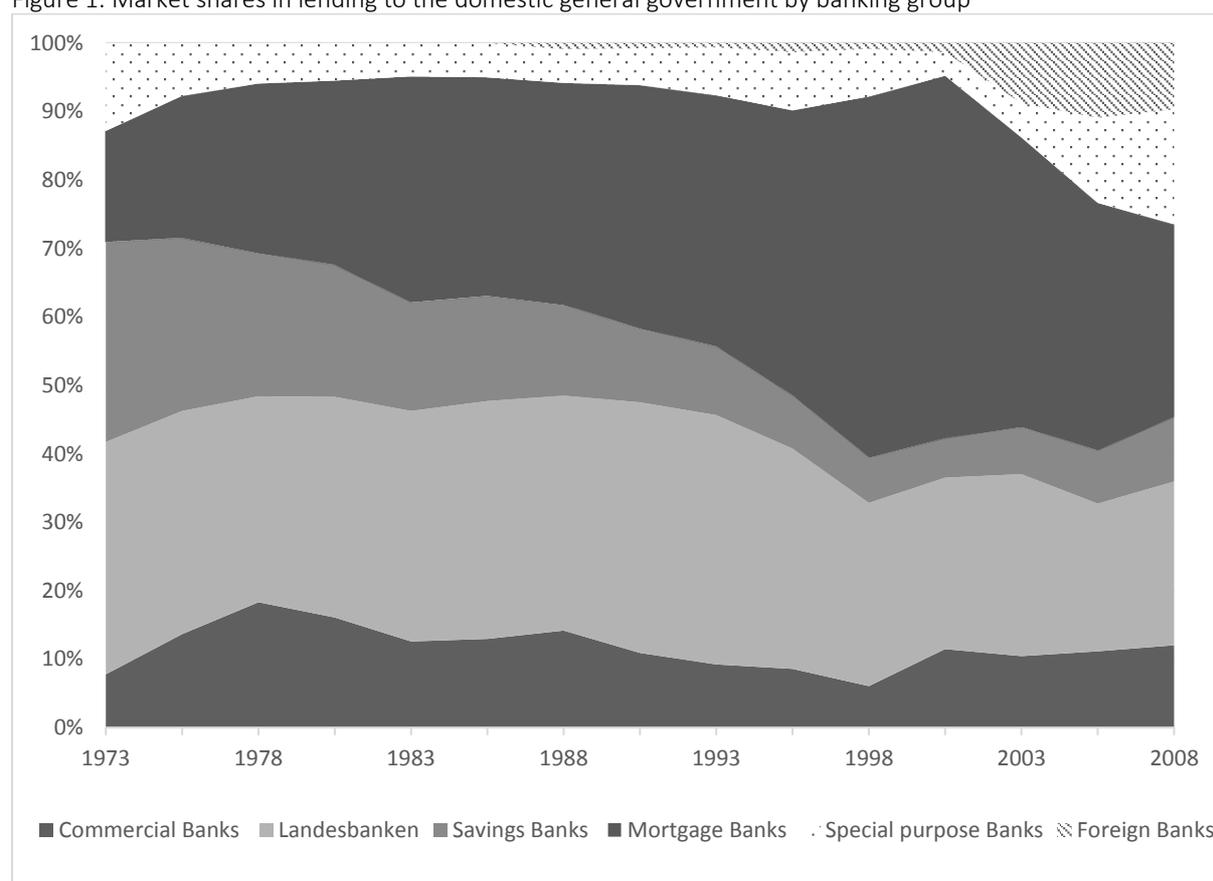
Chapter 5: Crisis Prone Public Financiers: Coping with Competition in the German Mortgage Banking Industry

The last Chapter 5, like the previous one, takes its starting point (outcome to be explained) in the financial crisis. Now the focus shifts to the financial industry, which makes it possible to examine how banks' activities are shaped by their relationships with different state bodies. Not only local authorities, but, above all, the banks were confronted with survival-threatening problems resulting in banking crises worldwide triggering economic crises – the effects of which can still be felt today. In the last ten years after the outbreak of the crisis, the social sciences have dealt extensively with its causes, characteristics and consequences. In political economy, the changes in the banking and financial systems of the pre-crisis decades were increasingly taken into scrutiny. It turned out that mainly certain crisis-prone business models of the banks were the cause of the crisis and therefore need to be investigated. These models are characterized by an above-average degree of systematic risk-taking, which has long paid off for many financial institutions and brought them enormous profits. How risky these banking activities were revealed at the latest in the course of the financial crisis, which caused numerous banks to run into liquidity bottlenecks and manifested significant losses.

This paper looks at the emergence of a crisis-prone business model in a particular banking sector in Germany, which has only received insufficient attention so far. Not only the big commercial banks and *Landesbanken*, but also numerous mortgage banks turned up among those institutions that had to be rescued. Why is it worth investigating this special bank group? There are two main reasons for this: First, it is quite puzzling that these generally conservative and strongly regulated banks took such a development between the 1970s and the early 2000s. Secondly, and crucially for this dissertation, mortgage banks have played a prominent role in the financing of the state's increasing borrowing requirements since the beginning of Germany's transition into the debt state in the late 1960s (Troost 1984; Rehm 2001). This primarily concerned the debts of the Federal Government and the Länder. In the 1970s until the

1980s, the federal government borrowed intensively from mortgage banks via *Schuldscheindarlehen* (promissory note loans) (BMF 1979: 55). This type of borrowing is described as “noiseless” because the state itself does not enter the market and issues a bond that also causes higher transaction costs (BMF 1979: 79-80). A *Schuldscheindarlehen* can be concluded with a phone call, while the issue of a bond requires roadshows, the formation of a consortium. Since the mid-1980s, however, the federal government (as is also shown in Chapter 1) has increasingly switched back to directly accessing the financial market (Bundesbank 1992: 25). From then on, and notably after reunification, the federal states in particular have covered a large part of their increasing credit requirements via mortgage banks (Rehm 2001: 217). This was also reflected in the growing market shares of mortgage banks in the market for direct loans to the state. As can be seen in Figure 1, this share has grown steadily since the 1970s. With a market share of over 50 per cent in the late 1990s and early 2000s, the mortgage banks were even the most important creditor group for the German public sector in direct lending.

Figure 1: Market shares in lending to the domestic general government by banking group



Source: Deutsche Bundesbank, own calculations

While the previous papers explicitly focused on how governments on the national and subnational level deal with debt in a more and more financialized way, the focus here is on the

credit supply side – the financial institutions’ business with government debt. This becomes all the more relevant when one considers that those crisis-hit mortgage banks virtually confined themselves to public finance. It was precisely those “public financiers” whose model turned out to be particularly susceptible to crises. At first glance this seems very puzzling, since business with the state is regarded as one of the safest banking operations of all (at least until the European debt crisis). At the latest with the crisis, in fact since the end of the 1990s, it became apparent that the banks were generating speculative profits from government debt through exaggerated maturity transformation and were thus consciously taking huge interest rate risks. As in the case of the municipalities, unanticipated interest rate developments led to the materialization of the risks taken, and liquidity bottlenecks occurred that could no longer be bridged independently. So the state had to step in and save the banks from destruction.

The chapter examines the important historical development of this crisis-prone business model of “public financiers” among mortgage banks, which had nothing in common with what a traditional risk-averse mortgage bank constituted in the 1960s. The research question of how to best explain that such a transformation could take place in a highly regulated banking sector is investigated. The chapter shows that for such an explanation we need to go back to the 1960s and to craft a more complex mechanism to understand how this business model evolved. It is argued that the initial condition is intensified competition, which the banks increasingly found themselves exposed to. The existing political-economic literature has already established the causal link between a high degree of competition in the financial industry and risky banking activities, but without systematically illuminating the concrete causal process between the two (Bell & Hindmoor 2015). This study attempts to shed light on this blind spot by deducing a conglomerate causal mechanism from economic sociological concepts. This mechanism operates over the long-term from the end of the 1960s to the beginning of the 2000s, triggered by increased competition, producing a crisis-ridden banking business model. The mechanism is crafted based on an integrated embeddedness approach (Krippner & Alvarez 2007; Beckert 2007, 2010), according to which all embedding macro-structures (institutions, cultural frames, and network structures) that influence economic activity in a field must be considered. In all these stabilizing structures and thus in every partial sequence of the causal process, the state plays an important part in its various roles and thus in differentiated relations with the mortgage banks. According to the hypothesized mechanism increased competition (X), causes a change in regulation (institutions), which in turn triggers change in the cultural understanding of how money is earned in the sector (cognitive frames). In a final step, the changed cognitive frames

generate changes in the incumbent-challenger structure of the mortgage banking sector; this ultimately leads to the crisis-prone business model of the “public finance” mortgage banks.

The conducted explaining outcome process tracing analysis confirms that the theorized mechanism builds a minimally sufficient explanation for the outcome. Increased perceived and experienced competition (among other things deliberately forced by the state) created uncertainty among banks with regard to their stable survival in the future. This triggered the coping with competition mechanism to operate, which, as a first step, led banks to seek more favorable regulation, partly granted based of the state’s own interests. The new regulation, which came into force in 1974, enabled banks to generate new profits in the public sector lending business, because state actors themselves anticipated being able to benefit from such an expansion due to the increasing public borrowing requirements. The exploitation of these new possibilities, however, required a change in cultural frames or the understanding of how money is made in the sector. The state’s market power as a debtor in the financial markets is used to such an extent that the mortgage banks hardly generate any profits in the public sector lending business if they apply their old cognitive frame of “riskless banking”. A new frame of “controlled speculation” evolved, according to which banks may to a certain extent speculate in public sector lending and accept risk-taking to a certain degree. The old frame is understood as dysfunctional and is replaced by the new one, which is born “out of necessity”. However, this in turn leads to a situation in which challengers from the field, who themselves experience this cultural change, become aware of new profit opportunities that require a deviation from the new “controlled speculation” frame. These challenger banks “made a virtue out of necessity” and henceforth focus on public-sector lending only, which is profitable only through speculative practices and risk-taking. The deviant innovator “public finance” banks were very successful in the 1990s, doing more and more maturity transformation and other speculative practices, thereby putting pressure on incumbents, which subsequently adapt in part. The result was a fierce inner-field competition between the more aggressive and more traditional banks. The volume of lending to the state and the associated public *Pfandbriefe* issued increased enormously, as did the risks taken. When some of the challenger banks developed into incumbents at the end of the 1990s, the old established banks tried to limit the deviant innovator model with the help of banking supervision. This was not sufficiently successful, as the following years and the banks that fell into crisis have shown.

This paper fills an important empirical gap first, by historically tracing the changes in the German financial industry that have accompanied Germany's transition towards the debt state, thereby, secondly, explaining an important historical outcome: the emergence of a crisis prone business model that was part of the German banking crisis. By unpacking the manifold state-banks relations the paper demonstrates that the historical emergence of this crisis-ridden business model focusing on public sector lending since the 1970s closely interacts with the different roles played by the state in financial markets as economic policy maker, borrower, regulator and supervisor. The state is deeply involved in the process of coping with competition of banks by enabling change and stabilization of the social structures in which banks activities play out. In this sense the paper also demonstrates the value of a practiced integrated embeddedness approach when it comes to sufficiently explaining the transformation of a sector.

Overarching contribution of the dissertation

This dissertation presents concrete empirical studies on the novel interpenetrations between politics and finance resulting from the transition from the tax into the debt state in the second half of the twentieth century. In doing so, it fills a crucial empirical gap, by analyzing how growing borrowing requirements of states have led to crucial shifts in the states' management of debt as well as in financial institutions' business models. So far, these research areas have largely been left to economics and policy advisory research of large international organizations that mainly focus normatively on the determination of an optimal debt structure or best practices catalogues. With the exception of a few contributions (Missale 2001; Falcetti & Missale 2002), the economic analysis of the debt management knows neither institutions nor actors. The model analyses focus on the optimal behavior of the debt managers. However, how and why debt managers actually make decisions and what consequences these have on the relation between state and financial industry is not discussed. Only very recently a growing group of researchers in political economy is working on these topics (see for overviews Hendrikse & Lagna 2017; Karwowski & Centurion-Vincencio 2018). However, with a few exceptions (Trampusch 2015, 2018), these studies do not go beyond description of individual cases. Here, however, based on the broad and in-depth elaboration of common fundamental descriptive developments across countries and over time, the causes of the local manifestations of the phenomenon are analyzed in three case studies.

Thereby, these analyses contribute in understanding state-finance relations by consistently synthesizing political economy with an economic sociological perspective, “the former standing to benefit from a more explicit micro-foundation in a sociological theory of action and the latter from more systematic consideration of politics and the state” (Beckert & Streeck 2008: abstract). Thus, this synthesis enables to grasp macro developments such as institutional changes and inner state conflicts (state-centered perspective) on the one hand and by adopting sociological approaches (focusing on the micro- and meso-level) to better understand why exactly political actors choose to financialize their debt management and why financial sector actors decide for speculative activities.

In accordance with a political economy perspective, focusing on broad macro-trends, the transformation towards the financialization of public debt management is seen as a wide-ranging phenomenon in OECD capitalism that highlights the commonalities between countries without neglecting their differences (Streeck 2012). The state-centric view of political economy also makes a crucial contribution by taking into account the complex nature of the state. Thereby this thesis reiterates the insight that analyzing the state-finance nexus requires the consideration of the internal differentiation of both analytical entities. Neither the state, nor the financial industry are monolithic, but rather highly complex social arenas where different objectives and interests exist in parallel, which can have an decisive influence on the respective state-finance relation (Krippner 2011; Fligstein & McAdam 2012). As shown, for example, in Chapter 2, relations between central and local governments (intergovernmental relations) can have a decisive influence on how the latter (can) interact with the financial industry (see also Sbragia 1986, 1996). This also applies to possible intra-state conflicts of interests and possible power struggles between different state actors (see also Trampusch 2015). Higher supervisory authorities and neighboring municipalities can actively exert social pressure on local politicians and treasurers, which could lead to the decision to introduce financial innovations, although they initially had a reluctant attitude towards them (see Chapter 3). Conflicting positions and tensions are also visible between a politicized city council on the one hand and a financialized finance department that has internalized a financial markets view on the other (Chapter 4). Although, it is not neglected that the financial industry has extraordinary instrumental and structural power, the different institutional features of states as well as their own interests are able to function as a buffer against the power of finance (Chapter 2). States own fiscal and borrowing considerations are an important factor that has an influence on financial deregulatory policies. While anticipated negative fiscal consequences can become an insurmountable policy

obstacle for financial deregulation (Chapter 2), expected positive outcomes for public finances lead to meeting the industry's deregulatory demands (Chapter 5). Furthermore, the state-centric political economy view underlines the importance of taking the different functions of the state in financial markets into account and going beyond the conceptualization of the state as a regulator. The state, also influences financial institutions by its activities as debtor, competitor, supervisor and policy-maker in different ways that may also lead to unintended conflicts of interests between political actors (Chapter 5).

In addition, the dissertation stresses the necessity of differentiating the financial industry in the analysis of state-finance interactions (Krippner 2011; James & Quaglia 2018), but also refers to possible conflicts within a segment that should be considered. Chapter 5 indicates that not only do different segments (public vs. mortgage banks) of the domestic financial industry have different interests in specific financial regulations, as they compete fiercely with each other, but different interests can also coexist within a segment, which can also have an impact on the public financing relationship. Considering the financialization of debt management at the national level (Chapter 1), the need for financial industry's internal differentiation becomes evident by the fact that almost all countries have introduced so called Primary Dealer Systems, in which a fixed number of big commercial and investment banks have a privileged access to government bonds and function as market makers for the debt management agencies. Consequently, it can be stated that not all but primarily the large credit and investment banks benefit from the financialized practices of the state, while access for smaller banks is restricted.

The entrance point to bring in economic sociology is the notion of fundamental uncertainty, i.e. the assumption that actors must make decisions in situations where the calculation of probabilities of the occurrence of future events is not possible (Beckert 1996, 2016). Such situations are present when political actors are faced with the decision of whether or not to introduce complex financial innovations of which they cannot know what the future outcome will be, or when economic actors face increasing competition that calls into question stable future profit generation. Confronted with this problem, actors are expected to engage in activities that reduce uncertainty, seeking to influence the structures that embed their activity. Financial sector actors, for instance, force specific regulation (institutions) in order to reduce legal uncertainty, or to gain more business flexibility to be able to better compete (Chapter 2 and 5). Further, economic action is understood to be constituted by cognitive devices or sense-making frameworks (Weick 1995; Fourcade 2006; Fligstein et al. 2017) such as economic

theories, that define a specific actor's view of how the economy works and that helps actors to make decisions. In this sense, Chapter 1 shows, that one crucial dimensions of financialization of sovereign debt management represents the shift from a macroeconomic view towards a perception on public debt that is rooted in financial economics. Chapter 5, illustrates that in order to comprehensively understand the transformation of a banking sector, one has to analyze how actors that face intensified competitive pressure engage with institutional frameworks, cultural meanings and social networks, and how these interrelate (Becker 2010).

However, at the center of current theoretical debates in economic sociology attention is given to the expectation formation processes of actors who are confronted with complex decisions (Beckert 2016), the insights of which were also used in two studies contained here. The expectations, or in other words an actor's imagination of certain future outcomes, are vital in this reading to understand decision-making under uncertainty. This dissertation shows that analyzing the expectation formation processes of political actors helps to understand why they decided to introduce financial innovations in their debt management, why they stopped or continue to use them based on experienced losses (Chapter 3 and 4). It further demonstrates that analyzing why specific imaginations of the future become convincing for these actors one needs to analyze the social constitution of expectations (Beckert 2016: 86-92): cognitive devices such as calculative tools, networks (experience of the relevant others) as well as the own past experiences reduce actors' uncertainty and thus make a specific story or narrative (image) of the future credible. There are also indications that financial sector actors deliberately influenced the expectations of city treasurers in their interest (selling financial instruments) by downplaying the potential risks and possible losses inherent in the instruments (Chapter 3). This can be interpreted as an exercise of power through the influence of cognitive processes, that Beckert (2016) calls "the politics of expectations".

In a nutshell, this dissertation contributes to the literature on the state-finance nexus by zooming in, focusing on the multi-faceted empirical and theoretical relations between the state and the financial sector actors on both sides of the public debt market, which are summarized in the following table 1.

Table 1: Overview of studies along central analytical dimensions and concepts

	State-finance relationship (theoretical)	State-finance relationship (empirical)	Intra-state relationship	Intra-finance relationship	Political Economy	Economic Sociology
Management of Public Debt						
1 Where States and Markets Meet: The Financialization of Sovereign Debt Management	<i>state financialization</i> (descriptive): public debt managers adopt financial sense-making frameworks (financial economics) and financial market practices (governance mechanism)	<i>debtor-creditor, revolving doors relationship</i> : investment banks with privileged access to public bonds, but also as states' market makers; financial sector actors employed in the public sector; state as a market player	debt managers vs. parliamentary commissions and supreme audit offices (problematic for democratic control); possible conflict between state as a regulator and as a market player	fixed number of privileged 'primary dealer banks' are appointed to buy, promote and distribute sovereign bonds: strengthened their position vis-à-vis the smaller banks	common trajectory of national capitalisms in the OECD world (Streeck 2012); governance mechanisms (Mayntz 2001; Lütz 2003)	cognitive frames or sense-making frameworks rooting in economic theories (Fourcade 2006; Fligstein 2017)
2 States' Own Interests as the Limit of the Power of Finance: The Regulation of Municipal Swaps in the UK and US	<i>state financialization</i> (causal) direct power-relationship: finance exerts instrumental and structural power over the state; state has own interests that limit the power of finance; mutual dependence	<i>regulator-regulated relationship</i> : legislators are lobbied by a broad coalition of financial institutions, central bank, and municipalities	intergovernmental conflict: central-local government relationship determines the local government-finance relationship	finance industry as broad interest alliance (national and international financial institutions) in favor of municipal swap deregulation	business power approaches: instrumental and structural power of finance (Culpepper & Reinke 2014; Culpepper 2015; Fairfield 2015)	mutual dependence of state and finance: financial markets as project between states and finance (Pacewicz 2012; Quinn 2017)
3 From Economic Gains to Social Losses: How Stories Shape Expectations in the Case of German Municipal Finance	<i>state financialization</i> (causal) ideational power-relationship: finance sector actors as storytellers influence expectations of city treasurers in their own interest	<i>debtor-creditor, seller-buyer relationship</i> : public and commercial bankers as sellers of financial innovations to city treasurers	state governments, supervisory bodies, other municipalities, city councilors nudge or pressure local treasurers to financialize municipal debt management	German public and commercial banks compete with each other and with international investment banks for public finance business	local authorities under fiscal pressure (context) and focus on the intra-state relations	shifting cognitive frames (Fligstein 2017; Weick 1995) fictional expectations (Beckert 2016)
4 Crisis, Expectations and Policy Change. US and German City Swaps Disasters	<i>state (de-) financialization</i> (causal): financial sense-making frame/ politicization as a buffer against/trigger for de-financialization	<i>politics-bureaucracy relationship</i> : politicized city councilors and financialized technocrats (treasurer)	city councils and city treasuries with diverging expectations based on different cognitive frames	–	policy analysis (Hall 1993) policy resilience despite crisis (Schmidt & Thatcher 2013)	crisis, uncertainty and expectation formation (Beckert 1996; 2016)

Business with Public Debt						
5 Crisis Prone Public Financiers: Coping with Competition in the German Mortgage Banking Industry	<i>mutual dependence:</i> state borrows cheaply and banks need public assets to generate speculative profits; state is deeply involved in the development of bank business models by stabilizing embedding structures	<i>Competitors, debtor-creditor, regulator- regulated, supervisor- supervised relationship;</i> the state plays its leading role as a borrower vis-à-vis the banks	implicit conflict between the interests of state supervisory agency and cost-minimi- zing public managers	German mortgage banks vs. public sector and commercial banks; “conservative” vs. “aggressive” mortgage banks	competition and risky banking business models (Bell & Hindmoor 2015; focus on the state in its different roles in finance (Trampusch 2018a; Gamble 2015)	integrated approach to embeddedness of economic action (Krippner 2007; Beckert 2010)

Normative implications and further research

This dissertation demonstrates that the changed approaches to public debt on both sides of this credit-relationship, although sometimes appear arcane to laymen, should not be rejected as purely technical problems. In this sense, it seems imperative that these questions are not left to economics alone, since they are also an expression of power relations in society and of broader capitalist dynamics and should also be analyzed as such. Political economy and economic sociology provide the necessary theoretical and methodological tools to reveal the *political*, which is concealed in the *technical*.

Normative questions of whether financialization of debt management is a beneficial or a worrisome phenomenon is by no means easy to answer and requires differentiation. In order to make an assessment a clear distinction needs to be made between the different levels of government and the respective debt management policy goals. National governments in many countries have achieved a degree of professionalization in this area with their partially outsourced debt management agencies; that is why one is not led to expect any major negative fiscal effects. Although these effects cannot be ruled out completely, the agencies are staffed with investment bankers and mathematicians who apparently understood the game of the financial markets in all its complex nuances and thus supposed to use it to the state's advantage. The situation is clearly different at the local level. The existing expertise and financial literacy among financial officers in municipalities varies greatly. In particular smaller municipalities endowed with less resources showed considerable problems in understanding complex financial instruments. They were often driven by social pressure to act modern and appropriate. Still,

devastating losses from swaps transactions that many local governments generated in the course of the financial crisis in the US and Europe also affected larger cities (such as Philadelphia, Los Angeles, Detroit or Milan) highlighting the risky character of these devices. Various debt management experts have completely discouraged municipalities from using these tools on their own, as their proper use requires a high degree of professionalization, including staff and IT equipment (Wolcott 2006; Dodd 2010; Campbell 2010). The Italian economist with a professional background in debt management Gustavo Piga calls for a ban on all local government use across the EU, by arguing that “although there might be one municipality that is capable of doing it, the cost is small compared with the gain of forbidding the many others that are incapable” (Campbell 2010).

Some national governments, such as Italy, have followed this advice, and have completely banned the use of derivatives by municipalities in response to these losses. Although such bans have also been discussed in federal countries (US or Germany), it has not yet been able to be enforced. There are different reasons for this. An essential one is that cities want to remain their still existing financial autonomy as untouched as possible; in this sense they also want to keep derivatives in their toolbox. And on the other hand, the industry does not want to lose its very existence – especially companies set up in the 1990s with the goal to specifically advise on these instruments. In Pennsylvania, for example, a coalition consisting of city treasuries of larger cities, bond councilors and financial sector actors (including swap consulting firms) was successfully formed to prevent such a ban through targeted lobbying.

In contrast to blaming individual municipal decision-makers as gamblers or risk-takers, as it has often been the case in the media landscape, it seems much more important to take the context and motivation into account in which financialization practices are introduced. The rise of the debt state took place not only at the federal level, but also evidently at sub-national levels. Many municipalities in OECD countries are suffering the same fate: tax revenues in particular have collapsed enormously, while on the other hand the tasks are becoming more numerous and social expenditure is rising. As a result, they are seriously in debt. In many cases, over-indebtedness leads to local austerity regimes in which the politically responsible have less and less autonomy to decide how and on what money is spent. At this moment, financial innovations are becoming the much desired devices that promise to create room for maneuver without large political costs (no direct cuts). In a nutshell, not financial innovations are the principal problem of municipalities, but that they are chronically underfinanced. In countries such as the US and

Germany in particular, this has to do with the system of fiscal federalism and the financial support provided by state and federal governments, which in recent decades has increasingly developed to the detriment of cities. Strong tax competition among municipalities also contributed to this. As long as the “fiscal crisis of the cities” is not solved, these will always look for new ways to free themselves from oppressive situations. Swaps are only one possible way to pursue this. This desperate search for financial leeway is met by the endless creativity of the financial engineering industry, which always seems to be able to develop a new product that offers new hopes. Further examples of this are, next to interest-rate swaps, the instruments of cross-border leasing, public private partnerships, tax increment financing or the so called lender options borrower options loans, often introduced ultimately to the fiscal disadvantage of the municipalities.

At the same time, however, the role of the banks, which sold complex instruments to even the smallest municipality, must also be viewed critically. Many court cases across many countries have also shown that banks have often deliberately provided incorrect advice. In the years before the crisis, municipalities were by no means the only actors to fall victim to financial fraud (see Reurink 2016). Without generalizations on this point, this aspect seems worthy of further enlightenment and also leads to another important crux that has already been emphasized by a group of financial sociologists in the tradition of Rudolf Goldscheid in the 1930s (Sultan 1932: 162): when it comes to analyzing the balance of power between financial capital and the state, one has to consider the stratification of the state (different levels of administration). The authors argue that the relationship between government and financial capital is most unequal at the local level; exerting influence seems to be easiest here.

While from a direct fiscal point of view a financialized debt management at the national level seems unproblematic in contrast to the local level, from a normative point of view possible problem areas arise. First, the non-transparency of national governments’ derivatives transactions is in particular contested when used for political reasons. Governments deliberately have used interest rates and currency swaps as an instrument to reduce balance sheets and conceal interest burdens. In the run-up to the Monetary Union many countries such as Greece, Spain, Italy and Portugal, but also France, Belgium, Germany and the Netherlands used swap transactions to fulfil the deficit criterion (Dunbar 2003; Piga 2001; Irwin 2012; Lagna 2016). Large investment banks such as Goldman Sachs were among the states’ helpful market partners, and benefitted hugely from these deals (Dunbar 2003). These cross-country balance sheet

manipulations using financial derivatives led to massive conflicts between government debt managers, Eurostat and the national statistical offices, but they also demonstrate the mutual interest of states and finance by circumventing existing rules (Heath 1998; Savage 2005: 153-55; Schelkle 2009: 837). In addition, interest rate derivatives can have distributional effects: In the event of a loss, they can lead to additional burdens for taxpayers, while only the contracting banks make profits.

Further, redistributive impacts may result from the fact that a financialized debt management is no longer based on and guided by macroeconomic theory, but rather rooted in financial economics and modern portfolio theory. The resulting shift in the PDM's objectives towards pure fiscal orientation through the optimization of costs and risks also means that other objectives have been clearly superseded. An important one is, for instance, the distribution objective, according to which the type and issuance of debt is oriented towards an evenly distributed creditor structure. To take an example, at the end of the 1960s the *Bundesschatzbrief* (federal treasury bill) – a six to seven year fixed interest security – was introduced by the German government, which was conceived of by its inventors “as a door opener for a social capital market – a capital market of the small people” (Hankel 2012). It should distribute the generous interest payments from the state to the general population. This federal treasury bond was discontinued in 2012 by the German debt management agency the BRD Finanzagentur GmbH, on the grounds that the costs are too high. For the US, Hager (2016) has already shown that the existing creditor structure of US national debt leads to increased inequality. It shows that it is especially the top 1 percent who benefit from the interest payments of the state (see also Streeck 2017). This raises the question as to whether, in view of the steadily increasing inequality worldwide, states should again give greater consideration to the distribution target in addition to fiscal goals (cost minimization).

The redistribution from bottom to top was also the result of the state rescue and nationalizations of many banks in the wake of the global financial crisis. This is particularly piquant when it comes to banks that have concentrated on public sector lending business, as in the case of the special German mortgage banks. These were accompanied, for instance, by their Belgian, French and Luxembourg counterparts Dexia and Fortis that followed a very similar business model. The banks produced huge profits during the 1990s and early 2000s on the basis of lending to the public-sector. Since the state authorities, aiming at minimizing interest payments, were able to squeeze margins enormously due to its financing or debt alternatives, this business

model was based on speculative practices in refinancing (“excessive maturity transformation” and “speculative use of derivatives”). Otherwise profits were no longer possible in this line of business. Some of the institutions that followed this model experienced explosive growth rates in balance sheet totals and impressive profits in the 1990s (e.g. AHBR, EssenHyp or DePfa). Provocatively put, the German state has not only made this business model possible with the liberalization of the Mortgage Bank Act (in its own fiscal interest) since the 1970s, but has also made plenty of “roulette chips” available through permanent public debt (especially in the federal states in the 1990s) in order to be able to turn the big wheel. Hence, while no “direct” profiting can be observed, one can argue that government debt “indirectly” brought mortgage banks huge profits. The whole issue becomes even more relevant when one considers how this led to the crisis: above all those “non-mortgage mortgage banks” or, public sector financiers got into difficulties because of their very risky business model, and some of them had to be rescued by taxpayers’ money. Thus one can conclude that the saved interest costs of the state debt managers, if they borrowed money at very low rates via the mortgage banks, have been lost again by detours from overall state perspective.

Further Research

A promising point of departure for further research, which emerges from the empirical subjects of this dissertation, is to investigate more closely the political and social consequences of local state-financialization. Do municipal swap disasters and adverse fiscal effects from other financial practices, for instance, have an impact on electoral outcomes? How are these events perceived in the broader society and do they influence public opinion regarding local democratic processes and have they even contributed to the success of populist movements? Here it is quite conceivable that the responsible policy-makers will be voted out if the losses caused are perceived and communicated as a policy-failure. Contrary, an explicit de-financialization program – as demonstrated, for example, in Philadelphia – can contribute to a successful mayoral election. Follow-up studies could focus even more on the mingling of financial practices and electoral goals and motivations of politicians.

A currently very pressing and widely discussed issue in the US, as in many other countries of the world, is the emergence and success of populist movements and parties after and in response to the financial crisis (Judis 2016). In the US, a common narrative has emerged among these anti-establishment movements (such as Occupy and Tea Party), usually representing opposing

political positions as the far-right and the far-left, criticizing the existing capitalist system as “crony” and as “rigged” (Reich 2015: 187). The political elite is perceived as corrupt, and the financial industry and the state as accomplices. These movements are understood to have been the fertile ground for the election of Donald Trump, and similar developments can be observed in Europe (Block 2018). Against this backdrop, it would be interesting to analyze the possible role of state-financialization in these processes. The losses caused by derivatives – that in some spectacular cases in the US even led to the bankruptcy of subnational governments (e.g. Detroit or Jefferson County) – led in many cases to huge public outcry. Initial evidence shows that anti-establishment movements (e.g. the right wing populist news network Breitbart, but also national unions) deliberately used the cases of city swaps disasters framed as policy-failures of corrupt elected local officials to underpin the narrative of an existing unfavorable state-finance interpenetration. Following this line of reasoning, it is conceivable that the financialization of the state has contributed in this way to these significant political developments and should be further investigated.

From a theoretical perspective, further research could bring together the existing power concepts with the research on expectation formation from economic sociology (Beckert 2016). To investigate, for example, the exercise of structural power even more directly and robustly, the expectations of politicians and regulators should be at the center of the analysis, since the concept of structural power (Lindblom 1982; Culpepper 2015) is essentially about the regulators’ anticipation of future reactions of the regulated. So far, structural power is often measured by the relative importance of the regulated sector at a very aggregated level: building on this, future studies could focus much more on the concrete expectation formation processes of regulators, who often find themselves in an uncertain decision-making situation, since it seems almost impossible to predict industry’s actual reactions in advance. What influences the fictional expectations of regulators, in which they ground their decision? If two or more different narratives may be competing with each other, which one prevails and why? Thus, more room for analysis should be given to the contested nature of expectations. A very promising approach, for example, is to look at different actors within the state, such as technocrats and elected politicians. How are policy decisions made when the expectations of these two parties diverge? This becomes all the more interesting when one looks at the role of bureaucrats previously employed in the industry who carry a certain perception and mindset into the public sector. Conversely, further studies would be conceivable, which would deal with the changed behavior of market players in the expectation that regulation will take place in the

near future. In the US municipal bond market, for example, the announcement of the far-reaching Federal Tax Reform of 1986, has led to significant divergent behavior of the financial sector actors in the years prior to its introduction. The concrete investigation of the mechanisms of such announcement effects in different cases appears to be a fruitful future research project.

Status of studies

Where States and Markets Meet: The Financialization of Sovereign Debt Management (Chapter 1) is joint work with Michael Schwan and Christine Trampusch and was published in *New Political Economy*, 2017, 22 (3), pp. 273–93. All three authors contributed equally to this publication, meaning the concept formation, empirical analyses, structuring and writing the paper were joint tasks.

States' Interests as Limits to the Power of Finance: the Regulation of Municipal Swaps in the UK and US (Chapter 2) is joint work with Christine Trampusch and has been submitted to *Socio-Economic Review*. Both authors contributed equally to this publication, meaning the concept formation, data-gathering (archival work), empirical analyses, structuring and writing the paper were joint tasks.

From Economic Gains to Social Losses: How Stories Shape Expectations in Case of German Municipal Finance (Chapter 3) is joint work with Agnes Orban and Christine Trampusch and is published in *Kölner Zeitschrift für Soziologie und Sozialpsychologie (KZfSS)*, 2018, 70 (S1), pp.89–116, and as a *MPIfG Discussion Paper*, 2017, 17/20, Cologne, Max Planck Institute for the Study of Societies. All three authors contributed equally to this publication, meaning the concept formation, empirical analyses, structuring and writing the paper were joint tasks.

Crisis, Expectation and Policy Change. U.S. and Germany City Swap Disasters (Chapter 4) is joint work with Agnes Orban and Christine Trampusch and under review at *World Politics*. All three authors contributed equally to this publication, meaning the concept formation, empirical analyses, structuring and writing the paper were joint tasks.

Crisis Prone Public Financiers: Coping with Competition in the German Mortgage Banking Industry (Chapter 5) is single-authored and has been submitted to *Politics and Society*.

References

- Abbas, S.M.A, et al. (2010), *A Historical Public Debt Database*, IMF Working Paper No. 10/245.
- Baldassare, M. (1998), *When Government Fails: The Orange County Bankruptcy* (San Francisco: Public Policy Institute of California).
- Bakir, C. (2012), *Bank Behaviour and Resilience: The Effect of Structures, Institutions and Agents* (Basingstoke: Palgrave Macmillan).
- Beckert, J. (1996), ‘What is Sociological about Economic Sociology? Uncertainty and the Embeddedness of Economic Action’, *Theory and Society*, 25 (6), pp. 803–840.
- (2007), *The Great Transformation of Embeddedness: Karl Polanyi and the New Economic Sociology*, MPIfG Discussion Paper 07/1.
- (2009), ‘The Social Order of Markets’, *Theory and Society*, 38, pp. 245–269.
- (2016), *Imagined Futures: Fictional Expectations and Capitalist Dynamics* (Cambridge: Harvard University Press).
- Beckert, J. and Streeck, W. (2008), *Economic Sociology and Political Economy: A Programmatic Perspective*, MPIfG Working Paper 08/4.
- Bell, S. and Hindmoor, A. (2015), ‘Masters of the Universe but Slaves of the Markets: Bankers and the Great Financial Meltdown’, *The British Journal of Politics and International Relations*, 17 (1), pp. 1–22.
- Birkholz, K. (2008), *Aktives Kommunales Debt Management: Wege Zu Mehr Effizienz Bei Der Kommunalen Fremdfinanzierung* (Bern:Haupt Verlag).
- Block, F. (2018), *Capitalism. The Future of an Illusion* (Oakland: University of California Press).
- Blommestein, H. J. (2002), ‘Overview of Trends and Recent Changes in the Structure of OECD Public Debt Markets and Debt Management Operations’, in: *OECD Debt Management and Government Securities Markets in the 21st Century* (Paris: OECD), pp. 9–49.
- BMF (Bundesministerium der Finanzen)(1979): *Gutachten zur Schuldenstrukturpolitik des Staates* (Bonn: Stollfuss).
- Bohne, A. (1995), ‘Städte und Gemeinde suchen leistungsfähige Banken: Ökonomisches Denken erleichtert Kämmerern Zugang zu neuen Finanzierungsformen’, *Frankfurter Allgemeine Sonntagszeitung*, 18 June, p. 7.
- Boin, A., Hart, P. and McConnell, A. (2009), ‘Crisis Exploitation: Political and Policy Impacts of Framing Contests’, *Journal of European Public Policy*, 16 (1), pp. 81–106.
- Bomey, N. (2016), *Detroit Resurrected: To Bankruptcy and Back* (New York: Norton).
- Braun, B. (2018), ‘Central Banking and the Infrastructural Power of Finance: The Case of ECB Support for Repo and Securitisation Markets’, *Socio-Economic Review* (online first).
- Bücker, T. (1993), *Finanzinnovationen und kommunale Schuldenwirtschaft – zum Einsatz von Swapgeschäften und Swapderivaten im Schuldenmanagement von Gemeinden* (Baden-Baden: Nomos).
- Bundesbank (Deutsche Bundesbank) (1992), ‘Zur Geschäftsentwicklung der Realkredit-institute seit Anfang der achtziger Jahre’, *Monatsberichte der Deutschen Bundesbank*, April, 1992, pp. 21–32.

- Campbell, A. (2010), 'Whistle-Blower Calls for Ban on Local Government Derivatives Use', *Risk Magazine*, 19 April.
- Carruthers, B. (1996). *City of Capital. Politics and Markets in the English Financial Revolution*, (NJ: Princeton University Press).
- Cassard, M. and Folkerts-Landau, D. (1997), *Risk Management of Sovereign Assets and Liabilities*, IMF Working Paper , 97/166.
- Culpepper, P.D., and Reinke, R. (2014), 'Structural Power and Bank Bailouts in the United Kingdom and the United States', *Politics & Society*, 42 (4), pp. 427–454.
- Culpepper, P. D. (2015), 'Structural Power and Political Science in the Post-Crisis Era', *Business and Politics*, 17 (3), pp. 391–409.
- Currie, E., Dethier, J. J. and Togo, E. (2003), *Institutional Arrangements for Public Debt Management*, World Bank Policy Research Working Paper, No. 3021.
- Davis, G.F. (2009), *Managed by the Markets: How Finance Re-Shaped America* (Oxford: Oxford University Press).
- Davis, G. F. and Kim, S. (2015), 'Financialization of the Economy', *Annual Review of Sociology*, 41, pp. 203–221.
- Deeg, R. (1999), *Finance Capitalism Unveiled: Banks and the German Political Economy* (Michigan: University of Michigan Press).
- (2001), *Institutional Change and the Uses and Limits of Path Dependency: The Case of German Finance*, MPIfG Discussion Paper, 2001/6.
- DeGoede, M. (2005), *Virtue, Fortune, and Faith: A Genealogy of Finance* (Minneapolis: University of Minnesota Press).
- Dill, C.-M. (1981), *Staatliche Schuldscheindarlehen* (Berlin: Duncker & Humboldt).
- Dodd, R. (2010), 'Municipal Bombs', *Finance and Development*, 47 (2), pp. 33–35.
- Dunbar, Nick (2003), 'Revealed: Goldman Sachs' Mega-Deal for Greece', *Risk Magazine*, 1 July.
- Dutta, S. J. (2017), 'Sovereign Debt Management and the Globalization of Finance: Recasting the City of London's Big Bang', *Competition & Change*, 22 (1), pp. 3–22.
- Ertürk, Ismail (2015), 'Financialization, Bank Business Models and the Limits of Post-Crisis Bank Regulation', *Journal of Banking Regulation*, 17 (1-2), pp. 60–72.
- Fairfield, T. (2015), 'Structural Power in Comparative Political Economy: Perspectives from Policy Formulation in Latin America', *Business and Politics*, 17 (3), pp. 411–441.
- Falcetti, E. and Missale, A. (2002), 'Public Debt Indexation and Denomination with an Independent Central Bank', *European Economic Review*, 46 (10), pp. 1825–1850.
- Favero, C. Missale, A. and Piga, G. (2000), *EMU and Public Debt Management: One Money, One Debt?*, CEPR Policy paper, No. 3.
- Fligstein, N., Brundage, J. S. and Schultz, M. (2017), 'Seeing Like the Fed: Culture, Cognition, and Framing in the Failure to Anticipate the Financial Crisis of 2008', *American Sociological Review*, 82 (5), pp. 879–909.
- Fligstein, N. and McAdam, D. (2012), *A Theory of Fields* (Oxford: Oxford University Press).
- Fourcade, M. (2006), 'The Construction of a Global Profession: The Transnationalization of Economics', *American Journal of Sociology*, 112 (1), pp. 145–94.
- Gabor, D. and Ban, C. (2015), 'The New Links Between States and Markets', *Journal of Common Markets Studies* 54 (3), pp. 617–635.

- Gamble, A. (2015), 'Slaves to the Market: A Response to Bell and Hindmoor', *The British Journal of Politics and International Relations*, 17 (1), pp. 27–30.
- Golebiowski, G., Marchewka-Bartkowiak, K. (2011), Governance of the Public Debt Management Agency in Selected OECD Countries, *Holistica Journal of Business and Public Administration*, 1 (2), pp. 2–17.
- Grunwald, E. (2007), 'Kommunales Schuldenmanagement vor neuen Herausforderungen', in: B. Frischmuth and H. Bals (eds) *Kommunales Schuldenmanagement – Auf dem Weg zu mehr Effizienz* (Berlin: Deutscher Städtetag), pp. 47–73.
- Hager, S. B. (2016), *Public Debt, Inequality, and Power: the Making of a Modern Debt State* (Oakland, California: University of California Press).
- Hall, P. A. (1993), 'Policy Paradigms, Social Learning, and the State: The Case of Economic Policymaking in Britain', *Comparative Politics*, 25 (3), pp. 275–96.
- Hall, P. A., Soskice, D. (eds) (2001), *Varieties of Capitalism – The Institutional Foundations of Comparative Advantage* (Oxford: Oxford University Press).
- Hankel, W. (2012), 'Mein Bundesschätzchen ist tot', *Frankfurter Allgemeine Sonntagszeitung*, No 27, 8 July, p. 35.
- Hardie, I. and Howarth, D. J. (2009), 'Die Krise but not La Krise? The Financial Crisis and the Transformation of German and French Banking Systems', *Journal of Common Market Studies*, 47 (5), pp. 1017–1039.
- (2013), *Market-based Banking and the International Financial Crisis* (Oxford: Oxford University Press).
- Hardie, I., Howarth, D. J., Maxfield, S. and Verdun, A. (2013), 'Banks and the False Dichotomy in the Comparative Political Economy of Finance', *World Politics*, 65 (4), pp. 691–728.
- Häuser, K. (1981), 'Die Rolle des Staates auf dem Kapitalmarkt', in M. Bierich (ed), *30 Jahre Kapitalmarkt in der Bundesrepublik Deutschland* (Frankfurt am Main: Knapp).
- Heath, R. M. (1998), *The Statistical Measurement of Financial Derivatives*, IMF Working Paper, No. 98/24.
- Heinacher, P. and Tartler, J. (1995), 'Bundesländer – Die Finanzministerien setzen derivative Instrumente bereits seit 1990 verstärkt ein', *Handelsblatt*, 14 February, p. 6.
- Hendrikse, R. P., Sidaway, J.D. (2014), 'Financial Wizardry and the Golden City: Tracking the Financial Crisis through Pforzheim, Germany' *Transactions of the Institute of British Geographers*, 29 (2), pp.195–208.
- Hendrikse, R. and Lagna, A. (2017), *State Financialization: A Multi-Scalar Perspective*, Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id.3170943 (accessed 18 December 2018).
- Hibbs, D. (1977), Political Parties and Macroeconomic Policy. *American Political Science Review*, 71 (4), pp. 1467–1487.
- Hollingsworth, J. R. and Lindberg, L. N. (1985), 'The Governance of the American Economy: The Role of Markets, Clans, Hierarchies, and Associative Behavior', in: W. Streeck and P.C. Schmitter (eds), *Private Interest Government: Beyond Market and State* (London: Sage), pp. 221–54.
- IMF (International Monetary Fund) and World Bank (2003): *Guidelines for Public Debt Management: Accompanying Document and Selected Case Studies* (Washington, D.C.: International Monetary Fund).

- Irwin, T. (2012), *Accounting Devices and Fiscal Illusions*. IMF Staff Discussion, Note 12/02.
- James, S. and Quaglia, L. (2018), 'Brexit, the City and Contingent Power of Finance', *New Political Economy* (online first).
- Judis, J. B. (2016), *The Populist Explosion: How the Great Recession Transformed American and European Politics* (New York: Columbia Global Reports).
- Karwowski, E. and Centurion-Vincencio, M. (2018), 'Financializing the State: Recent Developments in Fiscal and Monetary Policy', *Financial Geography Working Paper*, No. 11.
- Khumawala, S., Ranasinghe, T. and Yan, C. Y. (2016), 'Why Hedge? Extent, Nature, and Determinants of Derivate Usage in U.S. Municipalities', *Journal of Accounting and Public Policy*, 35 (3), pp. 303–325.
- Kirkpatrick, L. O. (2016), 'The New Urban Fiscal Crisis: Finance, Democracy, and Municipal Debt', *Politics & Society*, 44 (1), pp. 45–80.
- Krippner, G. R. (2001), 'The Elusive Market: Embeddedness and the Paradigm of Economic Sociology', *Theory and Society*, 30 (6), pp. 775–810.
- (2011), *Capitalizing on Crisis: the Political Origins of the Rise of Finance* (Cambridge : Harvard University Press).
- Krippner, G. R. and Alvarez, A. S. (2007), 'Embeddedness and the Intellectual Projects of Economic Sociology', *Annual Review of Sociology*, 33, pp. 219–240.
- Lagna, A. (2015), 'Italian Municipalities and the Politics of Financial Derivatives', *Competition & Change*, 19 (4), pp. 283–300.
- (2016), 'Derivatives and the Financialisation of the Italian State', *New Political Economy*, 21 (2), pp. 167–186.
- Lemoine, B. (2016), 'The Strategic State Caught up in Rates: The Creation of a French Public Debt Management Agency', *Revue française de science politique* (English Edition) , 66 (3-4), pp. 27–51.
- (2017), 'The Politics of Public Debt Financialisation: (Re)inventing the Market for French Sovereign Bonds and Shaping the Public Debt Problem (1966–2012)', in: M. Buggeln, M. Daunton and A. Nützenadel (eds), *The Political Economy of Public Finance: Taxation, State Spending and Debt since the 1970s* (Cambridge: Cambridge University Press), pp. 240–261.
- Lindblom, C. E. (1982), 'The Market as Prison', *The Journal of Politics*, 44 (2), pp. 324–336.
- LiPuma, E. and Lee, B. (2004), *Financial Derivatives and the Globalization of Risk* (Durham & London: Duke University Press).
- Luby, M. J. and Kravchuk, R. S. (2013), 'An Historical Analysis of the Use of Debt-Related Derivatives by State Governments in the Context of the Great Recession', *Journal of Public Budgeting, Accounting & Financial Management*, 25 (2), pp.276–310.
- Lütz, S. (2003), Governance in der politischen Ökonomie – zum Stand der Debatte, *Politische Vierteljahresschrift*, 44 (2), pp. 231–41.
- Macaskill, J. (2010), 'Macaskill on Markets: Government Trades are Not One-Way Bets for Investment Banks', *Euromoney*, March 5.
- Mayntz, R. (2001), 'Zur Selektivität der steuerungstheoretischen Perspektive', in: H.-P. Burth and A. Görlitz (eds), *Politische Steuerung in Theorie und Praxis* (Baden-Baden: Nomos), pp. 7–27.

- (2017), *Handeln und Struktur, Akteur und System: Die kausale Rekonstruktion von sozialen Makrophänomenen am Beispiel der Finanzkrise*, MPIfG Discussion Paper, No. 17/5.
- Millman, G. J. (1995), *Vandals' Crown: How World's Currency Traders Beat the Central Banks* (New York: Simon Schuster).
- Minsky, H. P. (1986), *Stabilizing an Unstable Economy* (New Haven: Yale University Press).
- Missale, A. (1999), *Public Debt Management* (Oxford: Oxford University Press).
- Missale, A. (2001), 'Optimal Debt Management with a Stability and Growth', *Public Finance and Management*, 1 (1), pp. 58–91.
- Müller, F. (1994), 'Das Zauberwort heißt Swaps: Der Kämmerer als Finanzjongleur', *Süddeutsche Zeitung*, 21 October, p. 39.
- Mysak, J. (2012), *Encyclopedia of Municipal Bonds: A Reference Guide to Market Events, Structures, Dynamics, and Investment Knowledge* (Hoboken: Bloomberg Press).
- Nars, K. (1997), *Excellence in Debt Management: The Strategies of Leading International Borrowers* (London: Euromoney).
- Nordhaus, W. (1975), 'The Political Business Cycle', *Review of Economic Studies*, 42 (2), 169–190.
- Pacewicz, J. (2012), 'Tax Increment Financing, Economic Development Professionals and the Financialization of Urban Politics', *Socio-Economic Review*, 11 (3), pp. 413–440.
- Pérignon, C., and Vallée, B. (2013), *Political Incentives and Financial Innovation: The Strategic Use of Toxic Loans by Local Governments*, HEC Paris Research Paper No. FIN-2013-1017.
- Piga, G. (2001), *Derivatives and Public Debt Management* (Zürich/New York: International Securities Market Association/Council on Foreign Relations).
- Pryke, M. and Allen, J. (2000), 'Monetized Time-Space: Derivatives–Money's New Imaginary?', *Economy and Society*, 29 (2), pp. 264–284.
- Quinn, S. (2017), 'The Miracles of Bookkeeping: How Budget Politics Link Fiscal Policies and Financial Markets', *American Journal of Sociology*, 123 (1), pp. 48–85.
- Rehm, H. (2001), *Management der öffentlichen Schuld – Befund, Probleme, Perspektiven* (Stuttgart: Deutscher Sparkassen Verlag).
- Reich, R. (2015), *Saving Capitalism. For the Many, Not the Few* (London: Icon).
- Reurink, A. (2016), *Financial Fraud: A Literature Review*, MPIfG Discussion Paper ,16/5.
- Savage, J. (2005), *The Making of the EMU: The Politics of Budgetary Surveillance and the Enforcement of Maastricht* (Oxford: Oxford University Press).
- Sbragia, A. (1986), Capital Markets and Central-Local Politics in Britain. *British Journal of Political Science*, 16 (3), pp. 311–339.
- Sbragia, A. (1996), *Debt Wish : Entrepreneurial Cities, US Federalism, and Economic Development* (Pittsburgh, Pa: University of Pittsburgh Press).
- Schelke, W. (2009), 'The Contentious Creation of the Regulatory State in Fiscal Surveillance', *West European Politics*, 32 (4), pp. 829–846.
- Schmidt, V.A. and Thatcher, M. (eds) (2013), *Resilient Liberalism in Europe's Political Economy* (Cambridge, UK: Cambridge University Press).
- Stewart, L. J., Cox, C. A. (2008), 'Debt-Related Derivative Usage by U.S. State and Municipal Governments and Evolving Financial Reporting Standards', *Journal of Public Budgeting, Accounting & Financial Management* , 20, pp. 439–456.

- Storkey, I. (2006), 'Sound Practice', in: M. Williams (ed.), *Government Debt Management: New Trends and Challenges* (London: Central Bank).
- Streeck, W. (2012), 'How to Study Contemporary Capitalism?', *European Journal of Sociology*, 53 (1), pp. 1–28.
- (2013), 'The Politics of Public Debt: Neoliberalism Capitalist Development and the Restructuring of the State'. *German Economic Review*, 15 (1), pp. 143–165.
- (2014), *Buying Time: The Delayed Crisis of Democratic Capitalism* (London: Verso Books).
- (2017), 'A New Regime: The Consolidation State', in: D. King and P. Le Galès (eds.) *Reconfiguring European States in Crisis* (Oxford: Oxford University Press), pp. 139–157.
- Sultan, H. (1932), *Die Staatseinnahmen: Versuch einer soziologischen Finanztheorie als Teil einer Theorie der politischen Ökonomie* (Tübingen: Mohr).
- Sundararajan, V., Dattels, P. and Blommestein, J. (eds) (1997), *Coordinating Public Debt and Monetary Management* (Washington, DC: International Monetary Fund).
- The Economist (1989), 'A Little Local Difficulty', *The Economist*, March 18, p. 128.
- Tickell, A. (1998), 'Creative Finance and the Local State: The Hammersmith and Fulham Swaps Affair', *Political Geography*, 17 (7), pp. 865–881.
- Trampusch, C. (2015), 'The Financialisation of Sovereign Debt: An Institutional Analysis of the Reforms in German Public Debt Management', *German Politics*, 24 (2), pp. 119–36.
- (2018a), 'Liberal Financial Markets in the Interest of Staatskredite – A Process-Tracing Study of the Link between Sovereign Debt Policy and the 1908 Bourse Law Reform in the German Empire', *Jahrbuch für Wirtschaftsgeschichte*, 59 (1), pp. 105–134.
- (2018b), 'The Financialization of the State: Government Debt Management Reforms in New Zealand and Ireland', *Competition and Change* (online first).
- Trampusch, C. and Spies, D. (2015), 'Was treibt Kommunen zu Spekulationsgeschäften? Eine Analyse der Swap-Geschäfte von Kommunen in Nordrhein-Westfalen', *Politische Vierteljahresschrift*, 56 (1), pp. 104–129.
- Troost, A. (1984), *Staatsverschuldung und Kreditinstitute* (Frankfurt a.M.: Lang).
- Van der Zwan, N. (2014), 'Making Sense of Financialization', *Socio-Economic Review*, 12 (1), pp. 99–129.
- Vitols, S. (2005), 'Changes in Germany's Bank-Based Financial System: Implications for Corporate Governance', *Corporate Governance: An International Review*, 13 (3), pp. 386–396.
- Vogl, J. (2017), *The Ascendancy of Finance* (Cambridge: Polity).
- Wolcott, R. (2006), 'The German Deficit Dilemma', *Risk Magazine*, 19 (5), 1 May.
- Weick, K. (1995), *Sensemaking in Organizations* (London: Sage).
- Wheeler, G. (2004), *Sound Practice in Government Debt Management* (Washington, DC: World Bank)
- Zingales, L. (2015), 'Presidential Address: Does Finance Benefit Society?' *The Journal of Finance*, 70 (4), pp. 1327–1363.

Chapter 1

Where States and Markets Meet The Financialization of Sovereign Debt Management

Abstract

Financial markets play an indispensable role in the management of sovereign debt, that is, the mechanics of how and from whom governments borrow. This paper suggests a novel, two-dimensional concept to measure the financialization of sovereign debt management (SDM): (1) the reliance on financial markets as a governance mechanism and (2) the adoption of a sense-making framework grounded in financial economics. We split this concept into nine indicators and apply it to data from 23 OECD countries between 1980 and 2010. Our analysis illustrates the predominant commonalities across countries, but at the same time, country-specific differences. We interpret them as two sides of the same coin in the light of an overarching trend of increasing alignment to financial markets. This article is not only one of the first cross-national as well as longitudinal studies of the dynamics in SDM; it also reveals that the relationship between finance and governments in the SDM is by no means one-sided.

Keywords: financialization of the state, state-market nexus, sense-making, governance, sovereign debt management, capitalism, comparative political economy

(Co-authored with Michael Schwan and Christine Trampusch)
(Published in *New Political Economy* (2017), 22 (3), 273-293)

1.1 Introduction

At the World Bank's 1989 Government Borrowers' Forum in Helsinki, representatives of about 30 countries met officials from Merrill Lynch, Morgan Stanley and Salomon Brothers, who were 'specially invited to present their prescriptions for advanced debt management' (Nars 1997: 5). The three investment banks had already done much work on the topic. For some years, they had been 'fishing for new business by telling their official customers how to move around their existing borrowing sources' and were even 'offering their computer packages free in the hope of winning the business, such as swaps, that they generate' (The Economist 1988: 117–18). In the end, they obviously made a big catch; since in the mid-1990s, most sovereign bodies were already using financial market techniques and instruments for managing their continuously rising levels of public debt.

Now, numerous examples from around the globe illustrate the potential consequences of this development. Several governments in Europe, for instance, used derivatives such as interest rate swaps for window-dressing purposes to hide their official debt levels. In the wake of the European Economic and Monetary Union (EMU), Italy and Greece were the most prominent offenders (Piga 2001a, 2001b, Dunbar 2003, Lagna 2016). Another problem when using derivatives is the risk of recording financially harmful losses. This happened, for example, in Australia, where the government was subsequently accused of 'losing billions of [...] taxpayer dollars through "gambling"' (Yusuf and Batten 2009: 295) and Belgium, with losses amounting to 44.3 billion francs (van Gerwen and Cassimon 2000).¹ Episodes like these demonstrate 'the entrance of financial markets in the management of public debt, extending financial logic to the public sphere' (Marazzi 2011: 120), which is a relevant but still underexplored subject (Munoz Martinez 2016).

Scholars of international and comparative political economy regularly investigate the relationship between financial markets and governments. They often analyse phenomena like deregulation, globalization, financialization of the economy, soaring public debt levels, financial repression and crises (e.g. Helleiner 1994, Cohen 1996, Epstein 2005a, Krippner 2011, Boyer 2013, Hardie et al. 2013, van Riet 2013, Dyson 2014, Streeck 2014, Reinhart and Sbrana 2015, Rommerskirchen 2015). Contributions then focus either on the ways in which the explosive growth of global financial markets constrains governments (Cerny 1994, Strange 1996, Streeck 2014) or on how public authorities have essentially facilitated the re-emergence

of these markets (Helleiner 1994, 1995, Krippner 2011). Our paper, in contrast, illuminates the state–market nexus in the sovereign bond market, ‘a most likely locus of financial market influence’ (Mosley 2004: 183) on government policies. We do so by examining sovereign debt management (SDM), a phenomenon to which so far ‘political scientists have paid scant attention’ (Mosley 2015: 158). Understood as the mechanics of how and from whom governments borrow money, SDM is not concerned with the actual level of debt, but with the manipulation of its structural composition.² This includes both the use of various debt instruments and the techniques of selling them to financial investors. By analyzing changes associated with SDM, this article provides a clearer understanding of the state–market nexus in the age of global financial markets. We conceptualize this as part of a larger process to which there have been rather few political economic contributions so far: the financialization of the state (Wang 2015, Lagna 2016).

How did SDM change over the last few decades? Is there a uniform development across countries or do they substantially differ? These are the puzzles which this paper addresses. As one of the first cross-national as well as longitudinal studies of this topic (cf. Abbas et al. 2014), our objective is foremost conceptual and descriptive. Following Caramani (2010: 43), we assume that empirical, descriptive analysis plays a major role in comparative politics, as it ‘allows us to get dependent variables right’ and ‘to discover phenomena’ (*italics in original*). We characterize the outcome, suggest a concept including indicators and provide data on a phenomenon which the discipline has not sufficiently identified and captured yet. Future studies on the causes and effects of the financialization of SDM might draw on our work.

Our study of 23 selected OECD countries from 1980 to 2010³ reveals a fundamental transformation in the ways governments manage their debt. Following Epstein’s (2005a: 3) notion of financialization as ‘the increasing role of financial motives, financial markets, financial actors and financial institutions’, we extend this framework to SDM. In contrast to other concepts such as ‘marketization’, we argue that referring to ‘financialization’ best suits the analysis of the changes in SDM that we uncover. However, to be analytically clearer and more precise, our concept of financialization of SDM includes two dimensions: (1) the reliance on the market as a governance mechanism and (2) the adoption of a sense-making framework grounded in financial economics. As we will justify in more detail, narrowing Epstein’s broad definition equips us to analyze the financialization of SDM effectively.

The main finding of our study is that the process of financialization of SDM is characterized by overarching commonalities accompanied by country-specific differences in both dimensions. Although the process fundamentally affects all countries, national specificities continue to exist. Financialized forms of SDM may take different shapes according to country-specific contexts. Drawing on Streeck (2012: 22), this ‘highlights the commonalities of [capitalism and] its varying institutional embodiments, or more precisely: the common dynamics that are responsible for the parallel trajectories on which national capitalisms historically move’.

In order to further clarify and underpin our argument this article proceeds as follows: the next section elaborates our understanding of a financialization of SDM in more detail and illustrates how far it differs from its former non-financialized form. We view SDM as economic activity, because it comprises decisions on how and from whom governments borrow money to finance their budget deficits. Hence, we analyze its past and present forms along two dimensions: the governance mechanisms used to coordinate this economic activity between different actors (Hollingsworth and Lindberg 1985, Mayntz 2001) and the underlying intellectual frameworks of economic ideas, which enable sense-making and legitimization (Weick 1995, Weick et al. 2005, Fligstein et al. 2014). We split these two dimensions into a set of nine indicators⁴ for our analysis in sections three and four. Finally, section five points to the contribution of this article to the analysis of the financialization of the state and the state–market nexus. We conclude that financialization is a continuing process affecting crucial state areas. Moreover, financial markets effectively define but do not determine courses of action for SDM.

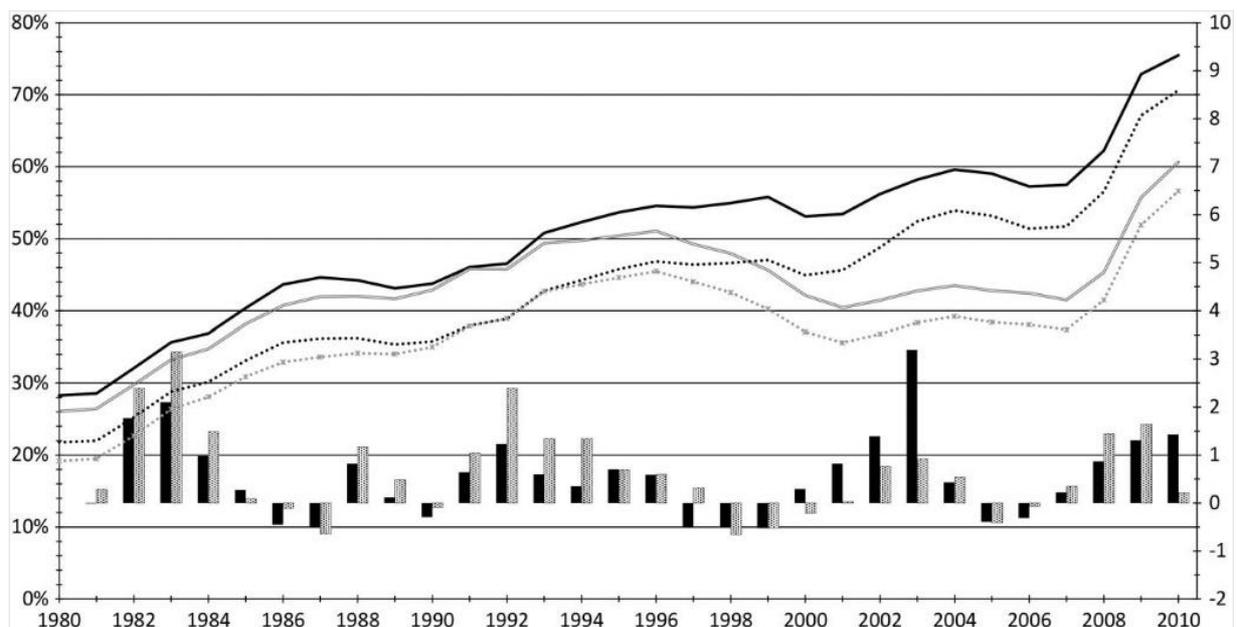
1.2 The financialization of SDM: A two-dimensional concept

Before we reveal our concept for measuring the change in SDM and argue why it is useful to transfer the term financialization to this area, we want to emphasize that all governments in our sample have been facing ever-higher debt levels. Figure 1 shows that since the 1980s, there has been an overall trend towards rising indebtedness in our 23 OECD countries. In 30 years, the debt-to-GDP ratio more than doubled from less than 30 to almost 75 per cent. While this alone is not new news, Figure 1 also reports that the share of marketable debt (MD)⁵ grew even more strongly. With the exception of a few rather short periods, most notably in the late 1990s, MD has constantly risen in relation to non-marketable liabilities. As a result, its share in total government debt increased from about 70 per cent in 1980 to more than 90 per cent in 2010. Consequently, this figure confirms that political science should not only scrutinize the levels or

change rates of public debt, but also show how far governments use market-based modes of refinancing and the related financial markets transactions of debt managers.

When social scientists analyze current trends in the dynamics of financial markets and debt, they very often refer to the term ‘financialization’ (van der Zwan 2014). Dealing with this rise of finance, most contributions are in line with Epstein’s (2005b) previously mentioned concept and centre on three subfields: the economy (e.g. Krippner 2005, 2011), corporations (e.g. Fligstein 1990, Froud et al. 2006) and the everyday life of households (e.g. Langley 2008, Fligstein and Goldstein 2015). Surprisingly, with few exceptions (Wang 2015, Lagna 2016), explicit analyses of the financialization of the state are still missing (Davis 2009: 177–87, van der Zwan 2014: fn. 13)

Figure 1: Total central government debt (continuous line) and total marketable debt (dotted line) as a % of GDP (left). Annual growth of marketable debt as a share of total central government debt (bars) in percentage points (right). OECD 23: bold, OECD 22 excluding JAP: light.



Sources: own calculations using OECD (2015) and other primary sources (see supplementary file).

Notes: data for all countries from 1980–2010 except CAN, IRL, ESP (1981–2010), FIN, LUX (1990–2010), FRA, NZL (1992–2010), NOR (1982–2010), CH (1986–2010) and UK (1998–2010). Although the picture becomes obscured with Japan out of the equation, the overall trend still holds. While the other countries reduced their debt-to-GDP ratios from 1996–2001 and even in the past relied on MD more strongly, Japan caught up with respect to the latter from 2000–3.

Of course, scholars acknowledge that there is a close relationship between financialization in general and the role of governments in expanding their markets for sovereign debt (e.g. Mosley 2003, Quinn 2010, Hardie 2012,⁶ Pacewicz 2013, Streeck 2014). Illustrative episodes are the ongoing Eurozone crises or the Basel II agreement of 1992, which more or less squeezed banks into buying zero-risk weighted sovereign bonds. Nevertheless, how governments become

actively engaged in private sector style financial market practices to manage their debt is usually left aside (Mosley 2010: 29). In addition, the political science literature on SDM and related topics is still in its infancy (exceptions are Datz 2008, Gabor 2012, Dyson 2014, Trampusch 2015, 2016, Lagna 2016, Livne and Yonay 2016, Munoz Martinez 2016).

This paper contributes to filling these gaps in three ways. First, we extend the concept of financialization by applying it to the practices involved in SDM. Second, we suggest that the process of financialization of SDM is reflected in an increasing reliance on financial markets as governance mechanisms and the adoption of a sense-making framework grounded in financial economics. Third, we complement existing analysis by adding a longitudinal and cross-national perspective. Thus, we provide new data and a conceptual application to the debate on financialization.

Table 1: Characteristics of financialized and non-financialized SDM.

Characteristics	Non-financialized SDM	Financialized SDM
Governance mechanism	<p>Non-market (<i>hierarchical, network</i>)</p> <ul style="list-style-type: none"> • Interest rates on bonds were politically controlled and determined; captive sources of financing; debt monetization • Financing decisions based on short-term expediency within a highly regulated domestic environment • Predominantly loans and long-term relationship financing 	<p>Financial market (<i>competitive</i>)</p> <ul style="list-style-type: none"> • Predominantly marketable debt instruments sold to privileged primary dealers (Indicators: MD, PDS) • Interest rates on bonds are market-determined by auctions, thus subject to supply and demand (Indicator: Auctions) • Sovereign refinancing as a tool to develop financial markets and broaden the investor base in a globally deregulated and competitive environment (Indicators: MDNR, MDFC, ILBs)
Sense-making framework	<p>Macroeconomics → passive administration</p> <ul style="list-style-type: none"> • Operational responsibility in the hands of central banks and civil servants inside Departments of Finance or Treasuries • Limited toolkit of instruments at use • Traditional public sector form of cash-based accounting 	<p>Financial economics → active management</p> <ul style="list-style-type: none"> • Operational responsibility in the hands of specific and separate agencies (DMOs). (Indicator: DMOs) • Use of complex financial innovations like derivatives, which allow for separating issuance from portfolio decisions. (Indicator: Swaps) • Modern private sector form of accruals accounting. (Indicator: Accruals Accounting)

Source: own compilation based on the literature quoted in the main text.

The reason for bringing these extensions into the literature on financialization becomes clear when one inspects the main trends of SDM over the last few decades. Economic and advisory literature on SDM shows that between the 1970s and 1990s, SDM has fundamentally changed in major OECD countries (Carracedo and Dattels 1997: 100–5, Nars 1997, Magnusson 1999,

Blommestein 2002, Wheeler 2004, Wolswijk and de Haan 2005: 6–8, Storkey 2006, Andabaka Badurina and Svaljek 2012: 77). Table 1 displays the main characteristics of past and present SDM. While the former can be described as non-financialized since it was less dependent on financial markets, their actors and logics, the latter clearly features many aspects of a growing alignment of SDM practices with financial markets. For better analytical understanding and conceptual clarity, we suggest discussing both forms of SDM according to the predominantly adopted governance mechanisms and the respective underlying sense-making frameworks, a point that will we now develop in detail.

Following the common conception of governance in the comparative political economy literature, economic activities can be coordinated through various governance mechanisms: state or firm hierarchies, networks, associations or market transactions (Hollingsworth and Lindberg 1985, Hollingsworth and Boyer 1997, Mayntz 2001, Lütz 2003). In the past, two of them mainly played an important role in SDM. On the one hand, hierarchical governance describes non-financialized SDM best, since non-market, state-centred coordination was its crucial feature. Highly controlled sovereign bond markets, with investors ‘captured’ by investment regulations, formed the (mostly) domestic environment in which financing decisions were based on short-term expediency. Another significant aspect of this was the use of debt monetization (inflation) for deficit financing until the 1970s. On the other hand, there were also certain aspects of networks, because bank loans and long term-oriented relationship financing were dominant features of SDM (Panizza et al. 2009: 655–6, Abbas et al. 2014). Thus, sovereign borrowers accessed capital markets with the help of banks, which functioned as their underwriters and whose reputation and ‘brand’ granted ‘market access on favourable terms’ (Flandreau and Flores 2009: 647).

In contrast, when describing present, financialized SDM, it is indispensable to speak of competitive (financial) market-based forms of governance. They take place in a globally deregulated environment and largely follow the logic of supply and demand. While in the past interest rates on bonds were politically determined, they are now subject to market fluctuations because debt instruments are issued at auctions with competitive bidding.⁷ Furthermore, the role of MD has been strengthened to deepen and widen financial markets. In order to measure this change towards financial market-based governance of SDM, we use the following six indicators: the share of MD, marketable debt held by non-residents (MDNR) and marketable

debt in foreign currency (MDFC), as well as the introduction of auctions, primary dealer systems (PDSs) and index-linked bonds (ILBs).

The second analytical dimension is about divergent underlying sense-making frameworks of SDM. Before developing this at length, we would like to emphasize why it seems crucial to us to include it in our concept. As Livne and Yonay (2016), for example, have elaborated for the Israeli case (GDMU), specific economic ideas and mathematical models based on these ideas effectively pre-shape discussions about debt management decisions. This is part of the larger argument about the influence of economists on policy-making in general (Hall 1989, Fourcade 2006, 2009) and financial ideas in particular (Blyth 2003). Referring to Karl Weick's (1995) insights from organizational sociology and psychology when analyzing decisions of the US Fed, Fligstein et al. (2014: 9–18) note that it is crucial to reflect different ways of sense-making. This means that within (economic or financial) organizations, evaluating different courses of action, and ultimately taking a decision, is always structured by pre-existing frameworks that represent a specific view of how the economy works (Fligstein et al. 2014: 11). Therefore, sense-making frameworks and governance mechanisms are interwoven (Weber and Glynn 2006). Relating this to our case, we argue that non-financialized SDM relied on the intellectual foundation of classic macroeconomics (Pecchi and Piga 1995, Giovannini 1997: 44). Starting in the 1960s, SDM included macroeconomic goals and was a tool for stabilizing the economy. This clearly distinguished it from private sector debt management (Wolswijk and de Haan 2005: 6–8). Debt management was viewed as an 'extension of monetary policy' (Currie et al. 2003: 11), which implies that macroeconomists *inter alia* 'assigned debt management the important role of stabilizing aggregate demand' (Pecchi and Piga 1995: 30). This becomes clearer when one takes into account the fact that in the past, operational responsibility for SDM was in the hands of central bankers and civil servants inside treasuries or ministries of finance. Administrative tasks were performed with a limited toolkit of debt instruments at hand, while bureaucrats at the same time used traditional public forms of cash-based accounting. Next to the emphasis on the macroeconomic impact of borrowing decisions, debt managers acted rather passively, since SDM was restricted to 'keeping books and records on borrowing transactions and the repayment of debt' (Andabaka Badurina and Svaljek 2012: 76).

In contrast, financialized SDM takes monetary policy as given (Abbas et al. 2014: 4, fn. 3) and is informed by financial economics as its intellectual foundation (Nars 1997). The fact that sovereigns have started to make sense of their debt as a 'portfolio' instead of focusing on

individual loans (Caplen 1995) mirrors the crucial shift in the underlying frameworks towards financial economics. This perspective implies that debt managers are focusing on optimization calculations based on cost–risk trade-offs. Standard portfolio theory (Markowitz 1952) provides instructions for the best possible combination of investment alternatives in order to optimize the investor’s portfolio. An optimal portfolio minimizes risks while maintaining or increasing the expected return. This main tenet of portfolio theory has been adopted by state executives (Abbas et al. 2014: 4) – only in reverse. They now aim at minimizing debt service costs resulting from a portfolio of liabilities, just as a private ‘asset manager would seek to add return to his portfolio’ (Lee 1996). Hence, a greater significance and consideration of risks in the daily debt management operations has accompanied the shift in frameworks (Magnusson 1999, OECD 2005, Holler 2013). While conducting our research, we have found numerous instances of evidence justifying sense-making as a conceptual dimension. A notable example is the former CEO of the German Finanzagentur, who explicitly speaks of the importance of Markowitz’ (1952) portfolio theory and its modern versions for day-to-day debt management practices (Daube 2009). Thus, in general, we regard this change in sense-making frameworks as a fundamental ‘shift in thinking (...) which redefined debt management in important ways’ (Currie et al. 2003: 15).

This implies, first, that nowadays, in most OECD countries, SDM is the operational responsibility of special debt management offices (DMOs), which primarily employ well-paid professional portfolio managers coming from private investment banks (e.g. Currie et al. 2003). Because DMOs compete with private financial institutions in hiring these experts, they also reformed their salary scales. On the one hand, these personnel are recruited based on experience in private financial sector firms but also with regard to their skills in risk and portfolio management, including the corresponding mathematical models such as Monte Carlo simulations. The German Finanzagentur (2002), for instance, has set up a team of trained financial economists, mathematicians and physicists to execute portfolio management and financial engineering.⁸ On the other hand, the newly hired staff also contributes to the establishment of a specific culture. For the UK for example, Davies (2005: 234), at that time senior official at the UK DMO, notes that ‘the most important aspect is that a strong risk management culture pervades the organization at all levels’. This perception of risk is typically associated with classic portfolio theory. To detect the risk structure inscribed in the debt portfolio, the introduction of accruals accounting brings a market-based view to public balance sheets (Newberry 2015). Accounting, including its various historical forms, is a generally

important aspect of sense-making, since it functions as a ‘cognitive device’ (Carruthers and Espeland 1991: 55). Moreover, Quinn (2016: 7) even regards it as one of the ‘building blocks of understanding’. Speaking of financial economics, the application of portfolio theory to debt management then advises debt managers to diversify risks by issuing various types of securities and using mathematics in financial risk management. As a result, each country now possesses its own characteristic debt portfolio, put together and constantly manipulated in the light of the cost–risk trade-off. In other words, ‘debt managers have increasingly become risk managers as well’ (Bröker 1993: 12). This allows them to play with interest rates and currency rate risks. They do so by using various forms of derivatives. In this regard, together with the aforementioned introduction of accruals accounting, ‘sense-making frameworks (...) reflect beliefs about what is, and beliefs about what ought to be’ (Starbuck and Milliken 1988: 51). Formerly, stricter international capital controls and less developed financial instruments had blocked this option. We operationalize the shift to financial economics in the sense-making framework with the following three indicators: the use of derivatives, the introduction of accruals accounting and the establishment of professional DMOs.

After having synthesized the main features of financialized SDM, the following two sections present our empirical analysis. Therefore, we start with the governance mechanisms before dealing with the sense-making frameworks. By connecting our indicators to the empirical material, we highlight the commonalities of financialization while also pointing to country-specific trajectories as differences within this trend. We rely on metric and non-metric (timing) data provided by international organizations like the OECD, the IMF and the World Bank, as well as academic research on this topic.⁹ Although conceptual considerations guide our choice of indicators, the scarcity of useful cross-national data at the same time constrains it.

1.3 Governance mechanisms of SDM: From state to financial markets

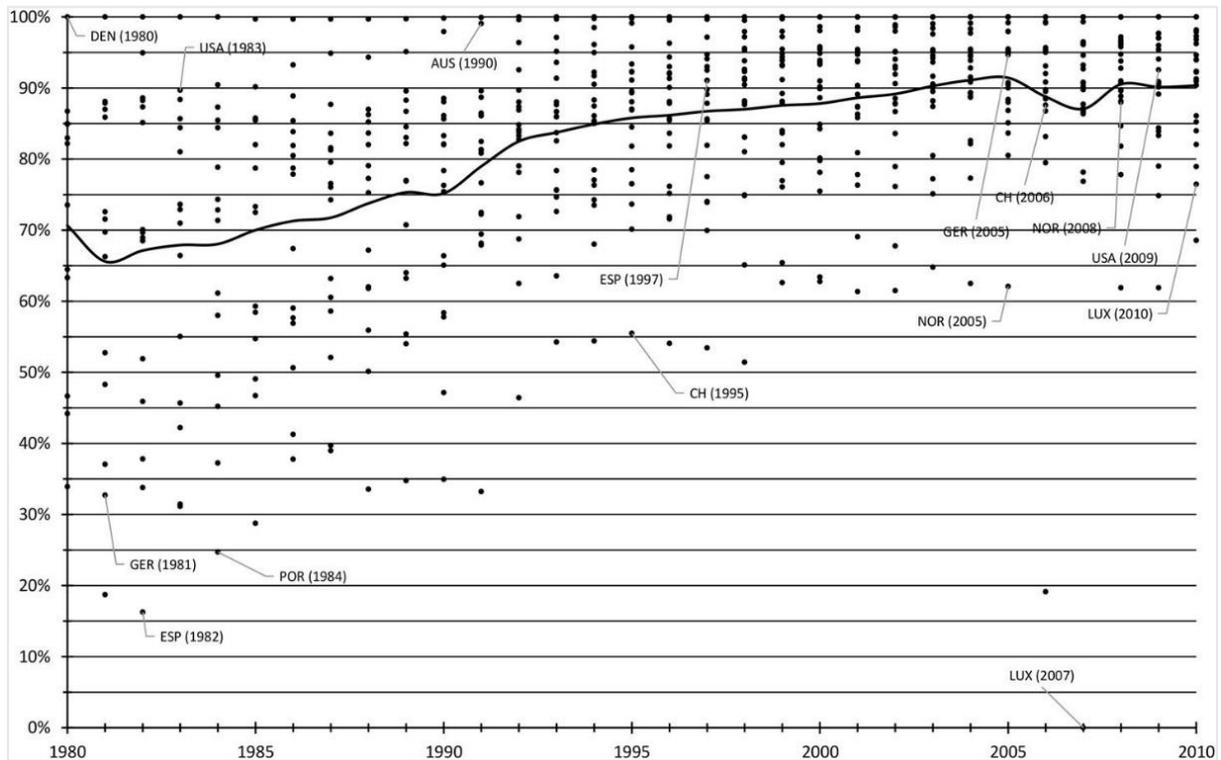
The first six indicators that we present refer to the governance of SDM. Regarding the timing of reforms, we analyze the years of introduction of auctions, PDSs and ILBs. Concerning metrics, we look at MD in general, as well as the share held by non-residents (MDNR) and issued in foreign currencies (MDFC).

Figure 2 depicts the share of marketable debt (MD). Its volume measures the degree to which debt managers are able ‘to maintain the marketability of the government’s debt instruments

[which ...] thereby ensures continued and broader access to financial markets' (OECD 1982: 12). It also suggests that liquid secondary markets, on which bonds are sold and traded,¹⁰ are increasingly significant. Therefore, the share of MD is a proxy for the level of securitization of sovereign debt. Furthermore, 'to the extent financial markets are seen to have a comparative advantage in diversifying risk, the cost–risk trade-off also implies that sovereign debt managers will typically prefer to issue marketable debt' (Abbas et al. 2014: 4). Thus, the higher the share of MD, the more debt managers use the market mechanism to borrow and the more financialized the SDM becomes. The numbers in Figure 2 reveal a clear increase in the MD share across our sample of 23 OECD countries. First, after a brief initial decline in the very beginning, the median rose by more than one-third from 65 per cent to 90 per cent in the period 1981–2010. Second, as the scatter plot shows, this trend has even affected countries that were initially reluctant to issue MD. Whereas in the early 1980s, Denmark, the USA or Austria already relied (almost) exclusively on MD, countries like Germany and Spain were at the bottom of the distribution list with values of 33 and 16 per cent. However, from the late 1990s, both have been constantly recording averages above 94 and 91 per cent.

Despite supporting our claim of substituting hierarchies and networks with (financial) markets as governance mechanism, data on the share of MD also present some evidence for the unequal manner of this process. Since there are still differences in the degree to which debt managers use MD, as the examples of Norway (63 per cent in 2005) or Luxembourg (76 per cent in 2010) show, we can argue that this aspect of financialization unfolds on country-specific trajectories. Our next two indicators of the governance dimension of the financialization of SDM build on what we have argued so far. By seizing the opportunity of appealing to non-resident buyers, debt managers can take part in international capital markets. The share of marketable debt held by non-residents (MDNR) covers exactly that and represents a tendency which has gained further momentum in some countries after the effective abolition of exchange rate risks by the EMU (Wolswijk and de Haan 2005: 17–18). Consequently, a higher proportion of MDNR signals a shift towards a financial market governance mechanism in SDM.

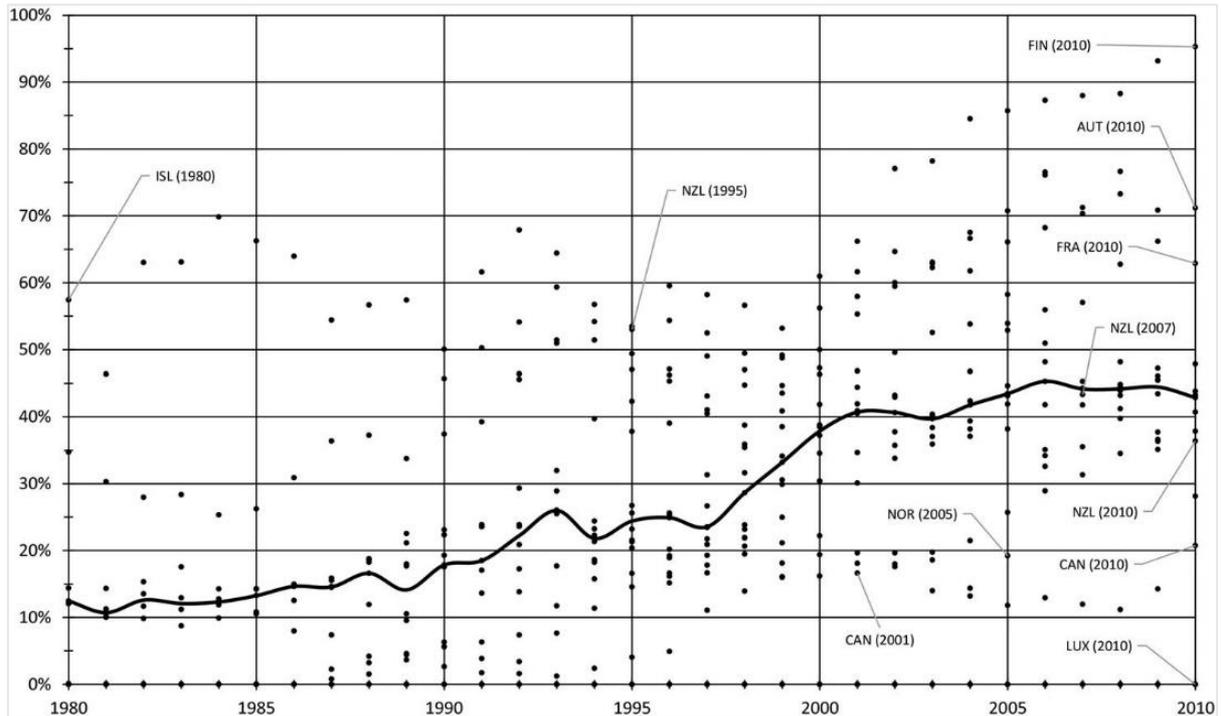
Figure 2: Marketable debt in % total outstanding central government debt, 1980–2010.



Sources: own calculations according OECD (2015) and other primary sources (see supplementary file). Black line: median. Note: Data for all countries from 1980–2010 except CAN, IRL, ESP (1981–2010), FIN, LUX (1990–2010), FRA, NZL (1992–2010), NOR (1982–2010), CH (1986–2010) and UK (1998–2010).

Turning to our data, Figure 3 clearly displays an increasing trend throughout almost all our countries. In the 30 years that we cover, the median value has quadrupled, reaching 45 per cent in 2010. In the early 1980s, Iceland was the only country with more non-resident than resident debt. At the end of the period, however, Finland, France and Austria lead our sample. Many countries now issue nearly half of their liabilities to non-residential investors; Portugal is a prime example connecting this to financialization (Rodrigues et al. 2016: 15–18). With a share of about 20 per cent MDNR, Canada and Norway lie at the other end of the spectrum. There are also countries which almost exclusively issue debt domestically. An example is Luxembourg, the only reporting country with zero per cent MDNR throughout. Japan also falls in this category. Because of its model of domestic pension fund capitalism with large institutional investors (Tokuoka 2010, Andritzky 2012), Japanese debt managers do not need to turn to international capital markets or do so very carefully, taking a share of about only five per cent.¹¹ Finally, there are also countries which have actually reduced their share of MDNR (e.g. New Zealand from 53 per cent in 1995 to 36 per cent in 2010). Overall, this confirms our claim that financialized SDM is common to developed capitalist economies, while at the same time unfolding unequally and on country-specific trajectories.

Figure 3: Marketable debt held by non-residents in % of total central government debt, 1980–2010.



Sources: own calculation based on OECD (2015) and other primary sources (see supplementary file). Black line: median. Notes: Data for all countries from 1980–2010, except: CAN (1981–2010), FIN (1990–2010), FRA (1987–2010), IRE (1995–2010), ITA (1988–2010), NED (1985–2001), NZL (1992–2010), NOR (1989–2010), SWE (1995–2010) and UK (1996–2010). No data for: AUS, BEL, GER, GRE, JAP and CH.

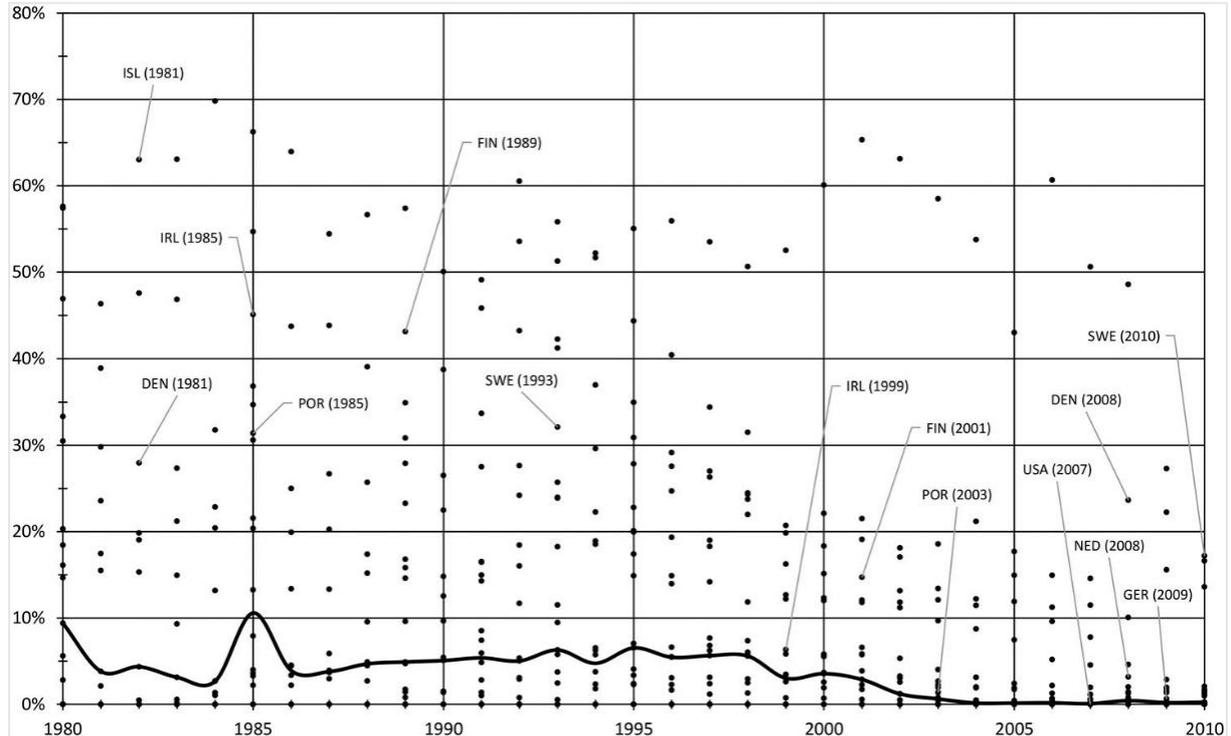
Marketable debt issued in a foreign currency (MDFC) can be another tool to attract a broader range of investors. In the past, this instrument especially enabled countries with limited domestic capital markets and minor currencies, like Ireland or the Scandinavian economies, to attract international investors. Whereas countries with leading currencies like the USA, Switzerland, Germany or the UK either refrained completely from MDFC or started using it relatively recently (Carracedo and Dattels 1997: 112). We would like to stress that foreign currency and non-resident debt are not necessarily mutually exclusive in all cases. There is, for example, also the possibility of issuing domestic currency debt to non-residential investors as well as having resident creditors buy foreign currency debt. The main line of division here runs along the size of the economy. The OECD (2012a: 5), for instance, notes that ‘for the larger OECD countries, foreign currency issuance does not appear crucial for attracting non-resident financial investors (...)’. On the other hand, even Germany now issues a Dollar-Bund as a reaction to investor demands and this provides a wider choice of instruments (Finanzagentur 2005). The scatter plot in Figure 4 displays the share of MDFC over time and shows a decline in country-specific differences. At its peak in 1985, the median MDFC value was about 11 per cent, whereas nowadays it is close to zero. As illustrated below, prime examples of this fall in MDFC are Portugal, Finland and Ireland. However, not all countries have reduced their share equally: marketable foreign currency debt still makes up 20 per cent in Denmark and Sweden.

With Germany and the Netherlands going against the tide, there are even some contemporary ‘outliers’. Both countries have started issuing MDFC quite recently, although still at very low levels of three and one per cent.

Two major causal factors have seemingly fueled this development: first, a steep decline in MDFC occurred in the wake of the EMU. The introduction of the euro as a common currency has fundamentally reduced national exchange rate risks while simultaneously widening the investor base (Favero et al. 2000: 4). At the same time, the euro itself has contributed to further financialization in general (Rossi 2013). Second, an increase in the use of derivative financial instruments not only gave sovereign debt managers the potential to hedge existing risks, but also made MDFC numbers disappear from the balance sheets. We will come back to this again in more detail when discussing the use of derivatives. In sum, our findings overall reflect a development of MDFC in the direction of financialized SDM. While these factors, which seemingly account for general decline of foreign currency debt at first sight – the EMU and the use of swaps – both express financialization on their own, cross-national variation in MDFC signifies country-specific trajectories embedded in a general trend towards a financialized SDM as a commonality.

Three other important indicators which measure the change in the governance mechanism towards a financialized SDM are the introduction of auctions, PDSs and ILBs. For these indicators, we were able to collect the years of their introduction. The first two measure in more detail the institutionalization of primary and secondary markets, and hence the shift from relationship financing to market-based techniques in the issuance of debt instruments (World Bank and IMF 2001, Andabaka Badurina and Svaljek 2012: 76).¹² Auctions mean that prices of government securities are determined through arm’s length, competitive bidding by (international) investors. According to Bröker (1993: 17), the use of auction techniques is ‘perhaps the most typical indication of market governance in public debt management’. Complementarily, the introduction of a PDS indicates the establishment of a communication and selling mechanism. It ensures continuous orientation towards investor demands (e.g. Arnone and Iden 2003, AFME 2015) because a fixed number of global investment banks ‘are appointed by sovereign issuers to buy, promote and distribute sovereign bonds’ (AFME 2015: x).¹³

Figure 4: Marketable debt in foreign currency in % of total central government debt, 1980–2010.



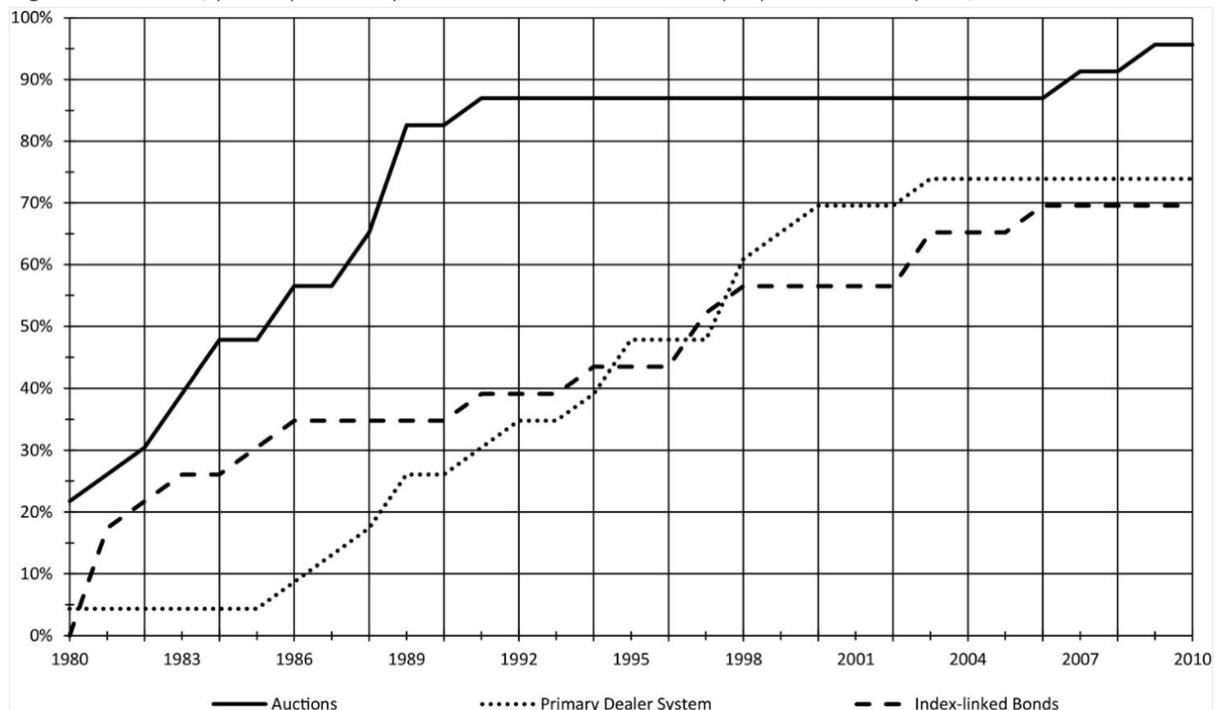
Sources: own calculation based on OECD (2015) and other primary sources (see supplementary file). Black line: median. Notes: Data for all countries from 1980–2010, except: FIN (1980, 1985, 1989–2010), FRA (1980, 1985, 1989, 1991–8, 2002–10), GER (1980, 1985, 1989, 1991, 1993–2010), GRE (1980, 1985, 1989, 1991, 1993, 1995, 2006–10), IRL (1980, 1985, 1989, 1991, 1993, 1995–2006), JAP (1980–2009), LUX (1990–2010), NZL (1992–2010), NOR (1981–2010), POR (1980, 1985, 1989, 1991, 1993, 1995, 2000–10), ESP (1980, 1985, 1989–2010) and CH (1986–2010).

They are the debt managers' advisors on issuing matters as well as their eyes and ears in the market and are 'entrusted to distribute debt and promote secondary market liquidity' (Gabor 2012: 6). In return, they have privileged access to government bonds including 'fairly generous selling commissions' (Kalderen 1997: 86). Another specific aspect of this investor orientation – and thus financial market governance – is the introduction of ILBs. This indicator captures whether debt managers wish to attract and meet a growing demand from institutional investors (Lemoine 2013) and broaden their investor base. These instruments usually link the interest paid by sovereigns to the domestic inflation rate. Hence, they particularly hedge the long-term interests of pension funds or insurance companies.

Figure 5 illustrates the cumulative proportion of adopters, where we record the timing of the introduction of these three indicators. Over time, we see an impressive and clear trend of commonalities in the financialization of SDM. Whereas in 1980 only five countries were already using auctions with PDS and ILBs almost non-existent, by 2010, the picture has been reversed: 16 countries were issuing ILBs, 17 had set up a PDS and all but one made use of auctions. As the progress of each curve shows, financialization of SDM unfolds at a steady

pace. In the early 1980s, a few ‘innovative’ governments paved the way for others to follow. Although the number of countries using auctions has changed only little since the early 1990s, the establishment of PDS and the introduction of ILBs unfolded more gradually over the entire 30-year period. In the end, however, what had once been non-financialized SDM with hierarchical and network governance, ultimately transformed into financialized SDM based on financial markets as governance mechanism.

Figure 5: Auctions, primary dealer systems and ILBs as cumulative proportion of adopters, 1980-2010.



Source: own compilation according to various primary sources (see supplementary file).

As with the previous indicators, it is important to stress that this trend of commonalities does not imply a levelling out of differences. For instance, countries still vary to some degree in the specific mechanics of how they operate either single-price or multiple-price auctions (Bröker 1993: 97, OECD 2012b). At a single-price auction (also uniform-price or Dutch auction), ‘all bonds are sold at the same lowest accepted price’, but at a multiple-price auction, ‘bonds are sold at the actual bid price of successful bidders’ (OECD 2012b: 64). Furthermore, differences exist not only in the timing of the introduction of a PDS, but also in its design. Most significantly, the number of primary dealers included and the supervision of a PDS reflect these differences (Arnone and Iden 2003: 22).

Moreover, speaking of country-specific trajectories, this also holds true for the extent to which debt managers actually use ILBs. Some countries such as the UK, Sweden, France and the USA have increasingly expanded their ILB use over the years. Yet, other countries do not issue ILBs

at all, either because inflation pressure is low, as in Switzerland, or because debt managers prefer other variable-rate instruments like those available in Austria, Belgium and Portugal (Missale 1999: 63–6) (see supplementary file Tables 11 and 12). ILBs differ not only in the extent to which they are used, but also with regard to their underlying index. In addition to the Consumer Price Index, other ‘inflation indices (such as wholesale prices, average earnings and the GDP deflator) have been used’ (Deacon et al. 2004: 6). Although ILBs are a debt instrument of generally increasing importance, there are still noticeable differences underlying country-specific trajectories.

Completing this first part of our empirical analysis, we conclude that there is ample evidence underpinning our argument for a shift from hierarchies and networks towards financial markets as a governance mechanism of SDM. In line with our concept, we interpret this as the first aspect of the financialization of SDM, shared by all countries in our sample, but with different country-specific trajectories. In the following, second, empirical section, we now examine the underlying sensemaking frameworks.

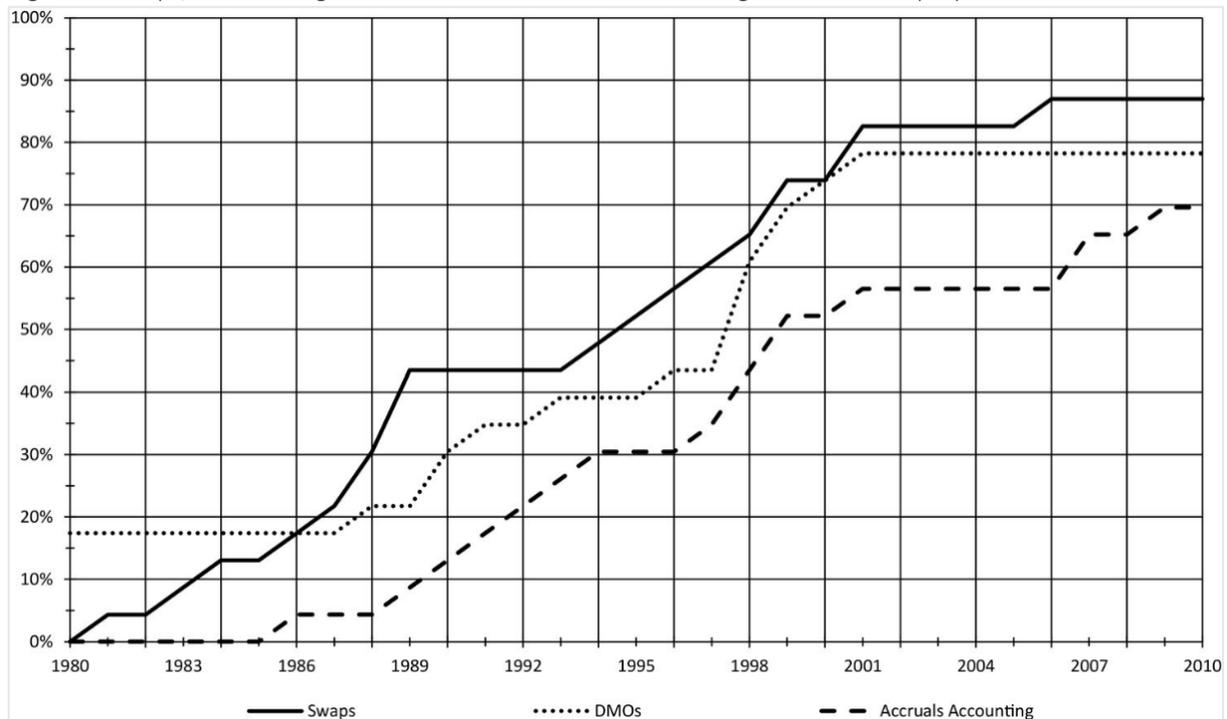
1.4 Sensemaking frameworks of SDM: from macroeconomics to financial economics

Our three final indicators – the introduction of accruals accounting, the establishment of DMOs and the use of derivatives – grasp the shift from macro- to financial economics sense-making frameworks of SDM. In this regard, it is especially important to note that since the late 1980s, these frameworks, which shape how debt managers view the role of SDM in the economy and thus guide their day-today behavior, have increasingly been grounded in the principles of portfolio theory (Bröker 1993, Nars 1997). It follows from this that a financialized SDM narrowly aims at minimizing long-term borrowing costs at an acceptable level of risk (IMF and World Bank 2001, Hubig and Blommestein 2013: 21). In other words, ‘government debt managers increasingly combine cost considerations with related risk considerations in the well-known trade-off fashion which has been developed by modern portfolio theory’ (Bröker 1993: 40). This refers to the assumption that decreasing potential costs go along with increasing risks. In particular, there is a trade-off between reducing either borrowing costs or rollover risk.¹⁴ Together, these three indicators describe a fundamental change: in a portfolio theory way, debt managers now treat the composition of sovereign liabilities as a debt portfolio similar to the asset and liability structure of a finance company.

Thereby, the introduction of accruals accounting captures the attempt to reveal the total cost and risk structure inscribed in sovereign debt portfolios. This signals transparency vis-à-vis financial investors and helps debt managers to ‘take adequate borrowing and restructuring decisions’ (Bröker 1993: 154). Thus, the introduction of accruals accounting reflects an important aspect of the shift in the sense-making framework towards financial economics: the perceived necessity to adjust the data basis and its representation for decision-making. According to Taylor and Crocker (1981, cited Starbuck and Milliken 1988: 51), frameworks ‘categorize data, assign likelihoods to data, hide data, and fill in missing data’. In contrast to its traditionally administrative cash-based form, accruals accounting introduces a market-based view of finance to the public sector that resembles a corporate balance sheet (Newberry 2015). In an OECD publication, Günther Bröker (1993: 154) highlights this similarity and notes that the only remaining difference is that ‘during a particular reporting period, a government debt manager would count as “total costs” of the government debt or of individual debt instruments what a portfolio manager would count as “total return” on his portfolio’. As Figure 6 depicts, the introduction of accruals accounting marks a relatively new phenomenon. Beginning in the late 1980s and early 1990s with only a few pioneering countries like Spain (1986), New Zealand (1989), USA (1990) or Belgium (1991), it then accelerated at the end of the Millennium. Eventually, by the end of our reporting period, 70 per cent of the countries had introduced it. Zooming in on this commonality, one also finds nuanced differences in accruals accounting. As the IMF study by Khan and Mayes (2009: 2) shows, some countries execute on ‘full accrual basis’ that is in line with international accounting standards (e.g. Australia, Canada or France), while others combine cash and accruals accounting (e.g. Finland, Ireland or Sweden).

The degree of SDM financialization also depends very much on the existence of separate DMOs. The establishment of DMOs is an important reform. They very often hire investment bankers or hedge fund managers. Thus, DMOs reflect another aspect of shifting sense-making frameworks towards financial economics. DMOs are responsible for most of the tasks described above and generally follow the organizational structure of a private sector financial institution having separate front, middle and back offices, each with distinct functions (Hubig 2013: 4, IMF and World Bank 2014: 21). Performing according to pre-defined benchmarks, they are equipped with financial sector personnel and technology. With the establishment of DMOs, since the late 1980s, governments have increasingly replaced passive issuance with portfolio management practices similar to those found in the private sector (Currie et al. 2003).

Figure 6: Swaps, debt management offices and accruals accounting as cumulative proportion of



Source: own compilation according to various primary sources (see supplementary file).

An illustrative case is the Swedish DMO. In addition to hiring financial sector staff, the Riksgälden even hires external portfolio managers and uses the SimCorp Dimension software package that was especially designed for private investment funds and asset managers (Jönsson 2005: 227). It is important to note that with the application of such computer programs, the respective forms of sense-making based on financial economics are transferred to these public DMOs since the respective models effectively pre-shape what can be perceived, detected and handled as inherent risk (Grimpe 2012). Apart from the USA, which had already introduced a separate public debt entity in 1940, the forerunners regarding DMOs were Switzerland (1979), New Zealand (1988), Sweden (1989), Iceland (1990), Ireland (1990) and Denmark (1991). Another significant wave, during which many European countries followed suit, marked the period before the introduction of the euro. After that, the curve has remained flat, so that now, 18 of our 23 countries have a DMO (Figure 6). Although, the introduction of separate DMOs is a common trend in the sample, there exist different organizational settings with correspondingly different degrees of independence from political interference (e.g. Cassard and Folkerts-Landau 1997: 23–36, Currie et al. 2003, Gross and Hoshmand 2015, Trampusch 2015, 2016). One can distinguish three different locations for a DMO: inside or outside the Ministry of Finance (with New Zealand and the UK for the former and Germany and Ireland for the latter) or within the Central Bank (e.g. Denmark).

Our final aspect of the shift in frameworks of SDM towards financial economics is the use of financial derivatives. In contrast to the various debt instruments dealt with in the previous section, derivatives are risk management instruments. This becomes clear when one sketches the entire debt management process along its timeline. Before using derivatives, the organizational structure (staff, software, etc.) has to be set up. Also, the debt portfolio itself has to exist and to be perceived as such. This means that both its composition of different instruments (foreign currency, long-term or short-term debt, etc.) and the notion of having a portfolio to hand which now has to be risk-managed must be given. Especially for the latter, the shift in frameworks is crucial. Accordingly, we argue that tracking the use of derivatives for debt management allows us to conclude that sense-making is now based on financial economics. In the case of SDM, derivatives usually encompass interest rate and cross-currency swaps. This is of crucial importance because it captures the fine-grained fundamentals of portfolio theory. Derivatives can be seen as useful tools for achieving two goals: lowering borrowing costs and optimizing risk structure (Finanzagentur 2002, OECD 2002, 2011). By using swaps, debt managers seek to ‘reduce the size of liabilities and to increase the value of the portfolio’ (Delduque 2000: 12). Inscribed in this very principle, there is always the opportunity of trying to take advantage of small differences in prices (Medeiros et al. 2007: 3). By doing so, debt managers might then turn into traders (Grimpe 2012).

Despite the hedging function of derivatives, one cannot exclude the potentially speculative and opportunistic behavior that goes along with them. The few studies of government swap deals so far strikingly indicate their misuse, for example, for window-dressing purposes (Piga 2001a, Irwin 2012, Lagna 2016). Even international advisers like the IMF view this as a twilight zone and legal limbo (Medeiros et al. 2007: 42). Although we have traced the year when governments permitted the use of derivatives for SDM, exact numbers for the extent to which debt managers have actually used this risk(y) instrument are not accessible, because most sovereigns treat the conditions, contents and results of swaps deals as highly confidential (Piga 2001a, Irwin 2012, Munoz Martinez 2016). Trailblazers in the use of swaps are Austria (1981), Denmark (1983), Canada (1984), Finland (1987), Australia (1988), Belgium (1989) and New Zealand (1989). In the 1990s, most other countries followed suit and now almost 90 per cent of them have entered derivatives markets (Figure 6). Thus, we can speak of another crucial commonality in the process of financialization of SDM in our sample. However, looking at individual countries or country groups also reveals differences, both in the types of swaps they use and the extent to

which they do so. The former depends very much on a country's monetary position. Cross-currency swaps are important for countries with weak currencies such as New Zealand or Sweden. Before the introduction of the euro, this was also true for other Nordic economies, most of the South, Ireland and Belgium (Missale 1999: 57–8, Wheeler 2004: 33). Still, this does not mean that these countries now refrain from using swaps but they use them differently, since the euro itself contributed to further financialization, as already pointed out. Examples like Finland, where the advent of the euro 'allowed for an increase in the use of derivative instruments' (Republic of Finland State Treasury 2013: 47), and Ireland, where the national debt management agency (NTMA) decided to hedge all foreign currency debt in euros from 1999 onwards (NTMA 1993–2011), underline this fact. Differences in the extent of swap use mainly depend on existing legal limitations, as a 2002 OECD report has noted for Finland, Germany, Italy and Spain. Furthermore, the degree of risk taking is different among countries. More aggressive DMOs, like the Swedish Riksgälden or the German Finanzagentur, also use tactical swaps, which are supposed to save additional costs in the short to medium term.

Summing up, we argue that countries have become more alike. Despite existing country-specific differences, they are all subject to common trends and benchmarks. This, we argue, runs through our entire empirical analysis. Whether it is regarding a shift from hierarchies and networks to financial markets as governance mechanisms, or concerning the substitution of macroeconomics with financial economics as underlying sense-making frameworks, financialization is a mega trend affecting all political economies and their SDM. Of course, this does not mean that we rule out distinct trajectories or even stark differences. What we want to stress instead is that one must always reflect them against the common background of financialization. In the concluding paragraphs of this study, we now discuss the main implications of our results and the future options for research.

1.5 Discussion and conclusion

This article has directed the attention of political scientists away from changes in the level or rate of public debt to the study of SDM. We have discussed a phenomenon which, until now, has almost fallen below the radar of debates in international and comparative political economy: the financialization of SDM. Against this background, our main contribution is conceptual and descriptive. We have mapped a new research field for political science by providing a two-dimensional concept, including indicators and data. With these, we have also shown that the

financialization of SDM exists and how it has spread across a subset of OECD countries. Transferring the term ‘financialization’ to the arena of SDM, we defined it via a two-dimensional concept as the increasing reliance on financial markets as governance mechanism and the adoption of sense-making frameworks grounded in financial economics that both define governments’ decisions about how and from whom they borrow. The financialization of SDM suggests the decline of the ‘old mode’ of SDM, which was very much based on hierarchy (for example, political determination of credit conditions) or networks (for example, long-term relationship financing), and grounded in an intellectual framework stemming from macroeconomics.

The main result is that we discern a double trend of overarching commonalities and country-specific differences in the financialization of SDM. This trend confirms Streeck’s (2012: 22) notion of a common trajectory of national capitalisms, ‘as result of their ever closer interaction in capitalist world markets’, on the one hand, and their ‘differentiation and specialization’ because of ‘differences in economic, political and ideational power’, on the other hand.

Consequently, our analysis also suggests that further studies aiming to detect the determinants of the financialization of SDM should refer to both an increasing interdependence between capitalist political economies and country-specific trajectories because of domestic conditions. In the analysis of the commonalities that result from growing interaction, it might be of interest that our data on the timing of reforms reveal that the USA is the single innovator, followed by the early adopters Sweden, Finland and New Zealand (see supplementary file: Table 14). Krippner (2005, 2011) confirms this likely role-model function of the USA by showing that in the 1970s, the US government worked to create the world’s financial markets, because it was looking for a way to fund its debt. This implies that the USA was the first country interested in creating a market in sovereign debt. Global investment banks like Baring, Merrill Lynch, J.P. Morgan, Salomon Brothers and UBS then triggered the spread of reform to other countries. Central bankers and debt managers of pioneering countries (USA, Ireland, New Zealand, Sweden or Denmark) and international organizations (IMF, World Bank, OECD and UNCTAD) functioned as major transmitters (Nars 1997: 5, Australian National Audit Office 1999: 47, Wheeler 2000: 154–5, 2004: 22, fn. 4, Currie et al. 2003: 16, Gabor 2012: 4–6; Grimpe 2012). This pattern resembles Streeck’s (2012: 22) explanation of the financialization of the economy: ‘[I]f the United States adopts financialization as its preferred strategy of wealth creation, this redefines the constraints and opportunities for the rest.’

However, national differences are the other side of the coin. Obviously, one should not treat them as merely endogenous to economic conditions like the rise of information and communications technologies and the capital market pressures, which investors and institutional creditors exert on governments (Mosely 2015). Our data point to country-specific trajectories in the use of instruments which are conditioned by domestic political economic institutions and conditions. They include pension schemes (e.g. Japan and non-resident holdings), the size of domestic capital markets (e.g. New Zealand and foreign currency bonds) or socio-economic contexts (e.g. Switzerland with low inflation risk and no ILBs). This signals that key characteristics of a country's debt profile remain contingent to a certain point and that further research should distil the political economic determinants thereof (Hoogduin et al. 2010, Breen and McMenamin 2013). These differences may also mirror country-specific interplay between economic, political and ideational power.

Our notion of commonalities and differences happening simultaneously also addresses a broader discussion: Are governments playing, or played by, the market (Schelkle and Barta 2014)? Do sovereigns use markets by making choices and do they still have autonomy (e.g. Mosley 2003, 2004, 2010) or do markets use governments (e.g. Strange 1996, Streeck 2014)? With reference to this, our analysis provides evidence that one needs to take into account both arguments. In the financialization of SDM, politics and states do play a major role. Central bankers and debt managers were reviewing best practices in SDM and cooperating with investment banks to learn more about portfolio theory and its application in practice. The negotiators of the Basel agreement had sufficient knowledge about how to boost the sovereign debt market through banking regulation. Moreover, the share of non-resident debt holders may depend on political factors such as the fractionalization of political parties (e.g. Hoogduin et al. 2010, Mosley 2015: 158). However, it is also accurate to discern a rising influence of international financial markets on governments. This is not only evidenced by global investment banks as major transmitters of the adoption of portfolio theory in SDM or their role as primary dealers of government bonds. Both the global financial crisis and the ongoing sovereign debt crisis in the Eurozone nicely illustrate this. Examples like these support the view that financial markets exert discipline over EMU governments (Streeck 2014, Rommerskirchen 2015). Consequently, in a broader sense, our study indicates that the relationship between finance capital and governments in the SDM is complex, by no means one-sided and in flux.

Our study not only contributes to the debate on the state–market nexus, but also alludes to the literature on the financialization of the state. Wang (2015) interprets this process as a shift towards the ‘shareholding state’ as an increasing shareholder and institutional investor in the economy. Our analysis, however, demonstrates that financial markets have also already entered the core domain of modern democracies: public finance and debt. Here, the question arises whether the financialization of SDM makes democratic borrowing control an intractable problem. Do parliaments, their commissions and supreme audit offices still understand the structure of government debt and the complex financial instruments debt managers use? In particular, the obvious non-transparency of sovereign swap deals may cast doubt on the possibility of adequate democratic control. Similarly, other conflicts may evolve, for example, between the roles of governments as prominent financial market actors and market regulators: *Quis custodiet ipsos custodes?* Dealing with these questions promises further insights into the dynamics and prospects of the tight connection between financial markets and public finance as well as their democratic control.

Notes

1. So far, financial markets have punished not only central governments but also local administrations for using derivatives. Notable examples are Orange County, CA, the London borough of Hammersmith and Fulham or the German city of Hagen.
2. Of course, debt levels and fiscal policies play a role as SDM seeks to cut down interest payments on public debt and thus indirectly reduce its level. Still, SDM does not include debt ceilings or other austerity policies.
3. Our sample contains different types of developed capitalist economies and thus is suitable for cross-national, inter-temporal comparison. Selecting 1980–2010 as our period of analysis is due to both data availability and the fact that the early 1980s saw the beginning of the financialization of the economy. As the OECD currently modifies its database, data end in 2010.
4. One could also include other quantitative and qualitative indicators. However, due to the limited availability of cross-national data, we decided to concentrate on the nine we present in this paper. Other potential indicators are, for example: the introduction of risk-management software, system based on Value-at-Risk, the performance of DMOs against pre-defined benchmarks, the permission to use debt buybacks or Repos, the introduction of a regular issuance calendar or the possibility of stripping, that is, the separate trading of interests and debt titles in secondary markets. Another important aspect of SDM that underwent substantial changes are the maturities of outstanding debt. Although we had initially included them into our analysis, we finally decided to leave them out for two reasons. On the one hand, the data gaps are too large and the most common indicator for measuring maturities, the Macaulay duration, was not available for our country set at all; on the other hand, the correct interpretation of maturity requires enormous case-specific knowledge, for example, how maturities are combined with swap deals which make long-term maturities shorter.
5. While marketable debt instruments include short-term (Treasury bills), medium-term (notes) and long-term securities (bonds), typical non-marketable debt instruments are foreign-currency loans, loans from financial institutions and savings bonds for personal investors (cf. Missale 1999).
6. Hardie (2012) speaks of the financialization of the sovereign bond market, but he limits his analysis to emerging market economies and leaves out the management of sovereign debt.
7. However, as was nicely demonstrated in the aftermath of the recent financial crisis, central banks still have a certain influence on the interest rates of sovereign bonds.
8. In a survey report about DMOs in OECD countries, McCray (2005: 75) notes that 55 per cent of all DMO staff are involved with middle office functions like portfolio management and risk management policy.
9. We have extracted our metric data – for the indicators marketable debt, marketable debt held by non-residents and marketable debt in foreign currency – mainly from the OECD Central Government Statistics database (2015), the collections of Missale (1999) and Abbas et al.

(2014), as well as further primary sources such as annual DMO reports or treasury bulletins. For these indicators, we report the annual country values of their share of total outstanding central government debt as well as their medians. However, the available sources did not allow us to trace back the year of their first use (with exception of ILBs). Metric data on the use of ILBs, which we did not include in the main text due to the word constraint, are listed in the supplementary file. Regarding the indicators auctions, primary dealer systems, accruals accounting, DMOs and swaps, it is not possible to measure them metrically, either because of their qualitative nature or due to the lack of availability of data. Therefore, we identify the year of their introduction, which enables us to describe the timing of the reforms across countries. Overall, we have also sent out email inquiries to several national debt managers and central bankers. Nevertheless, despite thorough consultation of the material, there are still notable gaps in the data. In cases of doubt, we sought to obviate these by incorporating only values we were able to cross-reference. Since our data remain partially incomplete, please check the annotations below each figure for details.

10. Market liquidity generally refers to the ability of markets to facilitate quick transactions. This means, for instance, that once an asset is acquired, it can be sold again on short notice.
11. In the cases of Luxembourg and Japan, there is however, a very small share of non-marketable debt held by nonresidents, which cannot be traded further on the secondary market. To the same extent, Switzerland has lately started to sell some titles to non-residents, although so far only less than 1 per cent.
12. There are roughly three types of selling techniques: Auctions, syndications and issuance on tap.
13. Most prominently, primary dealer systems typically include banks like Barclays, BNP Paribas, Citigroup, Deutsche Bank, J.P. Morgan, HSBC or Morgan Stanley.
14. Rollover risk is refinancing risk that occurs when debt is about to mature. If interest rates develop adversely when rolling over old with new debt, future payments are higher than before.

References

- Abbas, S.M.A. et al. (2014), *Sovereign Debt Composition in Advanced Economies: A Historical Perspective*, IMF Working Paper No. 14/162.
- AFME (Association for Financial Markets in Europe) (2015), *European Primary Dealers Handbook*, AFME. Available from: www.afme.eu/EPDA-Handbook/ [accessed 17 May 2016].
- Andabaka Badurina, A., and Svaljek, S. (2012), 'Public Debt Management Before, During and After the Crisis', *Financial Theory and Practice*, 36 (1), pp. 73–100.
- Andritzky, J.R. (2012), *Government Bonds and Their Investors: What are the Facts and Do They Matter?*, IMF Working Paper No. 12/158.
- Arnone, M., and Iden, G. (2003), *Primary Dealers in Government Securities: Policy Issues and Selected Countries' Experience*, IMF Working Paper 03/45.
- Australian National Audit Office (1999), *Commonwealth Debt Management – The Auditor-General* (Canberra: Australian National Audit Office).
- Blommestein, H.J. (2002), 'Overview of Trends and Recent Changes in the Structure of OECD Public Debt Markets and Debt Management Operations', in OECD (ed.), *Debt Management and Government Securities Markets in the 21st Century* (Paris: OECD), pp. 9–49.
- Blyth, M. (2003), 'The Political Power of Financial Ideas. Transparency, Risk and Distribution in Global Finance', in J. Kirschner (ed.), *Monetary Orders: Ambiguous Economics, Ubiquitous Politics* (Ithaca, NY: Cornell University Press), pp. 239–59.
- Boyer, R. (2013), 'The Euro Crisis: Undetected by Conventional Economics, Favoured by Nationally Focused Polity', *Cambridge Journal of Economics*, 37 (3), pp. 533–69.
- Breen, M. and McMenamin, I. (2013), 'Political Institutions, Credible Commitment, and Sovereign Debt in Advanced Economies', *International Studies Quarterly*, 57 (4), pp. 842–54.
- Bröker, G. (1993), *Government Securities and Debt Management* (Paris: OECD).
- Bundesrepublik Deutschland Finanzagentur GmbH (Finanzagentur) (2002), *German Government Securities Newsletter. For the Institutional Investor*, No. 2, April 2002.
- Bundesrepublik Deutschland Finanzagentur GmbH (Finanzagentur) (2005), *German Government Securities Newsletter. For the Institutional Investor*, No. 3, July 2005.
- Caplen, B. (1995), 'New Frontiers of Debt Management', *Euromoney*, 316, Aug 1995, p. 39.
- Caramani, D. (2010), 'Of Differences and Similarities: Is the Explanation of Variation a Limitation to (or of) Comparative Analysis?', *European Political Science*, 9, pp. 34–48.
- Carracedo, M.F. and Dattels, P. (1997), 'Survey of Public Debt Management Frameworks in Selected Countries', in V. Sundararajan, P. Dattels and J. Blommestein (eds), *Coordinating Public Debt and Monetary Management* (Washington, DC: International Monetary Fund), pp. 96–162.
- Carruthers, B. and Espeland, W.N. (1991), 'Accounting for Rationality: Double-Entry Bookkeeping and the Rhetoric of Economic Rationality', *American Journal of Sociology*, 88 (3), pp. 565–78.
- Cassard, M. and Folkerts-Landau, D. (1997), 'Sovereign Debt: Managing the Risks', *Finance & Development*, 34 (4), pp. 12–15.

- Cerny, P. (1994), 'The Dynamics of Financial Globalization: Technology, Market Structure, and Policy Response', *Policy Sciences*, 27 (4), pp. 319–42.
- Cohen, B.J. (1996), 'Review: Phoenix Risen: The Resurrection of Global Finance', *World Politics*, 48 (2), pp. 268–96.
- Currie, E., Dethier, J.J. and Togo, E. (2003), Institutional Arrangements for Public Debt Management, *World Bank Policy Research Working Paper* No. 3021.
- Datz, G. (2008), 'Governments as Market Players: State Innovation in the Global Economy', *Journal of International Affairs*, 62 (1), pp. 35–49.
- Daube, C.H. (2009), 'Das Schuldenmanagement des Bundes', in R. Eller, M. Heinrich, R. Perrot and M. Reif (eds), *Repeat. Jahrbuch Treasury und Private Banking* (Postdam: Roland Eller), pp. 74–97.
- Davies, T. (2005), 'Risk Management of Government Debt in the United Kingdom', in OECD (ed.), *Advances in Risk Management of Government Debt* (Paris: OECD), pp. 231–44.
- Davis, G.F. (2009), *Managed by the Markets: How Finance Re-Shaped America* (Oxford: Oxford University Press).
- Deacon, M., Derry, A. and Mirfedereski, D. (2004), *Inflation-Indexed Securities: Bonds, Swaps and Other Derivatives*, 2nd ed. (Chichester: Wiley).
- Delduque, J. (2000), 'The Concept of Independence as Applied to Public Debt Management', paper presented at XII Minerva Program – Fall 2000, School of Business and Public Management, The Institute of Brazilian Business and Management Issues, Available from: www.gwu.edu/~ibi/minerva/Fall2000/Jonathas.Delduque.pdf [accessed 17 May 2016].
- Dunbar, N. (2003), 'Revealed: Goldman Sachs's Mega-Deal for Greece', *Risk Magazine*, 16 (7), pp. 20–1.
- Dyson, K. (2014), *States, Debt, and Power. 'Saints' and 'Sinners' in European History and Integration* (Oxford: Oxford University Press).
- Epstein, G.A. (ed.) (2005a), *Financialization and the World Economy* (Cheltenham: Edward Elgar).
- Epstein, G.A. (2005b), 'Introduction: Financialization and the World Economy', in G.A. Epstein (ed.), *Financialization and the World Economy* (Cheltenham: Edward Elgar), pp. 3–16.
- Favero, C., Missale, A. and Piga, G. (2000), EMU and Public Debt Management: One Money, One Debt?, *CEPR Policy Paper* No. 3.
- Flandreau, M. and Flores, J. (2009), 'Bonds and Brands: Foundations of Sovereign Debt Markets, 1820–1830', *The Journal of Economic History*, 69 (3), pp. 646–84.
- Fligstein, N. (1990), *The Transformation of Corporate Control* (Cambridge: Harvard University Press).
- Fligstein, N., Brundage, J.S. and Schultz, M. (2014), Why the Federal Reserve Failed to See the Financial Crisis of 2008: The Role of "Macroeconomics" as Sense-Making and Cultural Frame, *IRLE Working Paper* No. 111-14.
- Fligstein, N. and Goldstein, A. (2015), 'The Emergence of a Finance Culture in American Households, 1989–2007', *Socio-Economic Review*, 13 (3), pp. 575–601.
- Fourcade, M. (2006), 'The Construction of a Global Profession: The Transnationalization of Economics', *American Journal of Sociology*, 112, pp. 145–94.

- Fourcade, M. (2009), *Economists and Societies: Discipline and Profession in the United States, Britain and France, 1890s to 1990s* (Princeton, NJ: Princeton University Press).
- Froud, J., Johal, S., Leaver, A. and Williams, K. (2006), *Financialization and Strategy – Narrative and Numbers* (London: Routledge).
- Gabor, D. (2012), ‘The Political Economy of Repo Markets’, *UWE Bristol Working Paper*.
- Giovannini, A. (1997), ‘Government Debt Management’, *Oxford Review of Economic Policy*, 13 (4), pp. 43–52.
- Grimpe, B. (2012), ‘Der Staat handelt. Finanzpraktiken im nationalen Schuldenmanagement’, in H. Kalthoff and U. Vormbusch (eds), *Soziologie der Finanzmärkte* (Bielefeld: Transcript), pp. 339–67.
- Gross, P. and Hoshmand, N. (2015), ‘Independence of Public Debt Management Offices’, paper presented at the *27th Annual Conference of the Society for the Advancement of Socio-Economics (SASE)*, London, 2–4 July.
- Hall, P.A. (ed.) (1989), *The Political Power of Economic Ideas* (Princeton, NJ: Princeton University Press).
- Hardie, I. (2012), *Financialization and Government Borrowing Capacity in Emerging Markets* (Basingstoke: Palgrave Macmillan).
- Hardie, I., Howarth, D., Maxfield, S. and Verdun, A. (2013), ‘Banks and the False Dichotomy in the Comparative Political Economy of Finance’, *World Politics*, 65 (4), pp. 691–728.
- Helleiner, E. (1994), *States and the Reemergence of Global Finance. From Bretton Woods to the 1990s* (Ithaca, NY: Cornell University Press).
- Helleiner, E. (1995), ‘Explaining the Globalization of Financial Markets: Bringing States Back in’, *Review of International Political Economy*, 2 (2), pp. 315–41.
- Holler, J. (2013), ‘Funding Strategies of Sovereign Debt Management: A Risk Focus’, *Monetary Policy & the Economy*, 10 (2), pp. 51–74.
- Hollingsworth, J.R. and Boyer, R. (eds) (1997), *Contemporary Capitalism: The Embeddedness of Institutions* (New York: Cambridge University Press).
- Hollingsworth, J.R. and Lindberg, L. (1985), ‘The Governance of the American Economy: The Role of Markets, Clans, Hierarchies, and Associative Behavior’, in W. Streeck and P.C. Schmitter (eds), *Private Interest Government: Beyond Market and State* (London: Sage), pp. 221–54.
- Hierarchies, and Associative Behavior’, in W. Streeck and P.C. Schmitter (eds), *Private Interest Government: Beyond Market and State* (London: Sage), pp. 221–54.
- Hoogduin, L., Öztürk, B. and Wierdsma, W. (2010), *Public Debt Managers’ Behaviour Interactions with Macro Policies*, DNB Working Paper No. 273.
- Hubig, A. (2013), *Introduction of a New Conceptual Framework for Government Debt Management* (Wiesbaden: Springer).
- Hubig, A. and Blommestein, H.J. (2013), ‘Is the Standard Micro Portfolio Approach to Sovereign Debt Management Still Appropriate? A Critical Analysis of the Underlying Analytical Framework’, in A. Hubig (ed.), *Introduction of a New Conceptual Framework for Government Debt Management* (Wiesbaden: Springer), pp. 21–42.
- IMF and World Bank (2001), *Guidelines for Public Debt Management: Accompanying Document and Selected Case Studies* (Washington, DC: International Monetary Fund).

- IMF and World Bank (2014), *Revised Guidelines for Public Debt Management*, IMF Policy Paper.
- Irwin, T.C. (2012), *Accounting Devices and Fiscal Illusions*, IMF Staff Discussion Note 12/02.
- Jönsson, P.-O. (2005), 'Risk Management of Government Debt in Sweden', in OECD (ed.), *Advances in Risk Management of Government Debt* (Paris: OECD), pp. 217–30.
- Kalderen, L. (1997), 'Debt Management Functions and Their Location', in V. Sundararajan, P. Dattels and H.J. Blommestein (eds), *Coordinating Public Debt and Monetary Management* (Washington, DC: International Monetary Fund), pp. 79–95.
- Khan, A. and Mayes, S. (2009), *Transition to Accrual Accounting* (Washington, DC: International Monetary Fund).
- Krippner, G.R. (2005), 'The Financialization of the American Economy', *Socio-Economic Review*, 3 (2), pp. 173–208.
- Krippner, G.R. (2011), *Capitalizing on Crisis. The Political Origins of the Rise of Finance* (Cambridge: Harvard University Press).
- Lagna, A. (2016), 'Derivatives and the Financialization of the Italian State', *New Political Economy*, 21 (2), pp. 167–86.
- Langley, P. (2008), *The Everyday Life of Global Finance: Saving and Borrowing in Anglo-America* (Oxford: Oxford University Press).
- Lee, P. (1996), 'The Jugglers of Sovereign Debt', *Euromoney*, 326, June 1996, pp. 91–5.
- Lemoine, B. (2013), 'DSK Stands for Self-Discipline', *Risk & Regulation*, Winter 26, pp. 6–7.
- Livne, R. and Yonay, Y.P. (2016), 'Performing Neoliberal Governmentality: An Ethnography of Financialized Sovereign Debt Management Practices', *Socio-Economic Review*, 14 (2), pp. 339–62.
- Lütz, S. (2003), 'Governance in der politischen Ökonomie – zum Stand der Debatte', *Politische Vierteljahresschrift*, 44 (2), pp. 231–41.
- Magnusson, T. (1999), 'Legal Arrangement for a Debt Office', paper presented at *the Ninth OECD Emerging Markets Workshop*, Praha, Czech Republic, Jun 1999.
- Marazzi, C. (2011), *The Violence of Financial Capitalism* (Cambridge: MIT Press Books).
- Markowitz, H. (1952), 'Portfolio Selection', *The Journal of Finance*, 7 (1), pp. 77–91.
- Mayntz, R. (2001), 'Zur Selektivität der steuerungstheoretischen Perspektive', in H.-P. Burth and A. Görlitz (eds), *Politische Steuerung in Theorie und Praxis* (Baden-Baden: Nomos), pp. 7–27.
- McCray, P. (2005), 'Management of Operational Risk by Sovereign Debt Management Agencies', in OECD (ed.), *Advances in Risk Management of Government Debt* (Paris: OECD), pp. 67–88.
- Medeiros, C., Polan, M. and Ramlogan, P. (2007), *A Primer on Sovereign Debt Buybacks and Swaps*, IMF Working Paper No. 07/58.
- Missale, A. (1999), *Public Debt Management* (Oxford: Oxford University Press).
- Mosley, L. (2003), *Global Capital and National Governments* (Cambridge: Cambridge University Press).
- Mosley, L. (2004), 'Government–Financial Market Relations after EMU: New Currency, New Constraints?', *European Union Politics*, 5 (2), pp. 181–209.

- Mosley, L. (2010), 'Governments and Global Capital in 21st Century', paper presented at the *American Political Science Annual Meeting*, Washington, DC, 2–5 September, and at the *International Studies Association Annual Meeting*, Montreal, Canada, 16–19 March.
- Mosley, L. (2015), '(De)Fault Lines? The EU, National Governments, and Private Capital Markets in the Post-Crisis Era', in B. Dallago and J. McGowan (eds), *Crisis in Europe in the Transatlantic Context. Economic and Political Appraisals* (New York: Routledge), pp. 152–68.
- Munoz Martinez, H. (2016), 'Hedging Neoliberalism: Derivatives as State Policy in Mexico', *New Political Economy*, 21 (3), pp. 291–304.
- Nars, K. (1997), *Excellence in Debt Management: The Strategies of Leading International Borrowers* (London: Euromoney).
- National Treasury Management Agency (NTMA) (1993–2011), *Annual Report and Accounts* (Dublin: NTMA).
- Newberry, S. (2015), 'Public Sector Reforms and Sovereign Debt Management: Capital Market Development as Strategy?', *Critical Perspectives on Accounting*, 27 (2015), pp. 101–17.
- OECD (1982), *Government Debt Management – Objectives and Techniques* (Paris: OECD).
- OECD (2002), *Debt Management and Government Securities Markets in the 21st Century* (Paris: OECD).
- OECD (ed.) (2005), *Advances in Risk Management of Government Debt* (Paris: OECD).
- OECD (2011), *Regulatory Reform of OTC Derivatives and Its Implications for Sovereign Debt Management Practices* (Paris: OECD).
- OECD (2012a), 'Managing Government Debt and Assets after the Crisis', *OECD Economics Department Policy Notes*, No. 10, February 2012 (Paris: OECD).
- OECD (2012b), *OECD Sovereign Borrowing Outlook 2012* (Paris: OECD).
- OECD (2015), *Central Government Debt Database*, Available from: <http://stats.oecd.org> [accessed 30 September 2015].
- Pacewicz, J. (2013), 'Tax Increment Financing, Economic Development Professionals and the Financialization of Urban Politics', *Socio-Economic Review*, 11 (3), pp. 413–40.
- Panizza, U., Sturzenegger, F. and Zettelmeyer, J. (2009), 'The Economics and Law of Sovereign Debt and Default', *Journal of Economic Literature*, 47 (3), pp. 651–98.
- Pecchi, L. and Piga, G. (1995), 'Does Debt Management Matter? A Market-Oriented Response from the Italian Case', *Economic & Financial Review*, 2 (1), pp. 29–36.
- Piga, G. (2001a), *Derivatives and Public Debt Management* (Zürich: International Capital Market Association).
- Piga, G. (2001b), 'Do Governments Use Financial Derivatives Appropriately? Evidence from Sovereign Borrowers in Developed Economies', *International Finance*, 4 (2), pp. 189–219.
- Quinn, S.L. (2010), *Government Policy, Housing, and the Origins of Securitization, 1780-1968, unpublished PhD thesis*, University of California.
- Quinn, S.L. (2016), "'The Miracles of Bookkeeping": Budget Politics as Mechanisms in the Johnson Administration', paper presented at the *Workshop 'Financial Innovation, Diffusion and Institutionalization: The Case of Securitization'*, 9–10 June 2016, Max Planck Institute for the Study of Societies, Cologne.
- Reinhart, C.M. and Sbrana, M.B. (2015), *The Liquidation of Government Debt*, IMF Working Paper No. 15/07.

- Republic of Finland State Treasury (2013), *Debt Management Annual Review 2013* (Helsinki: State Treasury).
- Rodrigues, J., Santos, A.C. and Teles, N. (2016), ‘Semi-Peripheral Financialization. The Case of Portugal’, *Review of International Political Economy*, 23 (3), pp. 1–36.
- Rommerskirchen, C. (2015), ‘Debt and Punishment: Market Discipline in the Eurozone’, *New Political Economy*, 20 (5), pp. 752–82.
- Rossi, S. (2013), ‘Financialization and Monetary Union in Europe: The Monetary-Structural Causes of the Euro-Area Crisis’, *Cambridge Journal of Regions, Economy and Society*, 6 (3), pp. 381–400.
- Schelkle, W. and Barta, Z. (2014), ‘Playing the Market or Played by the Markets? Financial Market Discipline and Public Debt Management in the EU’, paper presented at the *21st International Conference of Europeanists*, Washington, 14–16 March.
- Starbuck, W.H. and Milliken, F.J. (1988), ‘Executives’ Perceptual Filters; What They Notice and How They Make Sense’, in D. Hambrick (ed.), *Executive Effect: Concepts and Methods for Studying Top Managers*, (Greenwich, CT: Jai Press), pp. 35–65.
- Storkey, I. (2006), ‘Sound Practice’, in M. Williams (ed.), *Government Debt Management: New Trends and Challenges* (London: Central Bank), pp. 63–77.
- Strange, S. (1996), *The Retreat of the State: The Diffusion of Power in the World Economy* (Cambridge: Cambridge University Press).
- Streeck, W. (2012), ‘How to Study Contemporary Capitalism?’, *European Journal of Sociology*, 53 (1), pp. 1–28.
- Streeck, W. (2014), *Buying Time: The Delayed Crisis of Democratic Capitalism* (London: Verso).
- Taylor, S.E. and Crocker, J. (1981), ‘Schematic Bases of Social Information Processing’, in E.T. Higgins, C.P. Herman and M.P. Zanna (eds), *Social Cognition, The Ontario Symposium, Volume 1* (Hillsdale, NJ: Erlbaum), pp. 69–134.
- The Economist (1988), ‘Floppy Borrowings. Managing Sovereign Debt’, *The Economist*, 3 December, pp. 117–18.
- Tokuoka, K. (2010), The Outlook for Financing Japan’s Public Debt, *IMF Working Paper* 10/19.
- Trampusch, C. (2015), ‘The Financialization of Sovereign Debt: An Institutional Analysis of the Reforms in German Public Debt Management’, *German Politics*, 24 (2), pp. 119–36.
- Trampusch, C. (2016), ‘Financial Economics, Civil Servants and Public Debt Policies in New Zealand and Ireland’, paper presented at the *23rd International Conference of Europeanists*, Philadelphia, 14–16 April.
- Van der Zwan, N. (2014), ‘Making Sense of Financialization’, *Socio-Economic Review*, 12 (1), pp. 99–129.
- Van Gerwen, J. and Cassimon, D. (2000), ‘Financial Ethics on the Use of Derivatives in Sovereign Debt Management. The Case of the Belgian “Maystadt-Swaps”’, in L. Van Liedekerke, J. van Gerwen and D. Cassimon (eds), *Explorations in Financial Ethics* (Leuven: Peeters), pp. 153–71.
- Van Riet, A. (2013), ‘Financial Repression to Ease Fiscal Stress: Turning Back the Clock in the Eurozone?’, paper presented at the *8th Annual Seminar in Risk, Financial Stability and Banking*, São Paulo, Brazil, 8–9 August 2014.

- Wang, Y. (2015), 'The Rise of the "Shareholding State": Financialization of Economic Management in China', *Socio-Economic Review*, 13 (3), pp. 603–25.
- Weber, K. and Glynn, M.A. (2006), 'Making Sense with Institutions: Context, Thought and Action in Karl Weick's Theory', *Organization Studies*, 27 (11), pp. 1639–60.
- Weick, K. (1995), *Sensemaking in Organizations* (London: Sage).
- Weick, K., Sutcliffe, K. and Obstfeld, D. (2005), 'Organizing and the Process of Sensemaking', *Organization Science*, 16 (4), pp. 409–21.
- Wheeler, G. (2000), 'Autonomous Sovereign Debt Management Experience', in M. Cassard and D. Folkerts-Landau (eds), *Conference on Assets and Liabilities Management*, Hong Kong, November 1996 (Washington, DC: International Monetary Fund), pp. 147–65.
- Wheeler, G. (2004), *Sound Practice in Government Debt Management* (Washington, DC: World Bank).
- Wolswijk, G. and de Haan, J. (2005), Government Debt Management in the Euro Area. Recent Theoretical Developments and Changes in Practices, *ECB Working Paper No. 25*.
- World Bank and IMF (2001), *Developing Government Bond Markets – A Handbook* (Washington, DC: International Monetary Fund).
- Yusuf, A. and Batten, J.A. (2009), 'Currency Swaps and Australian Debt Management Practice', *International Finance Review*, 10, pp. 293–327.

Chapter 2

States' Interests as Limits to the Power of Finance The Regulation of the municipal swap market in the US and UK

Abstract

Since the 2008 financial crisis concepts of business power have become major issues in political economy. Through a comparison of typical and deviant cases, this study probes and refines the augmented power model which argues that the structural power of the financial industry fosters its instrumental power in influencing regulatory reforms under certain scope conditions (institutionalized access points, preference alliance and low salience). It shows that the industry's success in lobbying policy makers to authorize municipalities to use derivatives in the US is a typical case of this model. The failure of banks to acquire such a law in the UK reveals a hitherto little-noticed condition under which this power explanation breaks down: the states' fiscal and monetary interests that are anticipated to be adversely affected by local government engagement in the derivatives market. Thus, we demonstrate that the analysis of the state-finance relationship requires a precise consideration of the interests of the state, which can also be decisively affected by intra-state relations.

Keywords: instrumental power, structural power, financial deregulation, municipal swaps

(Co-authored with Christine Trampusch)
(Submitted to *Socio-Economic Review*)

2.1 Introduction

Since the financial crisis in 2008 the distinction between financial industry's structural and instrumental power in regulatory financial market reforms has become a major issue in comparative political economy (e.g. Bell and Hindmoor 2016, 2017; Culpepper 2015; Culpepper and Reinke 2014; Emmenegger 2015; James and Quaglia 2017; Woll 2014). In this debate more and more scholars argue that the relationship between the two sources of power reinforce each other (*augmented power mechanism*). The structural power of business interests, which is derived from their privileged position in the economy, may enhance their instrumental power, by increasing their lobbying power through the use of financial resources or personal contacts with policy makers and regulators (e.g. Bell and Hindmoor 2017: 106; Culpepper 2015: 401; Fairfield 2015: 411; James and Quaglia 2017: 5-6; Young 2015: 464; Woll 2014). This article addresses this debate and seeks to amend it in two respects. First, we probe the external validity of this model by using an empirical test for pre-crisis episodes of financial market reforms. Secondly, our comparison of a typical case with a deviant one allows the scope conditions of this power mechanism to be more clearly specified. This is an aspect which previous studies under-investigated (James and Quaglia 2017: 6).

The success and failure of finance to influence the regulation of municipal swaps in the US and the UK in 1986/7, respectively 1989/91, are suitable cases to make this contribution. Both, the UK and the US, rely economically on a strong financial sector whose structural power is therefore overwhelmingly stark and whose numerous political and monetary resources ensure its instrumental power (Bell and Hindmoor 2016, 2017; Burn 1999; Coleman 1996; Culpepper 2015; Culpepper and Reinke 2014; Emmenegger 2015; James and Quaglia 2017; Magdoff and Sweezy 1989; Moran 1991). Standing in direct competition with each other, both countries were also forerunners in financial market deregulation in the 1970s and 1980s, offering banks and other financial firms the best working conditions for installing the swelling global over-the-counter (OTC) trade with financial derivatives in the 1970 and 1980s (Coleman 1996; Vogel 1996). However, since the late 1980s their regulatory reforms of the use of financial derivatives such as interest rate and currency swaps by local governments have fundamentally diverged. Through the use of swaps – which are the derivative instruments most frequently used by municipalities (O'Hara, 2012: 250) – contracting partners 'swap' future interest rate payments in order to reduce their borrowing costs. In the US, which we are using as our typical case of the augmented power model, state law has sponsored the use of derivatives by

municipalities since the mid-1980s when Californian legislators enacted the swap bills of 1986/87,¹ which were initiated and shaped by US investment banks and law firms. In the UK – the deviant case – the municipal swap market has been closed since 1991 as British central authorities did not legalize municipal swaps, although the banks demanded it and strategically used their numerous political resources through heavy lobbying and painting the picture of a threat of regulatory arbitrage. This raises the question of why in these two countries, where the industries' power resources are understood to be similarly strong in structural and instrumental terms, we observe such different regulatory responses to the financial industry's policy preferences.

Following Beach and Pedersen (2016), this study adopts the method of theory testing process tracing in a combined mechanism and condition centred research design in an aim to solve this puzzle (Beach and Pedersen 2016: 4). It analyses the authorisation of municipalities to use swaps by US state law as a *typical case* of the augmented power explanation and the failure of finance to reach a similar kind of regulatory regime in Britain as a *deviant case* of this causal model. While the analysis of the typical case in the US traces how the financial industry was able to translate its structural power into effective lobbying (instrumental) power and how this power mechanism has linked banks' interests and preferences in the municipal swap market (X) with the eventual regulatory reforms on municipal derivatives use (Y), the study of Britain is conceived as a deviant case to this augmented power explanation. In the latter case the mechanism “breaks down” and the analysis of this outage “provides information that is then used in a systematic comparison with a case where the mechanism works to shed light on omitted causal or contextual conditions from the model” (Beach and Pedersen 2016:4). We explain the outage by supplementing the augmented power model with the literature on the mutual dependence of states and financial institutions (Burn 1999; Carruthers 1996; Dutta 2017; Kirkpatrick 2016; Pacewicz 2012; Quinn 2017; Sbragia 1986).

Our main argument is that the anticipation of probable adverse impacts of regulatory financial market reforms on central governments' domestic fiscal and monetary policy provides another crucial scope condition for the augmented power mechanism to work because these concerns explain states' willingness to sponsor the regulatory demands of the financial industry. Thus, in our case of municipal swap regulation, states' interests in fiscal and monetary policy explain how far it is in the central government's interest that local governments participate in the global derivative market. They make understandable why states may or may not help to translate the

industry's structural power into effective instrumental power. From a broader view we argue that the analysis of the state-finance relationship requires the consideration of intra-state relations and possible conflicts or power struggles within the state (see also Trampusch 2015). Not only issue salience and the internal differentiation of the financial industry (Krippner 2011; James & Quaglia 2017) are of importance, but also intra-state politics can have a substantial effect on the respective state-finance relation. The study is based on an intensive assessment of officially published primary documents on episodes of lobbying (archival documents of legislators, lobbyists and regulators collected at the archives of the Bank of England (BoE) and California State Archives), as well as the national and international daily and financial press. In addition, one in-depth interview with a key actor in the US reforms was used as a supplement when archival evidence was not sufficient.

The article is divided into five sections. The second section discusses the augmented power model as well as how and why the synthesis of this concept with the recent literature on the mutual dependence of states and financial institutions may help to determine the conditions under which the power mechanism works and when it breaks down. Whereas the third section is devoted to the analysis of the US and thus traces the augmented power mechanism in a typical case, the fourth section elaborates the deviant case analysis of the UK in order to specify the requisite state-centric scope conditions for the power model. The fifth section concludes.

2.2 The power of finance and the role of the state's fiscal capacity

One of the most prominent explanations for the rise of finance is the dominance of financial interests in the national and global political economy (e.g. Strange 1996). According to this perspective deregulation of financial business activities as well as regulatory reforms aiming to create financial markets are shaped by the interests of financial elites and achieved by the strategic use of their instrumental and structural power (e.g. Bell and Hindmoor 2016, 2017; Culpepper and Reinke 2014; Fairfield 2015; James and Quaglia 2017; Woll 2014). In this newer literature on business power a growing number of authors also assume that structural power may reinforce the impact of instrumental power on financial market reforms (Bell and Hindmoor 2017: 106; Culpepper 2015; 401; Fairfield 2015; James and Quaglia 2017, 5-6; Woll 2014; Young 2015: 464).

For the analysis of regulatory reforms which shape and create municipal swap markets, the causal model of augmented power of finance would predict that in pursuing their commercial interests financial elites have been deliberately and actively initiating a policy debate on authorizing municipalities to use swaps. Because of their dominant structural position in the economy as well as in public finance, investment banks and money brokers credibly threatened the state by claiming that inaction will lead to disinvestment and economic downturn. These signals of their structural power reinforced their instrumental power and thus their capacity to lobby regulators and legislators in favour of the swap reforms. In doing so, instrumental power being at play means that financial actors are expected to have had the necessary political power resources “that make deliberate actions to influence policy more effective” (Fairfield 2015: 420). These resources such as favourable relationships and meetings with legislators and policymakers, money, technical expertise and media access “place finance in a stronger position to lobby, orchestrate collective action and command authority in policy debates, finance campaigns, and/or shape public opinion” (Fairfield 2015: 420). Because of the active use of structural and instrumental power reform-oriented politicians have finally not only sponsored the finance industry’s demands in the legislative or regulatory arena but also enacted the relevant law.

Although the augmented power model is widely applied in empirical studies on recent post-crisis financial market reforms, particularly in the US and the UK (e.g. Bell and Hindmoor 2016, 2017; Culpepper and Reinke 2015; James and Quaglia 2017; Young 2015), the model’s scope conditions are rarely further investigated, as James and Quaglia (2017: 6) point out (see also Bell and Hindmoor 2017: 105-106). James and Quaglia, in their study of the City of London’s influence on the government’s Brexit policy, have identified three scope conditions “under which ‘latent’ structural power of business is translated into instrumental forms of influence within the policy process” (James and Quaglia 2017: 6). The first is the *institutional conditions of the finance-government relationship*, thus, how far the organisational and institutional structure of the state as well as the policy and law making process provides finance with access channels.² The second they name the *degree of heterogeneity* of the financial industry’s preferences as more homogenous regulatory or policy preferences make them stronger. The third scope condition, James and Quaglia (2017) point out, is the level of *political salience* of the respective regulatory reform or policy, and in accordance with Culpepper (2011) they show that the lower the salience of an issue the stronger the capacity of financial

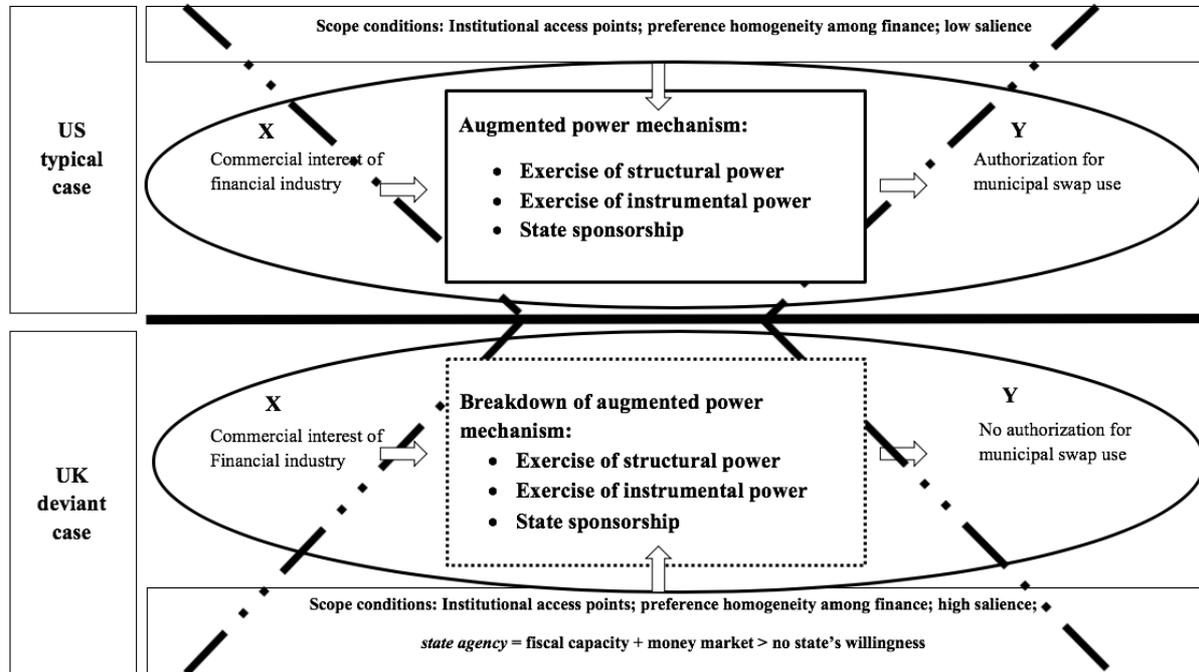
institutions to translate structural power into lobbying influence as governments are “more likely to defer to the expertise of business” (James and Quaglia 2017: 6).

With the aim of testing the validity of this augmented power model (X: commercial interest in municipal swaps; M: exercise of structural and instrumental power and state sponsorship, Y: explicit authorization; scope conditions), which represents our base model, and to possibly refine it, we have selected two cases where X and M are present, but where the outcome Y is only present in one case. The objective is to solve the puzzle why, in contrast to the typical case of the model (X, M and Y present), in the deviant case (X, M present, but Y absent) the corresponding expected outcome (deregulation) does not occur. Indeed, our study of the typical case shows that in the US (State of California) not only the causal conditions of the power model but also its necessary scope conditions were present (as depicted in Figure 1). However, our study of the failed lobbying efforts by banks in the UK suggests that the power explanation may benefit from some refinement. Although in the late 1980s investment banks and money brokers possessed and exercised considerable structural and instrumental power, held homogenous preferences regarding municipal swaps regulation, found sponsorship by the Governor of the BoE and used their privileged access to the Bank to attain their preference for municipal swap authorisation, the British case deviates from the power model: the HM Treasury decided against the City's and BoE's demands for allowing local authorities the use of swaps. First, our analysis reveals higher salience of municipal swaps in the UK, so that one of the three scope conditions was not present. However, and far more importantly, the empirical material reveals that the decisive condition for why the financial industry's power in regulatory reforms has been significantly weakened were the central government's own interests in fiscal and monetary policy. Thus, we emphasize that when analysing the conditions for success and failure of the power of the financial industry, one should not stop at the proposed three scope conditions, but should also consider the interests of the state at stake that might result from intra-state relations and possible conflicts of interests (preference heterogeneity within the state).

In keeping with the literature on the mutual dependence of states and finance, we use our finding to claim that the state's role in the rise of finance is a pro-active one, as states have a joint interest in liquid and global financial markets (Helleiner 1994; Dutta 2017; Quinn 2017). Deliberate public policies sponsoring the business of finance also depend on how public finance

relies on capital raised by money and capital markets and governments' own concerns about domestic fiscal and monetary policy (Sbragia 1986; Pacewicz 2012; Dutta 2017, Quinn 2017).

Figure 1: The augmented power mechanism and its scope conditions in the typical and deviant case



These concerns can be shaped or affected by intra-state politics (intergovernmental relations), i.e. by power struggles between different state actors (Trampusch 2015). At a more general level, this means that sovereign states can still exercise some authority over international finance and so research on the power of finance should “focus more on state agency” (Emmenegger 2015: 490) and on the internal differentiation of the state as it may “condition and mediate structural power” (Bell and Hindmoor 2017: 104).

2.3 The Power of finance and regulatory reforms in the U.S.: the typical case

Before we present the causal process observations that confirm the existence of the power mechanism in our typical case, we map the relevant scope conditions under which the mechanism is expected to work: (1) the political system of California allows the financial community various access points, (2) financial firms uniformly demanded swaps' authorisation, and (3) municipal swaps were a low salience issue in the mid-1980s.

Scope Conditions: Institutional Access Points, Preference Homogeneity among Finance, Low Saliency

The influence of special business interests including those of the financial services industry through lobbying has been a crucial aspect of Californian policy- and law-making processes with growing significance in the 1970s and 1980s (Christensen and Gerston 1984; Michael and Walters 2002). In this context one has to mention the close ties between the state's treasury office and the financial community since the former assemblyman Jesse Unruh became California's state treasurer in 1974 and received large campaign contributions from financial industry firms (Boyarsky 2008: 207–220). Another crucial access point for articulating their policy preferences at the state level has been the legislature (Rosenthal 1993). By focussing on the Committee on Finance and Insurance, the financial services firms could gain influence over getting a bill passed or blocked without capturing legislative majorities.

Secondly, financial institutions were united in requesting municipal swaps. New profit opportunities for the financial industry mushroomed during the 1970/80s when financial activities were deregulated at the federal and state level (Legislative Analyst's Office 1985) and at the same time the US banks engineered several financial innovations through which they were able to generate fee-based income (Magdoff and Sweezy 1989). In the early 1980s, interest rate swaps were invented, which were later used by financial institutions and also in the non-financial corporate sector. The federal Tax Reform Act (TRA) of 1986 dramatically reduced the attractiveness of municipal bonds for banks. Because it was anticipated that the act would increase the interest rates municipalities had to pay for borrowing money, several different financial innovations – amongst them swaps – were introduced to facilitate access to the market for taxable bonds and cope with the constrained public budget (Hildreth and Zorn 2005; California State Archives 1987, September 10).

Thirdly, the use of financial innovations by municipalities was not publicly discussed. It was more a case of “quiet politics” in Culpepper's sense.

The Financial Industry's Commercial Interest in Authorizing Interest Rate Swaps (X)

The historical record shows that in the US investment banks have viewed municipal swaps as a promising avenue which requires flanking measures by legislation (California State Archives 1987, March 17). Because banks recognized that the derivatives business is understood to have

transformed municipal finance from a rather boring business to a highly profitable sector (Das 2011), they aggressively marketed municipal swaps since the mid-1980s. Next to First Boston Corp. and a few other US investment banks, Merrill Lynch was at the forefront of these marketing activities (California State Archives 1987, March 17). Merrill “ignited the municipal swap market, they focused on this, they marketed a hell out of it” (Interview Law Firm, September 21, 2017; see also Hiday 1996). Douglas Hamilton who founded the municipal derivatives department at Merrill Lynch in 1986 (WSJ 1985) “is the grandfather of municipal derivatives” (Interview Law Firm, September 21, 2017). Despite the absence of state rules, a few local governments used swaps based on their own local statutes (Walters 1987; California State Archives 1987, June 25). It turned out, that the absence of explicit authorisation was a real obstacle for the growth of the municipal swap market to take off: a trader of Bankers Trust Co. told the finance magazine *The Bond Buyer* that “municipalities and utilities in general have shied away from swaps, largely because of possible regulatory and legal restrictions” (Zigas 1984). Also on the supply side, bankers were confronted with legal uncertainty. Were these contracts legally enforceable? The banks that were developing the market had a lot of difficulties in getting clear opinions that these instruments were valid (California State Archives 1987, April 2; Interview Law Firm, September 21, 2017). As a consequence, it was crucial for the banks that the US states’ legislators should introduce statutes that would explicitly authorize all local government entities to use interest rate and currency swaps, which would tear down the wall of legal uncertainty and open up the way to a huge potential client base. These lobbying attempts started in 1986 in California, and ended in 1987 with the broadest swap authorisations in the country at the time. They served as a blueprint for many other states in the following years.

The Use of Structural and Instrumental Power for Explicit Municipal Swap Authorisation (M)

Already in the mid-1980s, the financial industry generated about 14 percent of the gross state product in the Californian economy (Legislative Analyst’s Office 1988). However, the structural power of finance not only stemmed from its increasing relative importance in the economy, but also from its indispensable role in the municipal finance sector. At the local level financial markets are the governments’ main source of borrowing and investment. In the early 1980s commercial banks held approximately 40 percent of municipal bonds was the largest share (Hildreth and Zorn 2005: 131). Thus local governments which compete with each other

for funds are confronted with the constant threat of banks investing their money in some other and perhaps higher ranked city where they can make superior profits.

The US investment banks used their numerous power resources to lobby for an expressed authorisation of municipal swap use. Thus, Merrill Lynch and a few other investment banks paid the bond counsel firm Orrick, Herrington and Sutcliffe for lobbying and drafting the authorisation of municipal swaps for use in California (California State Archives, June 8; Orrick, Herrington & Sutcliffe 2004: 62; Interview Law Firm, September 21, 2017). The firm had very close and good relationships with a lot of legislators and state figures in Sacramento, because they did business with the Treasurers' office regularly (California State Archives, August 24; Interview Law Firm, September 21, 2017). At the same time, since the TRA '86 had driven down business of the firms (Cohen 1988.), the bond counsel firm itself had an interest in allowing local governments to use swaps because municipalities' use of financial innovations were expected to create new business. That the bond counsel firms spearheaded the lobbying was not by chance: "pre-Orange County, bond counsel was respected in Sacramento, and when we asked for things we usually got it (...) we wrote a lot of bond legislation at the era from the late 1970s throughout the 80s" (Interview Law Firm, September 21, 2017; see also California State Archives 1987, August 24).

In addition, the banks themselves used their technical expertise and informational advantage to lobby in favour of the bill at the state capitol. Douglas Hamilton and Phillip Peloquin from Merrill Lynch participated in a meeting of the Assembly Committee on Finance and Insurance in order to "share their expertise and to help educate the committee in these matters" (Johnston 1987, in: California State Archives, June 8). They gave committee members examples of the types of problems faced by local governments and how the provisions of the bills would allow them to manage municipal borrowings and investments better (California State Archives 1987, June 8). They demonstrated the benefits of successful swap use by a 1985 interest rate swap transaction of the City of Modesto and a currency swap agreement by the County of Los Angeles. The bankers' attested technical expertise conferred legitimacy, in particular on such a complex issue as derivatives where most legislators lacked the appropriate knowledge to evaluate the bills. Some Assembly members did not understand swaps at all (Walters 1986).

State Sponsorship (M)

The bond counsel firm found the democratic assemblyman Patrick Johnston (chairman of the Finance and Insurance Committee at the time) as the legislator who agreed to carry the bills AB 939, and AB 2523 that would allow municipalities to use interest rate and currency swaps in the taxable as well as the tax-exempt market for the California legislature. A bond counsellor explains:

“When you want to do legislature, the first thing you have to do is to find someone who wants to carry it. So, I asked around who is willing to carry this, and somebody turned up his name, so we met with him and talked to him. We had several meetings with him, because there were a number of things going on, several hearings in which questions come up about the legislation that had to be addressed” (Interview Law Firm, September 21, 2017).

Further proof that the initiative to lobby for the bill came from banks and bonds counsel and not from Johnston is the number of letters of gratitude that he received from Orrick and Merrill Lynch (California State Archives 1986, October 7). Evidence for direct involvement of the banks in the legislative process is shown by another letter to Johnston from Merrill Lynch's director Peloquin, who wrote:

“On behalf of my colleagues at Merrill Lynch, I would like to thank you for your tireless and extremely effective leadership on Assembly Bill 2523. I think that the margin of the final vote was indicative of both the effort that you put behind the bill and the merits of the legislation. I enjoyed having the opportunity to meet and work with you and look forward to doing so again in the near future” (California State Archives 1987, July 13).

This statement makes it clear that lobbying success could not be taken for granted, since there also existed resistance to the bill, for example by Gavin Murphy, a much respected figure in the municipal bond market at that time editor of California Municipal Bond Advisor and now editor-in-chief of *The Bond Buyer*. In a letter to Johnston (California State Archives 1987, September 9) he expressed his concerns about bill 2523 because of the lack of regulation and oversight of investment bankers and financial advisers who solicit state and local governments to undertake these activities. Murphy's suggestion “to have the California Debt Advisory

Commission oversee the activities permitted by the proposed legislation” was added by the law firm, and the bill was accordingly amended. Also the then treasurer of the City of Sacramento, Friery, had deep concerns that local governments did not possess adequate expertise to cope with the potential new financial powers and he stated that “I believe the possibility of the international brokers with the expertise descending on local government would be similar to leading sheep to slaughter” (California State Archives 1987, May 21).

However, in order to overcome such critical voices another crucial strategy was to develop a support coalition including municipalities (California State Archives 1987, March 17), since “if you gonna do legislation affecting municipalities you usually want some municipalities saying, yeah that is a good idea” (Interview Law Firm, September 21, 2017). It further underlines that the reforms were not just in the interest of private business but also serve the common good. And municipalities in the context of the TRA '86 were open and motivated by any possibilities and innovations that would create greater financial flexibility. The City manager of Santa Clara, Sparacino, for instance, wrote in her support letter to assemblyman Johnston that the city supported the bill because it increased the “flexibility allowed to local governments in sale of bonds, investment acquisition, and the ability to place investment based on interest rate, currency, cash flow” and “responsible local government will thus be able to minimize costs and maximize returns for their citizenry” (California State Archives 1987, May 13). Finally, a broad alliance of industry associations, bond counsel firms, investments banks, local governments, municipal agencies supporting the bills was put together (California State Archives 1987, July 14). In doing this, banks and in particular the bond counsel firm Orrick benefitted from their multiple relationships with local and state officials based on previous business with several different actors.

As a last crucial component in state sponsorship, according to the bond counsel interviewed, was that the office of the state treasurer supported the bill as well. In his view “the state treasurer’s office was clearly an important element in getting it passed because the state treasurer was Jesse Unruh (...). He had a lot of influence and a lot of power, and a lot of respect in the legislature” (Interview Law Firm, September 21, 2017). The New York Times described him as “one of the most influential state legislators in the land”, and that as state treasurer he “transformed the job into a source of financial and political power that reached from California to Wall Street” (Uhlig 1987). Unruh was very transparent about his close ties to investment banks and the bond counsel firms that were giving him substantial campaign contributions.

According to Walters (1988: 1) “as treasurer, he continued that policy by choosing bond underwriters, investment advisers and bond counsels that had close political and personal connections to him or who had been generous with their campaign checks”. The Treasurer’s office supported the bill by underlining its potentially positive fiscal effects resulting from the use of the proposed financial instruments by local governments (California State Archives 1987, June 16; Interview Law Firm, September 21, 2017).

Finally, the investment banks and bond counsel firm got what they wanted when Governor George Deukmejian of California signed the swap bills in early October 1986 and September 1987 allowing all municipal entities to enter into interest rate and currency swaps in the taxable as well as the tax-exempt market. Merrill Lynch’s managing director Peloquin stated in the Bond Buyer that the “new legislation removes any uncertainty by making it "crystal clear" that the law applies to every public entity, state or local, in California” (Walters 1987). The explicit authorisation seems to have generated an increasing use of swaps and thus an enormous growth of the municipal swap market in the state (Redmond 1996: 2208).

2.4 The deviant case: why the power model fails in the UK

While in our typical case of California finance won, in our deviant case of the UK the augmented power mechanism failed. Worldwide, English local authorities were the first public borrowers to swap their fixed interest rates with banks, but they also were the first public entities for which these financial market activities were prohibited. In 1991 the House of Lords declared municipal swaps *ultra vires*.³ One leading case for this ruling was the London Borough of Hammersmith and Fulham (LBHF) which the district auditor alleged had generated income from trading swap agreements. When British courts declared swap deals to be beyond local authorities’ competencies, British and international financial institutions protested and launched a massive lobbying campaign for retrospective legal authorisation. However, the banks’ campaign failed. This collapse of banks’ power is puzzling because banks and money brokers exercised considerable structural and instrumental power at that time and the Governor of the banks’ best friend, the BoE, Lord Robin Leigh-Pemberton, also supported this legal authorisation. Moreover, banks and money brokers unanimously preferred such a law and had privileged institutional access to the BoE and the Treasury.

Scope Conditions: Institutional Access Points and Preference Homogeneity among Finance

In the UK, the relationship between finance and central authorities ensured financial industry's interests (the City of London) a privileged access to the policy-making process. Furthermore, like the US, banks and money brokers were strongly involved in municipal finance and unanimously preferred the use of interest rate swaps by local authorities. During the 1980s, in the heyday of British financial market deregulation, with "(m)atters affecting the City ... decided in the City" and the BoE speaking "on the City's behalf with Whitehall, especially the Treasury" (Coleman 1996: 182), the close relationship between the City of London and the BoE was outstanding (Coleman 1996: 175-199; Moran 1991; Vogel 1996: 97). Besides its excellent channels of access to the central government, banks and money brokers unanimously urged local governments to swap interest rates with them. According to notes and letters collected in the archives of the BoE about local authority borrowing, (e.g. BoE Archive 1980b, BoE Archive 1981, BoE Archive 1982, BoE Archive 1983) in the early 1980s money brokers⁴ and banks⁵ had already appealed to central and local authorities, urging local governments to enter the money market by interest rate swaps.

The Financial Industry's Commercial Interest in Authorising Interest Rate Swaps (X)

Domestic and foreign banks had a massive commercial interest in local authorities' swaps and so initiated a policy debate on authorizing municipalities to use swaps. On the local authorities' side, the Greater London Council (GLC) and its Comptroller of the Financial Services, Maurice Stonefrost, was one of the banks' key contacts. Local authorities can draw public credits (with fixed interest rates) from the Public Board Works Loan (PWBL), a government agency within the Treasury, which funds its loans through the issuance of Treasury Bills. However, for local authorities private capital funding in the money and stock market is an important secondary source of finance which they also use to circumvent central budget control (Loughlin 1996; Sbragia 1986).

In the early 1980s, in various meetings with BoE and Treasury officials but also with the Government Broker Mullens & Co., financial industry representatives argued that the use of instruments like swaps would allow them to benefit from local authorities' high credit ratings (e.g., BoE Archive 1980a, August; BoE Archive 1982, December). In 1982 a paper on interest rate swaps submitted to Ian Plenderleith, who was at that time head of the Gilt-Edged and

Money Markets Division at the BoE, by the money broker Packshaw & Company Ltd. explained the use of swap agreements very clearly: “Local authorities with their higher credit rating, have access to fixed rate funds on much finer terms than are available for the banks’ corporate clients and through the swap can switch this benefit to their variable rate borrowing” (BoE Archive 1982, December 22). Consequently, in a letter to M. Redley, H.M. Treasury, Robin Packshaw wrote that “it would be a pity if local authorities were denied the advantages of this technique” (BoE Archive 1982, December 21).

The BoE accepted swaps as a debt instrument for local authorities and so after the first local authority transaction in 1982 (Veeder 1991, chapter 6.14) more local authorities entered various swap agreements with domestic and foreign banks. Often they used the swap deals to turn the fixed interest-rates (mostly of their PWLB loans) into variable interest-rates (Loughlin 1996: 339). At the time when local swaps took off, also in the late 1980s when the LBHF affair popped up, banks viewed municipal swaps as a very promising business model, demanding explicit swap authorisation for local governments. For example, in August 1990, the British Bankers’ Association (BBA) and the Chartered Institute of Public Finance and Accountancy (CIPFA) jointly submitted a memorandum to the HMT in which they demanded safe harbour legislation and the elimination of legal uncertainty by explicit authorisation for local governments (BoE Archive 1990, August 23).

The Use of Structural and Instrumental Power for Explicit Municipal Swap Authorisation (M)

Swaps’ liaisons by local authorities ended abruptly in June 1988 when a banker at Goldman Sachs called the Audit Commission to express her concerns on the “absolutely massive exposure” of the LBHF (Campbell-Smith 2008: 188). Immediately, after the District Auditor’s judicial intervention, the banks reacted “on two fronts” (McKendrick 1997: 217): First, they tried legal action to oblige local authorities to repay sums; secondly, they demanded retrospective legislation declaring local authorities’ swaps *intra vires*. The banks wanted immediate legal action in order to limit their own financial losses but they were also concerned with more general damage to the world-wide swap market and the reputation of the City of London as a financial hub in general (Nisse 1989: 2).

Just as in the US, the UK financial industry had enormous structural and instrumental power and used its power to take hold of municipal swaps. With respect to structural power it should be emphasised that in the UK, banks were not only important in the overall economy (Coleman

1996; Moran 1991; Vogel 1996) but in the municipal financial sector as well (Sbragia 1986) because of the highly centralized system of local finances (Bailey 1982; O'Brian and Pike 2015: R15; Sbragia 1986). Particularly in the 1970s and 1980s, local governments used their private funding in the money or capital market as an instrument to circumvent central controls (Loughlin 1996; Sbragia 1986). They were dependent on the debt instruments banks offered to them; they used the financial innovations to refurbish their balance sheets and to counteract spending cuts imposed by the central authorities with "creative accounting" practices (Audit Commission 1987: 13; Loughlin 1996: 330).

Consequently, being aware of the strong interest in capital funding, when the municipal swap market crashed the banks and money brokers used their close contacts with the BoE officials and the central government (HMT, DoE, PM) to clarify the legal scope of swaps. The banks rapidly launched a lobby campaign for retrospective legislation which they continued in the following years (e.g., Hosking 1989a: 22; London 1991: 16; Smith 1989: 2; Peston 1991: 3; *The Economist* 1991: 90; *The Guardian* 1989; *The Independent* 1989c: 20; *The Independent* 1989d: 27; *The Independent* 1989e: 29). To coordinate their lobbying activities, the banks established a Steering Group with which 70 banks and other financial institutions associated and published a memorandum (Loughlin 1996: 344). The BBA's and the Steering Committee's demand for quick authorisation of swaps was joined by the International Swap Dealers Association (ISDA), the CIPFA and the local authorities themselves (Loughlin 1996: 356; see also: Arnold-Forster 1990: 9; Cowen 1990: 10; *Local Government Chronicle* 1991: 1; Miller 1990: 4). The various letters and notes collected by the BoE Archives (see BoE Archive 1990b) make the intensity of the banks' lobbying activities clear. Renowned banks, among them the TSB group, Salomon Brothers, JP Morgan, Fushi, Barclays de Zoete Wedd and CLC, sent letters to the BoE, HMT and the PM in which they expressed concerns about their own losses if local swaps were finally declared ultra vires; they also highlighted the probable negative consequences for the City of London and the blow to the UK's financial market. On several occasions the BBA warned central authorities of chaotic consequences for the British financial market if municipal swaps were not declared legal instruments in municipal debt management (see also: *The Guardian* 1989; Hosking 1989b: 28). Consequently, in a paper submitted to the Treasury and Civil Service Committee in March 1991 the BoE (1991) highlighted:

"The present position is clearly unsatisfactory from the point of view of the reputation of the City of London (...) there [is] a prospect of further uncertainty and delay as a new

round of litigation gets under way, with further damage to markets and to the United Kingdom's reputation abroad" (BoE 1991, 3.6).

State Sponsorship (M)

From the very beginning of the banks' lobbying campaign, the BoE's Governor Robin Leigh-Pemberton sponsored their legal demands (McKendrick 1997: 217; See also: *The Independent* 1989d: 27; *The Independent* 1989e: 29). He astutely realised that declaring municipal swaps unlawful would strongly damage the reputation of the City of London (e.g., Hosking 1989a: 22; Vaughan and Brown 1991) and tried to convince the Treasury to offer a rapid solution to the banks' problems (e.g., Hosking 1989b: 28; Peston 1991: 3; Vaughan and Brown 1991). In a meeting of the Bank's Court of Directors in November 1989, the Governor acknowledged that he had "received strongest representations from central bank colleagues in Basle and from the British Bankers' Association", and he had "again urged the Government to review the situation as a matter of urgency and had submitted proposals which were designed to relieve the current situation and to provide a way forward for the future" (BoE 1989: 133). In March 1991, he reiterated his support even in the meeting of the Treasury and Civil Service Committee of the House of Commons and highlighted that he passed the banks' demands directly to the Treasury (House of Commons 1991: 38). The great attention and major importance the BoE devoted to the swap affair is also confirmed by the fact that it coordinated "behind the scenes negotiations" between the banks, brokers, the local authorities, the Audit Commission and the HMT (BoE Archive 1990b, June 15) to strike a deal which would minimize the losses for banks and make it possible for local authorities to continue using swaps.⁶ However, at the end of 1990, BoE experts viewed it as rather unrealistic that the government would support legislation whereby "the Bank could play a role in devising a package solution" as "there were several important policy implications at stake" (BoE Archive 1990b, November 14). Nevertheless, in early 1991 the BoE's Deputy Governor and the banks continued to "lobby hard", as *The Independent* reported (Thomson 1991: 2).

Why did banks fail, despite their enormous structural and instrumental power and despite support from the-Governor of the BoE? Why did the chairwoman of the banks' Steering Committee, Irene Dorner, in May 1991 complain: "This is the end of the road in terms of lobbying" (*Australian Financial Review* 1991: 44), after the Chancellor of the Exchequer, Mr. Heseltine, announced in the House of Commons the government's final decision not to follow

the banks' requests for legislation (McKendrick 1997: 217) and facilitate the re-entry of local governments into the swaps market?

In the following we argue that the government's major motives in not following the banks' demands were its own fiscal and monetary policy interests. From the very beginning of the local authorities' swap agreements until their end, not only HMT but experts at the BoE considered local authorities' financial market activities as harmful because they hampered the central government's steering capacity in the monetary market and fiscal policy. Moreover, after the LBHF affair municipal swaps became an issue with quite a media interest. However, the historical record shows that it was government's own concerns that led to the ultimate breakdown of the power model in the UK.

Saliency of Municipal Swaps

Compared to the US case, where there was almost no media presence of the issue, because of the LBHF affair municipal swaps gained a higher level of exposure in the UK. Not only were the financial losses of local authorities discussed but also the legal uncertainty and the potential damage to the City of London as the press coverage documents.⁷ The Inquiry report on the LBHF case insisted that this affair was "almost universally regarded as the most serious financial controversy affecting English local government for many decades" and that it "subjected the City of London to bitter criticism as a financial centre" (Veeder 1991, chapter 2.1). In accordance with Culpepper (2011) and James and Quaglia (2017) the increased saliency of municipal swaps may have weakened the structural power of banks and made the augmented power mechanism collapse. The empirical record shows, however, that the analysis should not stop here, since another aspect has to be considered in order to understand the failed exercise of power by financial sector actors.

Central authorities' fiscal and monetary policy concerns in the UK

The extensive empirical material demonstrates that the major reasons why banks failed were the central authorities' own concerns over their capacity to steer the monetary market and control the government's fiscal policy. Unlike the US, the UK central government's debt management and monetary policy is strongly influenced by local authorities' funding practices

(e.g., Bailey 1982; BoE 1983; Page 1966; Rhodes 1981; Sbragia 1986). Both major sources of local authorities' funding – public loans from the PWLB and capital funding in the money and stock market – constitute a significant share of the domestic capital and money markets (Hall 1977: 43), and consequently are strictly regulated by HMT and the BoE. In our context it is also important to note that in sharp contrast to the US, the British government (via the PWLB) is the lender of last resort and local authorities cannot therefore be declared insolvent.

The historical record shows that from the early 1980s onwards, central authorities expressed their concerns; thus, well before the issue became salient. For example, in 1982, the BoE's Deputy Governor in a speech to county treasurers not only explicitly pointed to the mutual links between local authorities borrowing instruments and the management of the money market, but he also announced that in “exploring the new opportunities” (such as swaps), local authorities should be aware that they may collide with the HMT's and BoE's debt and money market management concerns (BoE Archive 1982, December 1). The BoE also argued that swaps “give them [the banks] an opportunity to queue jump” (BoE Archive 1982, December 5). The BoE experts pointed out that swaps “may be undesirable for monetary reasons” because they foster bank lending. In addition, the BoE was also concerned about the question of risk bearing in case of a counter party's default. “[T]he longer I consider this ... the more questions arise” one BoE expert wrote in a letter to the Orion Royal Bank Limited (BoE Archive 1982, December 1).

The central authorities also raised their concerns when the banks and money brokers launched their swaps lobbying campaign (BoE Archive 1990a, January). In an internal note the BoE remarked that between 1985 and 1989 local authorities were de facto acting like “financial intermediaries” and adding more and more liquidity to the banking system by depositing in banks assets (from the sale of Council Houses)⁸ instead of repaying PWLB debt (BoE Archive 1990a). On October 4, 1990, in a meeting with BBA, CIPFA, DoE, and the BoE, the HMT explained, that local authorities' “charge payers were involuntary stakeholder[s] with unlimited liabilities” and that a “combination of legislation and voluntary code would not be sufficient to protect their interests” (BoE Archive 1990b, October 4). The BoE criticized the local authorities for deliberately making short-term gains by earning “some 15 per cent” with these bank deposits while a PWLB loan “costs only 10 percent” (BoE Archive 1990a). The BoE experts even concluded: “Thus central government is obliged to intervene to counter the monetary effect of local authorities' behaviour. It might seem somewhat ridiculous for central

government to have its financial operations driven by local authority financing decisions” (BoE Archive 1990a).

As a consequence, in February 1990, the Treasury wrote to the Department of the Environment that local authorities' capital and investment funding practices are “causing unacceptable difficulty for our money market” and are “a threat to the BoE's control of the short-term interest rate which we cannot allow to happen”; “direct and immediate action” was demanded (BoE Archive 1990a). HMT wrote that “local authorities are, in total, investing very substantial sums of money with the banking sector, whilst at the same time borrowing large sums from the PWLB. The combined effect of this is to cause difficulties in the management of the money market” (BoE Archive 1990a). When banks submitted their letters and submissions, central authorities also made clear that any legislation about *intra vires* and the repayment of losses is “not a matter of government” as the “government is not behind the financial obligations of the local authorities” (BoE Archive 1990b). HMT internally also assessed probable effects of lifting the *ultra vires* clause with regard to local authorities' swap activities on its own steering capacities in local lending (BoE Archive 1989, April 20).

All in all, because of its massive concerns about the local authorities' use of financial innovations damaging the central government's fiscal and monetary market steering capacity, HMT rejected the banks' demand for legislation. In May 1991, John Maples, Economic Secretary to the Treasury, declared: “Clearly banks feel they are victims of serious injustice, and there is a good deal to that argument. But all forms of validation are very unattractive to us in principle and practice.” The HMT argued that it sees “immense technical difficulties with validation of past swaps contracts” and that permitting local authorities' swaps would hamper the government's ability to control the authorities. In addition, HMT estimated the costs for the charge payers (Vaughan 1991: 22).

To sum up: in contrast to the US, British local authorities' financial market activities strongly influence central government's own fiscal and monetary management policies. The historical record indicates that from the very beginning of the municipal swap market until its final closure in 1991, these concerns were regularly expressed by central authorities. Although, the higher salience of the issue in the UK may have played a part, our argument is that for the failure of the augmented power mechanism in Britain domestic state interests were vital. The central

government took the consequences of local governments' capital market activities more seriously than its joint interest with banks to expand the British financial market further.

Central Authorities' Fiscal (and Monetary) Policy Concerns in the US (California)

Moving back to our typical case, the authorisation for municipalities to swap by California state law, we can confirm that the fiscal policy interests of California were not negatively affected by municipal swaps. First, at the time of the authorisations interest rate swaps did not have any negative connotation. No swap scandals or losses occurred in the first half of the 1980s, so that the state rather expected savings for municipalities by using these instruments. The state treasury even considered the instruments as suitable for its own debt management. However, as experts argue, "after the scandal of Orange county, state legislators would not have passed the swap bill" (Interview Law Firm, September 21, 2017). Secondly, as mentioned above, there is no state and federal control of municipal capital funding as is the case in the UK. In particular, after the decrease of federal aid in the 1980s, US municipalities to a very large degree have depended on the financial market for financing their budget deficits. Thirdly, municipalities can be declared insolvent, which would lead to debt relief for the cities to the disadvantage of lenders, who would lose money. This is a fundamental difference from UK municipalities, where the central government would have to step in. Connected to this, US municipalities generally have more autonomy – a crucial aspect of US federalism – than local authorities in the unitary political system of the UK where there is a tight relationship between the central government's fiscal policy and local finances. Finally, in California the state Treasury is not concerned whether local capital funding might harm its own debt and fiscal policies. The large size of the US money and capital market means that municipal finance has no impact on Federal monetary policy. Consequently, we argue that in order to analyse the state-finance power relationship more rigorously, we have not only to take institutionalized access points, salience and the internal differentiation of finance into account, but we must also focus on the inner-state relations, institutions and politics.

2.5 Conclusion

The financial crisis of 2008 has led to a revision of the concepts concerning the financial industry's structural and instrumental power. It has evoked a discussion that structural power

reinforces instrumental power. This augmented power model has been applied to post-crisis financial market reforms particularly in the US and UK, two countries for which it is uncontested, that financial industries' structural and instrumental power resources are overwhelmingly strong.

Since the 1980s, both the US and UK, have represented the two world's main financial centers for derivatives activities. However, since the late 1980s their regulatory approaches with regard to the use of derivatives by local governments have fundamentally diverged. In the US (typical case) state law has sponsored the use of derivatives by municipalities since the mid-1980s, but in the UK (deviant case) since the late 1980s the municipal swap market has no longer been supported by central authorities when finance failed to shape regulatory reforms to allow municipalities to swap their interest rates. In the UK case, in addition to the instrumental power directly exerted by banks through their political resources, banks used their structural power strategically (painting the threat of regulatory arbitrage on the wall). At a time when derivatives markets were in their infancy, the UK was in direct regulatory competition with the US. This would even more lead us to expect the augmented power explanation to hold in this case. This divergence in the success of finance to influence policy reforms begs the question: when does finance win and when does it lose?

In answering this question our study refers to but also modifies the business power approach as the most common explanation for why the financial elite is able to influence market regulation in its own interest. We analysed the reform of California's state law as a typical case of the augmented power of finance model and the ban of municipal swaps in the UK as a deviant case of this kind of explanation. Our analysis of the success and failure of financial industry's capacity to influence the regulation of municipal swaps confirms the external validity of the augmented power model for the pre-crisis period. However, our comparison of the typical with the deviating case shows that we should not stop analysing the three scope conditions proposed by James and Quaglia (2017), but that the fiscal and monetary interests of the state should be considered as another important context factor for the effectiveness of the power model.

What does our finding that state behaviour is essential for the effects that the power of finance is able to exert on regulatory reform imply for further research on the state-finance relationship?

First, our finding that the impacts of power of finance in regulatory reforms also depend on state agency fits with recent accounts of the mutual dependence of the financial industry and the state and their joint interest in liquid financial markets.

Secondly, however, we have also shown that if the state is not willing, has strong own policy interests and is concerned about losing its steering capacity over the economy then this mutual dependence becomes one-sided because finance can lose despite its strong instrumental and structural power. This illustrates the importance of studying inner-state relations (e.g. intergovernmental), possible conflicts and power struggles within the state which could have an impact on the respective state-finance relationship.

Thirdly, our analysis has also demonstrated the usefulness of recent accounts that claim structural power may reinforce instrumental power. How structural power fosters instrumental power and how the relationship between them is mediated by state agency should encourage more studies. More theoretical work is needed in conceptualizing how financial market liberalisation has had an impact on governments' public finance policies during the various historical turning points of financial market integration. Comparing the period before the 1930s with those until the breakdown of Bretton Woods, of the 1980s-deregulation wave and of the post-crisis period may reveal that state fiscal interests are aligned with finance over time.

Notes

1. In the US, strong state governments permit local governments to use financial instruments such as interest rate swaps, because municipalities are understood to be creatures of the states.
2. On which see also Bell and Hindmoor 2017.
3. With its decision the House of Lords followed the High Courts' decision of 1989 which in 1990 was successfully appealed by the banks.
4. E.g., Butler Till, Fulton Packshaw Ltd., Phillips & Drew.
5. E.g., Deutsche Bank, Barclays de Zoete Weed, Salomon Brothers.
6. There were several meeting with the banks, coordinated by the Audit Commissioner Howard Davies, on which see BoE Archive 1990b.
7. On which see Veeder 1991, chapter 2.1 and the articles in *The Independent*, the *Local Government Chronicle* and *The Economist* we quote in our case study on the UK.
8. The privatization of Council Houses was launched by the 1980 Housing Act.

Appendix

Interview

One semi-structured interview was conducted with a bond counsellor of an international Law Firm in San Francisco and lasted 60 minutes. All statements are reported anonymously, so that citations cannot be linked to the interviewee.

Interview	Date
Law Firm	September 21, 2017

References

- Arnold-Forster, J. (1990), 'Banks Set to Play Safe Pending New Legislation', *Local Government Chronicle*, March 2.
- Audit Commission (The Audit Commission for Local Authorities in England and Wales) (1987), *Annual Report and Accounts: Year Ended March 31, 1987* (London: HMSO).
- Australian Financial Review (1991), 'Banks Slam UK Government Decision on Council Swaps', *Australian Financial Review*, May 9.
- Bailey, S. J. (1982), 'The Political Economy of Local Government Finance', *Quarterly Economic Commentar*, 8 (2), pp. 49–64.
- Beach, D. and Pedersen, R.B. (2016), Selecting Appropriate Cases When Tracing Causal Mechanisms, *Sociological Methods & Research*. Available from: <http://journals.sagepub.com/doi/abs/10.1177/0049124115622510> (accessed March 14, 2018).
- Bell, S., and Hindmoor, A. (2016), 'Structural Power and the Politics of Bank Capital Regulation in the United Kingdom', *Political Studies*, 65 (1), pp. 103–121.
- (2017), 'Are the Major Global Banks Now Safer? Structural Continuities and Change in Banking and Finance since the 2008 Crisis', *Review of International Political Economy*, 25 (1), pp. 1–27.
- BoE (Bank of England) (1983), The Financial Environment for Local Authorities, *Bank of England Quarterly Bulletin*, 4 (1), pp. 520–524.
- (1989), *Minutes of the Court of Directors*. November 30. Available from <https://www.bankofengland.co.uk/-/media/boe/files/minutes/1989/court-1989.pdf>. Accessed May 9, 2015.
- (1991), Local Authority Swaps, *Bank of England Quarterly Bulletin*, 2 (1), pp. 250–256.
- BoE Archive (Bank of England Archive) (1980a), *Local Authorities: Sterling Borrowing*, 14A95/2.
- (1980b), *Local Authorities: Sterling Borrowing*, 14A95/3.
- (1981), *Local Authorities: Sterling Borrowing*, 14A95/4.
- (1982), *Local Authorities: Sterling Borrowing*, 14A95/14.
- (1983), *Local Authorities: Sterling Borrowing*, 14A95/15.
- (1989), *Local Authorities General Papers*, 13A280/6.
- (1990a), *Local Authorities: Sterling Borrowing Including Public Works Loan Board (PWLb)*, 14A95/22.
- (1990b), *Local Authorities: Swaps – Banks*, 13A315/3.
- Boyarsky, B. (2008), *Big Daddy: Jesse Unruh and the Art of Power Politics* (Berkeley: University of California Press).
- Burn, G. (1999), 'The State, the City and the Euromarkets', *Review of International Political Economy*, 6 (2), 225–261.
- California State Archives (1986), *Bill File 939* (Sacramento: California State Archives).
- California State Archives (1987), *Bill File 2523* (Sacramento: California State Archives).

- Campbell-Smith, D. (2008), *Follow the Money: The Audit Commission, Public Money and the Management of Public Services, 1983-2008* (London: Allen Lane).
- Carruthers, B. G. (1996), *City of Capital: Politics and Markets in the English Financial Revolution* (Princeton, NJ: Princeton University Press)
- Christensen, T. and Gerston, L.N. (1984), *Politics in the Golden State: The California Connection* (Boston: Little Brown).
- Cohen, L.P. (1988), 'Municipal Bond Lawyers, Already Hurt By Tax Reform Act, Face a New Threat', *Wall Street Journal*, September 15.
- Coleman, W. D (1996), *Financial Services, Globalization and Domestic Policy Change* (New York: St. Martin's Press).
- Cowen, L. (1990), 'A Caseload of Implications', *Local Government Chronicle*, March 2.
- Culpepper, P.D. (2011), *Quiet Politics and Business Power: Corporate Control in Europe and Japan* (New York: Cambridge University Press).
- (2015), 'Structural Power and Political Science in the Post-Crisis Era', *Business and Politics*, 17 (3), pp. 391–409.
- Culpepper, P. D., and Reinke, R. (2014), 'Structural Power and Bank Bailouts in the United Kingdom and the United States', *Politics & Society*, 42 (4), pp. 427–454.
- Das, S. (2011), *Extreme Money: The Masters of the Universe and Cult of Risk* (Harlow: Financial Times Prentice Hall).
- Dutta, S. J. (2017), 'Sovereign Debt Management and the Globalization of Finance: Recasting the City of London's Big Bang', *Competition & Change*, 22 (1), pp. 3–22.
- Emmenegger, P. (2015), The Long Arm of Justice: US Structural Power and International Banking, *Business and Politics*, 17 (3), pp. 473–493.
- Fairfield, T. (2015), 'Structural Power in Comparative Political Economy: Perspectives from Policy Formulation in Latin America', *Business and Politics*, 17 (3), pp. 411–441.
- Hall, M. J. B. (1977), 'The Layfield Report and Local Authority Borrowing. A Case of Centralization?', *Public Administration*, 55 (1), pp. 43–58.
- Helleiner, E. (1994), *States and the Reemergence of Global Finance. From Bretton Woods to the 1990s* (Ithaca: Cornell University Press).
- Hiday, J. L. (1996), 'Former Lazard Partner Ferber Denies Pushing Merrill despite Secret Retainer', *Wall Street Journal*, August 2.
- Hildreth, W. B., and Zorn, C. (2005), 'The Evolution of the State and Local Government Municipal Debt Market over the Past Quarter Century', *Public Budgeting & Finance*, 25(4s), pp. 127–153.
- Hosking, P. (1989a), 'Banks Threaten to Withdraw from Swap Contracts', *The Independent*, November 27.
- Hosking, P. (1989b), 'Societies and Bank at Odds over Swaps', *The Independent*, November 28.
- House of Commons (1991), *The 1991 Budget: Second Report of Treasury and Civil Service Committee*, Session 1990-1991, March 26.
- James, S., and Quaglia, L. (2017), *Brexit and the Limits of Financial Power in the UK*, GEG Working Paper, 129.

- Kirkpatrick, L. O. (2016), 'The New Urban Fiscal Crisis: Finance, Democracy, and Municipal Debt', *Politics & Society*, 44 (1), pp. 45–80.
- Legislative Analyst's Office (1985), *Major Fiscal Issues Facing the Legislature* (Sacramento: Legislative Analyst's Office).
- (1988), *A Perspective On The California Economy* (Sacramento: Legislative Analyst's Office).
- Local Government Chronicle (1991), *CIPFA and Banks Call for Swap Legislation*, January 4.
- London, S. (1991), 'Banks See Lamont', *Financial Times*, January 28.
- Loughlin, M. (1996), *Legality and Locality: the Role of Law in Central-Local Government Relations* (New York: Oxford University Press).
- Magdoff, H., and Sweezy, P. M. (1989), *Stagnation and the Financial Explosion. Economic History As It Happened*, Vol. IV. (New York: Monthly Review Press Classics).
- McKendrick, E. (1997), 'Local Authorities and Swaps: Undermining the Market?', in: R. Cranston (ed): *Making Commercial Law. Essays in Honor of Roy Goode* (Oxford: Clarendon), pp. 201–238.
- Michael, J. and Walters, D. (2002), *The Third House: Lobbyists, Money, and Power in Sacramento* (Berkeley: University of California Press).
- Miller, K. (1990), 'Pressure for a Solution', *Local Government Chronicle*, January 1.
- Moran, M. (1991), *The Politics of the Financial Services Revolution: The USA, UK and Japan* (New York: Palgrave Macmillan).
- Nisse, J. (1989), 'Banks Consider Legal Move to Limit Damage', *The Independent*, March 7.
- O'Brien, P., and Pike, A. (2015), 'City Deals, Decentralisation and the Governance of Local Infrastructure Funding and Financing in the UK', *National Institute Economic Review*, 233 (1), pp.14–26.
- O'Hara, Neil (2012), *The Fundamentals of Municipal Bonds* (Hoboken, NJ: Wiley).
- Orrick, Herrington and Suttcliffe (2004), *Interest Rate Swaps – Application to Tax-Exempt Financing* (San Francisco: Orrick, Herrington & Sutcliffe LLP).
- Pacewicz, J. (2012), 'Tax Increment Financing, Economic Development Professionals and the Financialization of Urban Politics', *Socio-Economic Review*, 11 (3), pp. 413–440.
- Page, H. R. (1966), 'Local Authorities in the Capital Market', *The Three Banks Review*, 71, pp. 26–37.
- Peston, R. (1991), 'Bank Seeks Law Change to Stave off Swaps Crisis', *The Independent*, January 27.
- Quinn, S. (2017), 'The Miracles of Bookkeeping: How Budget Politics Link Fiscal Policies and Financial Markets', *American Journal of Sociology*, 123 (1), pp. 48–85.
- Rhodes, R. A. W. (1981), *Control and Power in Central-Local Government Relations* (Aldershot, Gower, and Brookfield: Ashgate).
- Rosenthal, A. (1993), *The Third House: Lobbyists and Lobbying in the States* (Washington, DC: CQ Press).
- Sbragia, A. M. (1986), Capital Markets and Central–Local Politics in Britain, *British Journal of Political Science*, 16 (3), pp. 311–339.

- Smith, P. W. (1989), 'Banks Seek Law on Loan Swaps', *The Independent*, March 30.
- Strange, S. (1996), *The Retreat of the State: The Diffusion of Power in the World Economy* (Cambridge: Cambridge University Press).
- Trampusch, C. (2015), 'The Financialisation of Sovereign Debt: An Institutional Analysis of Reforms in German Public Debt Management', *German Politics*, 24 (2), pp. 119–36.
- The Economist (1991), 'Banks Want Legislation', January 26.
- The Guardian (1989), 'Financial News in Brief: Chaos Warning', May 18.
- The Independent (1989c), 'Outlook: Why Lenders Are Miffed', May 18.
- (1989d), 'Outlook: Banks without Friends', June 14.
- (1989e), 'Outlook: Precipitating a Swaps Crisis', June 29.
- Thomson, R. (1991), 'Allied Punts Itself into Hot Water', *The Independent*, March 24.
- Uhlig, M. A. (1987), 'Jesse Unruh, a California Political Power, Dies', *The New York Times*, August 6.
- Vaughan, L. (1991), 'Banks Fail over Swaps Appeal', *The Independent*, May 8.
- Vaughan, L. and Brown, C. (1991), 'Bank Supports Validation of Swaps', *The Independent*, March 22.
- Veeder, V.V. QC. (1991), *The Final Report of the Independent Inquiry into Capital Market Activities of the London Borough of Hammersmith and Fulham*, July 1991.
- Vogel, S. K. 1996. *Freer Markets, More Rules: Regulatory Reform in Advanced Industrial Countries*. Ithaca, New York: Cornell University Press.
- WSJ (Wall Street Journal), 1985, 'Wall Street Firms Prepare to Handle Municipal Futures', May 31.
- Walters, D. L. (1986), 'California Enacts Law Expanding Options Of State, Local Units to Issue Taxable Debt', *The Bond Buyer*, October 8.
- (1987), 'New California Laws On Bond Issuance and Investment Will Change Local Finance', *The Bond Buyer*, September 28.
- (1988), 'War of Succession for California's Bond Empire', *Wall Street Journal*, March 2.
- Woll, C. (2014), *The Power of Inaction: Bank Bailouts in Comparison* (Ithaca, New York: Cornell University Press).
- Young, K. (2015), 'Not by Structure Alone: Power, Prominence, and Agency in American Finance', *Business and Politics*, 17 (3), pp. 443–472.
- Zigas, D. (1984), 'Interest Rate Swaps Growing Fast, but Credit Problems Loom'. *The Bond Buyer*, October 4.

Chapter 3

From Economic Gains to Social Losses

How Stories Shape Expectations in the Case of German Municipal Finance

Abstract

This paper analyzes how stories shaped treasurers' expectations in municipal swap activities and contributes to the sociological debate on the mechanisms of expectation formation. Employing a deductive variant of process tracing, it synthesizes the literature on expectations in economic decision making with the literature on the diffusion of "ideas," "myths," and "fashions" in organization theory and management studies. The swap story has spread since the mid-1990s among German municipalities. At the heart of this story is the replacement of traditional borrowing with active portfolio optimization; financial instruments known as swaps play a leading role. This paper examines how stories shape expectations. Specifically, it delves into how the swap story, as a solution to the financial woes of local governments, shaped these governments' expectations despite the uncertainty resulting from the instruments' complexity. We argue that the effect of stories on expectations depends on timing. Expectations at an early stage are shaped by economic analyses to reduce uncertainty, while expectations at a later stage are primarily shaped by societal pressures and an established trend. These two distinct mechanisms produce expectations related to economic and social consequences, respectively. Selecting four typical cases, our analysis confirms that stories affected the formation of treasurers' expectations regarding the use of swaps through these different mechanisms.

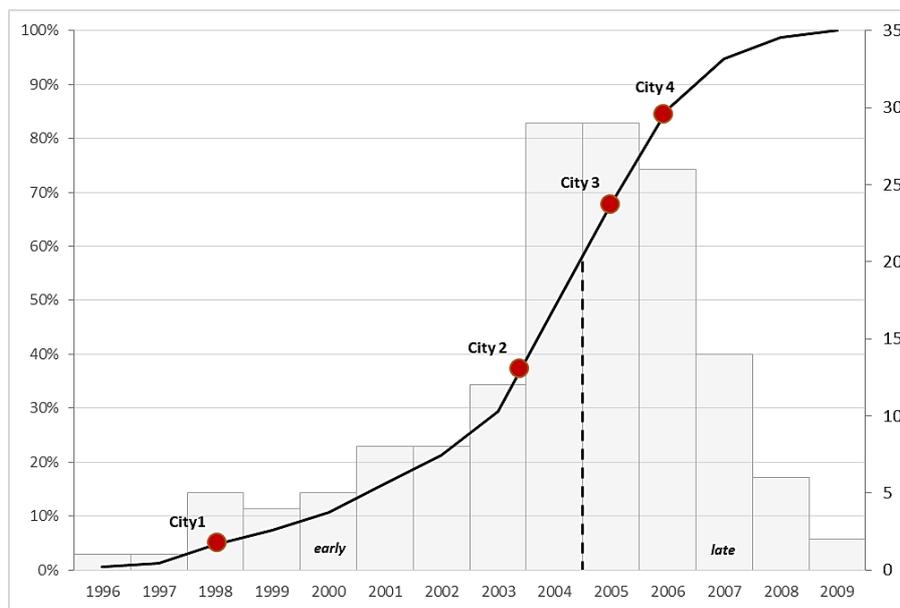
Keywords: stories, expectations, financial innovations, economic sociology, financialization, causal mechanisms

(Co-authored with Agnes Orban and Christine Trampusch)
(Published in *Kölner Zeitschrift für Soziologie und Sozialpsychologie* (KZfSS) (2018), 70
(Supplement 1), 89–116)

3.1 Introduction

The year 2005 can be seen as the peak of the derivatives hype across German local governments (City 1 interview, November 2016¹; see also Figure 1 below). Having already experienced considerable financial problems in the 1980s and 1990s, local governments ran up extremely high budget deficits in the early 2000s, which were mainly caused by a stagnation of revenues, increasing social expenditures, and a new federal tax policy. Some cities began making derivative deals as early as the mid-1990s. Hundreds of local governments began to follow suit the mid-2000s, introducing these instruments as a normal means of managing their local debt. Through interest rate swaps – which are the derivative instruments most frequently used by municipalities (Birkholz 2008: 172) – contracting partners agree to “swap” future interest rate payments. The most common swap deals made by local governments are floating-to-fixed rate swaps or fixed-to-floating rate swaps (Kolar 1996: 332).

Figure 1: The Swap Fashion in North Rhine-Westphalia, percent of adopters (*left*) and number of new swap users (*right*). ($N = 150$ (correspond to approx. 38% of all NRW cities).



Source: Own calculations based on Bund der Steuerzahler Nordrhein-Westfalen (2009), Kuhlen (2016) and supplemented by information obtained from local data bases (Ratsinformationssysteme) and the local press using Nexis. If no information on the time of the first swap was available, the city was coded as having no swaps. Reporting of derivatives is not mandatory in Germany. We can assume that municipalities try to hide their involvement in swaps, especially after losses occurred. Hence, this presentation should be read as approximation and the exact dates treated with caution)

In a fixed-to-floating rate swap, the local government (or entity) pays the swap partner (which is mostly a bank) a floating interest rate while it receives a fixed-rate payment from the bank. Losses occur, for example, if the floating rate rises above the fixed-rate which the government receives from the bank. As a result, the local government has a higher interest rate payment

than that fixed in the original debt obligation. However, gains can also occur. For the moment, however, the market has come to a halt, not least because several municipalities incurred millions of Euros' worth of losses from their deals and many of them have filed lawsuits against their banks. In the German Federal state of North Rhine-Westphalia (NRW), at least 52 cities took legal action against banks such as Westdeutsche Landesbank (WestLB) and Deutsche Bank, accusing them of fraudulent activities and miscounseling (Kuhlen 2016). In addition, the continuing low interest rate policy of the European Central Bank has to be considered, since it was fluctuating and relatively high interest rates during the 1990s together with corresponding high borrowing costs in particular that led cities think about turning to derivatives markets in the first place.

In contrast to Italian and British municipalities, which are entirely prohibited from using any derivatives by central government regulations (as a political reaction to huge financial disasters), German cities are still authorized to make use of them. They remain part of their autonomous local financial management repertoire, and it may not be too far-fetched to imagine that a change in the interest rate environment will be accompanied by an increase in derivatives usage. A large number of German local governments (according to The Association of Taxpayers in NRW (BdSt 2009), about 150 of 396 in North Rhine-Westphalia alone) came to belief that swaps are a valuable tool in their debt management and continue to do so (Trampusch and Spies 2015). They thereby replaced planning security (in connection with fixed-interest loans) with uncertainty in their local finances, as the payments linked to swap deals occur in the future and various outcomes are possible. The swap story became so powerful that governments assumed additional uncertainty and even potential losses.

This paper seeks to provide an answer to the question: how does a story shape the formation of expectations when future outcomes cannot be predicted? Stories help actors imagine these future outcomes and the means of attaining them: "Stories provide causal links to show how the gap between the present state of the world and the predicted future state will be closed, thus providing plausible reasons why one should expect the outcome the teller has chosen to depict" (Beckert 2016: 69; see also Czarniawska 2004: 7). While economists and sociologists agree that stories are among the most important factors that must be considered if we want to understand the formation of expectations and, consequently, economic decisions in a capitalist economy (Akerlof and Shiller 2009, Chapter 5; Beckert 2013), the specific mechanisms that explain how stories successfully shape expectations are underexplored. This paper aims to

contribute to the debate on the mechanisms of expectation formation. We conceptualize expectations as an actor's beliefs about the consequences of alternative action-courses (Esser 1999, Chapter 7; Shackle 1964: 13).

Based on a synthesis of the literature on expectations in economic decision making with the literature on the diffusion of “ideas,” “myths,” and “fashions” in organization theory and management studies (DiMaggio and Powell 1983; Meyer and Rowan 1977; Tolbert and Zucker 1983; Gulati et al. 1997), we claim that the effect of stories on expectations depends on time or, more specifically: depends on the number of previous story-followers. Deductively, we hypothesize two different mechanisms of how stories are influential in the formation of expectations. These mechanisms differ in the following aspects:

- What is the timing—is the story told to early or late adopters (scope conditions)?
- Who are the main storytellers?
- How do these storytellers present the story?
- What are the motivations of actors listening to the stories?
- What is the content of expectations that are affected by the story?

The two mechanisms share the initial condition, namely the story. We argue that a story affects the expectations of early adopters (only a low number of story followers) if it is able to reduce uncertainty. Here, the information needs to be enriched with calculative devices such as economic models, theories, and forecasting that help to predict future outcomes. But as soon as the majority believes in a story, calculability loses importance because the story achieves a status of a “myth” (Meyer and Rowan 1977) or a societal expectation (Abrahamson 1996). The remaining actors follow the story regardless of cost–benefit calculations because the story reflects the expectations of the majority. Negative social consequences of non-following, such as looking irrational or unmodern and falling behind, gain in importance. The two proposed mechanisms are tested in four case studies of German municipalities and their expectations regarding the use of derivatives. For this test we selected typical cases.

In the next section of this paper, we briefly summarize the research agenda on the formation of expectations and the role of stories in this regard. In order to contribute to this debate, we build on economic sociology and develop the argument that stories shape expectations by two different mechanisms. Furthermore, Sect. 2 explains our understanding of causal mechanisms, our typical cases research design as well as the data sources. In part three, we present the empirical results: the spread of swaps among municipalities in NRW, the swap story, in which swaps were presented as the causal bridge between the present situation (municipal fiscal stress)

and the imagined future state (financial relief/political autonomy), and evidence for the presence of the two mechanisms in the cases of four cities in North Rhine-Westphalia. The fourth part concludes with a summary of the results and implications for research on the formation of expectations, the effect of stories on expectations, and the financialization of the state.

3.2 How stories shape expectations: from calculative devices and economic gains to following trends and fearing social losses

In the economic and sociological literature on economic decision making it is uncontested that explaining economic decisions in a capitalist economy requires an analysis of how actors form expectations. While economists and sociologists may agree that expectations are specific statements about the future, their causal conceptions of how actors form expectations and why these expectations may change differ (for a discussion of economic perspectives, see Gakieh 2008; for sociological alternatives, see Beckert 2016; Emirbayer and Mische 1998). We can distinguish three main approaches to the description of expectations: rational expectations and adaptive expectations within economics and fictional expectations within economic sociology. The first two perspectives assume that actors arrive at an informed prediction of future outcomes by using all information available about the determinants of a variable when forming expectations (in the case of adaptive expectations only the most recently observed error). Expectations are the subjective probability distribution of outcomes. Since these expectations are “informed predictions,” they match the predictions of a relevant theory—they are rational (Muth 1961: 316). While economic perspectives assume that people are able to calculate subjective probabilities of future outcomes, the fictional expectations perspective (Beckert 2016) in sociology rejects calculation as the *modus operandi*.² According to this approach, uncertainty makes calculation and the assignment of probabilities to outcomes of an action-course impossible, meaning that expectations are necessarily socially constructed. In Beckert’s fictional expectation approach, calculation is a form of story-telling itself and the reduction of uncertainty through calculation is impossible as outcomes are incalculable. Calculations “are not instruments that make it possible to anticipate the future, but tranquilizers against the paralyzing effects of having to act in unpredictable environments” (Beckert 2013: 234). This difference mainly results from different assumptions about the state of the world (uncertainty or risk) and hence about whether future outcomes can be calculated and probabilities assigned in principle. Instead of ruling out a perspective a priori, it seems more promising to acknowledge that rationality is not a constant but a variable (Stinchcombe 1986: 5 f.) and that

different logics of action exist (March and Olsen 2009).³ The degree of rationality, then, becomes something to be explained because “the ability to reach probability judgments also depends on social context” (Rona-Tas and Guseva 2001: 625). Credit rating agencies (Rona-Tas and Guseva 2001) or calculative tools such as economic models (MacKenzie 2006) and market categories developed by financial analysts (Beunza and Garud 2007) reduce uncertainty and enable calculation in the first place. Hence, and following Esser (1999, Chapter 7) and Shackle (1964: 13), we conceptualize expectations here, without implying a mode of action a priori, as *actors’ beliefs about the outcomes or consequences of a course of action open to them*. A story has a narrative structure that causally links information regarding the present state with information regarding the future state. Both economic and sociological approaches argue that stories or narratives are central to the formation of expectations precisely because they describe desirable future states of the world (Beckert 2016; Emirbayer and Mische 1998) and possible roads towards future success (Akerlof and Shiller 2009), and because they help actors arrive at projections of future economic developments and policy decisions (Smart 1999). Stories differ from mere information because they contain pieces of information that have already been interpreted causally and organized to form a coherent whole – ready to be communicated in ways that are meaningful to an audience. Stories are “prepackaged” sets of information organized around a specific causal plot. However, while the role of stories is acknowledged, the specific mechanisms that explain how stories successfully shape expectations remain underexplored (Beckert 2013).

How exactly are stories influential when future outcomes cannot be predicted with certainty? We approach this question by combining the more recent literature on expectations in economic decision making with some of the older literature on the diffusion of practices (e.g., Kennedy and Fiss 2009; Tolbert and Zucker 1983), “myths” (Meyer and Rowan 1977), and “management fashions” (e.g., Abrahamson 1991, 1996) that is prominent in organization theory and management studies. These strands in the literature show that economic as well as social considerations shape perceptions, motivations, or expectations of actors. They also suggest a two-stage model and argue that the specific mechanisms that explain actors’ motivations differ between early and late adopters, as the importance of economic and social considerations depends on the number of previous adopters of an innovation or an idea (Kennedy and Fiss 2009; Tolbert and Zucker 1983).

Based on this literature we argue that the effect of a story on expectations depends on time because the previous adoption by other relevant actors matters: the same story affects the anticipation of future outcomes differently for someone who is among the first to hear it and for someone who is exposed to it after it has already generated a large number of followers. According to organization theory, while early adopters are primarily motivated by the anticipated economic benefits and calculations result in expectations that are defined in terms of economic outcomes, late adopters are more affected by the behavior of previous adopters (Tolbert and Zucker 1983; Gulati et al. 1997).⁴ In the latter case, societal expectations of what is considered as rational behavior are more decisive than material considerations. The more organizations adopt an idea, the less it is questioned because it must “be taken for granted as legitimate, apart from evaluations of their impact on work outcomes” (Meyer and Rowan 1977: 344). Hence, while early adopters try to calculate the future economic benefits of an innovation and assess whether it will increase efficiency, late adopters primarily respond to what is already widely perceived as efficient and rational by others. Actors adopt an idea because doing so establishes them as rational and modern—even if following might be individually inefficient. Late adoption thus depends not on expected benefits but on the “the degree to which there is a common understanding that the change is necessary for efficient organizational performance” (Tolbert and Zucker 1983: 26).

More recent contributions to organization theory (Kennedy and Fiss 2009) and management studies (Nikolaeva 2014) have built on this insight in order to develop an integrated model. The distinction between social and economic gains, however, fades into the background in these works. Kennedy and Fiss (2009) conceptualize the difference between early and late adopters as a question of anticipated gains and anticipated losses respectively. According to this conceptualization, early movers are motivated by the *opportunity* to achieve economic and social gains, while followers are motivated by the *threat* of economic and social losses. From an information perspective, Nikolaeva (2014) argues that in the early stage, organizations are in search of efficiency gains and information about benefits and opportunities, while in the later stage, the fear of social threats and potential disadvantages lead to the desire to imitate the majority. This threat from not following may even override existent information about harmful economic outcomes.

Based on these reflections, we hypothesize two sequential mechanisms of how stories affect expectations. Storytelling in the case of early adopters needs to provide credible information

and the calculation of future costs and benefits in order to reduce uncertainty (e.g., through financial analysis, forecasting, or modeling). This should be a less important property of stories that shape the expectations of late adopters because at that stage, stories reflect a socially shared “myth” about what is rational to do, i.e., represent a societal expectation (Abrahamson 1996; Meyer and Rowan 1977) about necessary steps towards a socially defined end. At the stage of early adopters, when the number of followers is still low and societal expectations have not yet developed, organizations will make independent decisions. In deciding whether to adopt an idea, actors will assess the opportunities with regard to their economic needs and potential economic gains. A story should be successful during this stage if it can credibly predict economic benefits and thereby help actors to overcome uncertainty regarding the outcome of a decision. In modern capitalist economies, calculative devices such as economic models, theories, and forecasting appear to provide the most important ingredients of successful stories (Beckert 2016). Numerous studies lend support to the argument that influential narratives stem from economists (Fourcade-Gourinchas and Babb 2002), particularly financial economists (MacKenzie 2006; Whitley 1986), financial and technical analysts (Beunza and Garud 2007; Kraemer 2010; Preda 2007), central banks (Holmes 2009; Smart 1999), and rating firms (Sinclair 2005). Central bank narratives are one prominent example of how storytelling with calculative devices helps economic actors to cope with uncertainty. As Holmes puts it: “The challenge for central banks is to discipline expectations with persuasive narratives, informed by a continuous stream of data and analyses, articulated in a measured and consistent fashion” (Holmes 2009: 285). Analysts are builders of calculative devices that “bracket, give meaning and make it possible to develop quantitative point estimates” (Beunza and Garud 2007: 35). Calculative tools reduce uncertainty and hence make calculation possible (Rona-Tas and Guseva 2001). A new story will affect the expectations of an actor because it provides seemingly rational forecasts of the outcomes of a new course of action. The resulting expectations will be of an economic nature: an anticipated increase in material gains.

While economic motivations are important at an early stage, they lose importance at later stages. Once a critical number of relevant organizations believe in a success story, it turns into a “myth” about what is rational and modern. One example for such a “myth” (or story about what is rational) can be found in Piotti’s (2009) account of German companies relocating to China. The story of cost reductions through relocations dominated the German press. The narrative provided information about the behavior of other actors and the benefits of relocating to China, which fostered imitation. In addition, the story underestimated the possible costs of

relocation. This led to a unilateral view that was largely unquestioned by economic actors. Myths are “reinforced through the increasing adoption of practices coherent with those ideas” (Piotti 2009: 309). In the end, the level of profits after relocating remained at a low level, or firms experienced unpredicted losses. Piotti shows that actors simply followed the “success story” because they believed in the majority view. According to Tolbert and Zucker (1983) and Gulati et al. (1997), economic considerations and calculations increasingly become background considerations in this stage while anticipated social outcomes and the desire to appear rational come to the fore. In contrast to the early stage, actors will not or cannot assess the value of an innovative idea for their specific needs, since a common understanding about what constitutes an “efficient” way is already established (a societal expectation shared by the majority). Hence, threat perceptions stemming from societal expectations and thus the aim of avoiding social losses should be much more dominant at the later stage. Actors will follow a myth because they do not want to be considered unmodern or irrational (Abrahamson 1996; Meyer and Rowan 1977; Tolbert and Zucker 1983; Gulati et al. 1997). In this regard, social identification (Czarniawska 2002; Sahlin and Wedlin 2008) and the signaling of information through the behavior of others (Piotti 2009) have been stressed as parts of the mechanism (for a review see Ordanini et al. 2008).⁵ In any case, not following will make organizations appear unmodern and may result in a loss of social approval in the short term. The expectations of others outweigh economic reasoning, which is why the property of a story matters less than the number of “story-followers” and their expectations at a later stage. Therefore, expectations at a later stage are primarily of a social nature: they are anticipations of social losses. Although benefits “may become increasingly social rather than economic or technical” (Gulati et al. 1997: 374) at this stage, economic considerations could still matter since disapproval incurs material costs in the long run (Meyer and Rowan 1977).

In light of these considerations, we combine the ideal types presented by Tolbert and Zucker (1983) and Kennedy and Fiss (2009), and we hypothesize two different mechanisms of how stories affect the formation of expectations—and two outcomes: The first mechanism, which we call “calculating gains,” produces expectations related to economic gains. The second mechanism, which we call “fearing social losses,” generates societal expectations and the anticipation of social threats (see Table 1).

What is our understanding of these two causal mechanisms and how do we analyze them? In the social sciences, we find various concepts of mechanisms; James Mahoney (2001: 579–80)

has counted no less than 24 definitions, focusing either on causal chains, intervening variables, or causal paths. As it goes far beyond the scope of our study to further elaborate on these variants, we adopt Jon Elster’s (1983: 24) broad understanding of mechanism-based explanations:

“To explain is to provide a causal mechanism, to open up the black box and show the nuts and bolts, the cogs and wheels of the internal machinery. (Here the term “mechanism” should be understood broadly, to cover intentional chains from a goal to an action as well as causal chains from an event to its effect.) ... A mechanism provides a continuous and contiguous chain of causal or intentional links, a black box is a gap in the chain. “

Table1: Two mechanisms: How stories shape expectations

	Mechanism	
	(1) Calculating gains	(2) Fearing social losses
Story (initial condition, X)	Swap story	Swap story
Scope Condition: Timing	Early adopters	Late adopters
(a) Storyteller	Financial analysts	The majority (financial analysts, other treasurers, city council members, local press...)
(b) Story presentation	Quantitative information: Economic modelling and forecasting	Widely accepted: Common understanding about what is “rational” and “efficient” (a myth)
(c) Motivation	Cost-benefit calculation: Calculative tools reduce uncertainty over future outcomes by providing numerical predictions, categories, or causal theories	Societal expectations: Myth followers want to avoid social losses (“being left behind”) and/or achieve social gains (“looking good”, “being modern and efficient”; being part of the community)
(Y) Content of expectation	Anticipation of economic consequences dominant	Anticipation of social consequences dominant

With regard to the ontology⁶ which informs how we proceed in our mechanism analysis, we adopt the probabilistic view suggested by Marcus Kreuzer (2016) and Tullia Falleti (2016). In contrast to the deterministic design supported by Derek Beach (2016)⁷, the probabilistic concept of mechanism includes the initial condition (X), the scope conditions (in our analysis the timing, thus early vs. late adoption) as well as the outcome in the mechanism analysis (on which see Trampusch and Palier 2016: 439–442 and Falleti 2016). Mayntz (2004: 244; italics by Mayntz) calls this “*generative mechanism*” analysis.

Table 1 specifies our two (generative) mechanisms, distilled out of the literature reviewed above, through which the swap story (X) affects local treasurers’ expectations (Y). In a nutshell, the two mechanisms differ in the following aspects:

- What is the timing – is the story told to early or late adopters (scope conditions)?
- (a) Who are the main storytellers?
- (b) How do these storytellers present the story?
- (c) What is the motivation of actors listening to the stories?
- (Y) What is the content of expectations that are affected by the story?

These mechanisms share the initial condition (X), namely the swap story. The differentiation between these processes of expectation formation is ideal typical and should be regarded as an analytical distinction that will not be found in its pure form in the real world. Regarding mechanism 1 (“calculating gains”), which we presume will work for early adopters (scope condition), we expect the main storytellers to be (a1) financial analysts who (b1) present the swap story using economic models which provide scenarios and forecasting for the calculation of future economic gains and losses (story presentation). Furthermore, we hypothesize (c1) that treasurers should be able to formulate probabilities for the occurrence of different outcomes in the future after being exposed to such economic models. An orientation towards others should be absent in the empirical material (motivation). The predicted outcome (the content of expectations) is: material consequences in the future matter more than social consequences (Y1). Regarding mechanism 2 (“fearing social losses”), which operates under the scope conditions of late adopters, we presume that we will see, besides financial analysts, other treasurers, city council members, and the local press, i.e., “the majority,” occurring as storytellers (a2). These actors present the swap story as a widely accepted, rational, and efficient instrument for local finance and its non-use as unmodern. We therefore expect the presence of an unquestioned myth (e.g., statements such as “that is the way to do it” or the dominance of the myth in the media) (b2). With regard to the motivation of the local treasurers, we presume that the treasurer is afraid of social disapproval from relevant others such as the regulator, a peer city, or the city council (e.g., statements such as “I don’t want to be perceived as old-fashioned or inefficient”), and we expect economic calculations to be lacking (c2). The predicted outcome (the content of expectations) is: social consequences in the future matter more than material ones (Y2).

In order to analyze the process of expectation formation empirically and test these two proposed causal mechanisms, process tracing is the most suitable method (Bennett and Checkel 2015). We employ a deductive variant of process tracing which aims at “checking with empirical case(s) analysis whether the theoretically elaborated causal mechanisms are indeed the ones explaining how X and Y are connected” (Trampusch and Palier 2016: 439). For deductive

variants of testing for causal mechanisms via process tracing, the typical case selection strategy is often recommended (e. g., Beach and Pedersen 2013, 2016; Gerring 2007; Trampusch and Palier 2016: 448). Typical cases are cases “where both the X, Y, and the requisite contextual conditions are present” (Beach and Pedersen 2016: 4). Typical cases are chosen to “better explore the causal mechanisms at work” (Seawright and Gerring 2008: 299). The researcher investigates whether the evidence in the case validates the stipulated causal mechanisms or not (ibid.).

For our mechanism analysis, we have selected four cases as typical by decomposing the NRW population⁸ according to our hypothesized scope condition, i.e., into early and late adopters, with the end of the year 2004 as the threshold (50% of adopters; see the next section for details). The determination of this threshold is based on the chosen period of investigation for this study, which lasts from 1996 to 2009, where 1996 is the first year in which swaps were used in NRW. We chose 2009 as the endpoint of the study due to data availability and because we know that after several municipal swap failures got attention from the media (and after the corresponding disclosure of failures of expectations) in the course of the Global Financial Crisis (GFC), most cities have refrained from adopting swaps. In the aftermath of the GFC, another factor that added to widespread reservations regarding swaps across NRW cities was the ECB’s low interest rate policy, which meant that the main purpose of swaps—to save interest on debt—was already achieved. Our early adopter cities, City 1 and City 2, adopted swaps in 1998 and 2004 respectively, while our late adopter cities, City 3 and City 4, began to use swaps in 2005 and 2006 respectively. All four cities share with almost every local government in NRW tremendous fiscal problems that became severe during the 1990s. While City 1 and City 2 are counted among NRW’s major cities, City 3 and City 4 represent medium-sized cities. The treasurers of the early and the late adopter cities do not significantly differ in their educational background and their professional experience: they share long careers in local politics and municipal finance. Although it is not the goal of the paper to measure or assess the performance of the cities’ swaps, it might be important to note that apart from City 2, the cities were confronted with unexpected outcomes. Instead of expected gains, they booked losses from the swaps they executed.

In order to reconstruct the story (X) and test the two mechanisms (scope condition, X, a, b, c, Y), we collected statistical data and conducted interviews with city treasurers of all four cities. In addition, we consulted court decisions, city council documents, and the regional and financial press (cf. the Appendix). Data sources and interviewees are presented in an anonymized form as the situations are still precarious for some of the actors involved and some court cases are

not yet settled. Sources and interview transcripts are archived and available for traceability. We are aware that elite interviews have limitations and weaknesses with regard to the validity and reliability of the information they provide because in retrospective accounts, the interviewees may reinterpret their past behavior as well as their motivations (on which see Golden 1992). However, “[e]lite interviewing is ... well-suited to the process tracing method and widely accepted as an additional ‘potent source of data’ on the processes and mechanisms investigated if one interviews ‘first-hand participants of the processes’” (Tansey 2007: 767). Furthermore, in order to tackle the potential limitations of these interviews, we followed the recommendations suggested by Tansey (2007) and other method experts (quoted in his article), such as: analyzing not only one but several cases, cross-checking major information by written sources (such as the documents provided by the banks, the courts, city councils or the local press), carefully selecting our elites, and assessing the interviews by criteria such as “who is speaking,” “under what circumstances,” and “for what purpose are they speaking” (Tansey 2007: 767). Finally, we wish to raise the point that in non-experimental and non-quantitative social sciences, every interview is retrospective and by rejecting any use of expert interviews on past events, qualitative social science would lose its *raison d’être* vis-à-vis experimental and quantitative research. We believe this is an option which neither quantitative nor qualitative research would want to select.

3.3. Results

Swaps in North Rhine-Westphalian Municipalities

As depicted in Figure 1, NRW municipalities were starting to approach OTC derivatives markets in the mid-1990s. In 2009, 150 of the 396 localities used these products. Based on the above-cited literature on the diffusion of ideas, two phases of derivatives adoption can be distinguished: an early phase lasting from 1996 to 2004, and a late phase lasting from 2004 until 2009. The cumulative adopter graph (solid black line) – depicting the aggregated proportion of adopter cities over the study period from 1996 until 2009 – conveys a rather slow diffusion process in the beginning, with only 20% of the 150 cities adopting derivatives after the first six years, i. e., by the end of 2002. In the following four years, however, derivatives use soared rapidly: we observe an enormous increase in the rate of adoption with approximately 30 additional municipalities each year between 2004 and 2006, so that in 2005 more than 50%, and in 2007 almost 90%, of all adopter cities had agreed to a swaps trans- action. Based on the

ideal typical adopter categorization of Rogers (1983), the first 50% of the cities are described here as “early adopters” and the last 50% as “late adopters.”⁹ In 2009, 150 cities had executed a swap transaction, which adds up to approximately 38% of all NRW cities. This data and Fig. 1 illustrate the diffusion of the actual use of derivatives. In the following, however, we are interested in the role of stories in the expectation formation of the public treasurers of the selected four cities, which led to their decision to buy swaps. Before we analyze the explicit influence of stories on expectations and what exactly made the stories credible in our four selected cases, we first examine the specific communicated narrative that projected a desirable future for the cities in more detail.

The Swap Story: Regaining Political Leeway Through Swaps use in Times of Fiscal Crisis

As defined in Sect. 2, a story necessarily consists of three main elements: a description of the present state of the world, a predicted future state, and a causal connection that provides the explanation for how the experienced “now” will be transformed into the projected future. Transferred to the empirical phenomenon under study, private and public sector banks increasingly presented municipalities with the option of interest rate derivatives such as swaps. They presented these as a promising means of alleviating their ongoing fiscal crisis, which had unfolded in the 1980s and worsened dramatically during the 1990s/2000s. Financial difficulties became more severe in the 1990s, when several cities in NRW lost sole responsibility for the budget (or budget autonomy), which had been a specific feature of cities in federal states compared to centralized states. Due to this financial distress, the cities were forced to fiscal austerity measures. They had to present budget consolidation plans (Haushaltssicherungskonzept, HSK), which had to be approved by the respective district government.

From the 1970s to the 1990s, municipalities made borrowing decisions under conditions of perceived certainty. Cities financed their budget deficits to a large degree by taking fixed-interest loans with at least 10 years maturity from their *Hausbank* (i.e., their principal bank—in most cases a local savings bank) independently from the current and anticipated interest rate structure. After taking out the loan, the treasurer waited until maturity and decided whether to extend or repay the loan. This long-established routine employed minimal expectational input, since it was based on the perception of an (interest rate) security resulting from long-term fixed-interest rates (Hopfe et al. 2011: 375). Constant nominal interest rates over the whole term of the loan gave treasurers a solid basis of calculation as well as the security that increasing capital

market rates were not causing a rise in the cost of borrowing. A treasurer always knew when and how much he had to repay, with the effect that the traditional way of handling debt meant long-term planning security (Stoffers 2014). The underlying idea—that the fixing of interest rates can be equated with avoiding any economic risk and can thus render the city immune to the vagaries of the financial markets—seemed to have maintained its grip for quite a long time.

In sharp contrast, according to the swap story which banks presented to local treasurers, every financial decision was risk afflicted and volatilities in financial markets provided opportunities rather than threats. If interest rates decreased during the maturity of a fixed-interest loan, the cities, according to the banks' narrative, would incur opportunity costs. An economically rational municipal debt management, on the other hand, would make it possible to actively and continuously exploit the optimization potentials and opportunities offered by financial markets through the anticipation of prospective interest rates movements. Such an innovative approach would thereby mitigate the repercussions of the accumulated local debt and would support the creation of increasing room for maneuver in future budgets. As the WestLB states, derivatives are central in this regard; they represent a plausible means for changing a disadvantageous situation into a promising future: "With the specific use of derivatives, interest rate payments can be reduced considerably and thereby financial leeway can be produced, which in turn can be used for the necessary investments" (Wahlers 2004: B5).

Twenty years ago, the (*experienced*) *present situation* of local governments that had to be transformed—demonstrating the bank story's starting point—was described by Deutsche Bank as one of financial paralysis: high indebtedness and the accompanying growing debt service were severely reducing the leeway to finance much needed investments and thereby the decision scope of local politics (Salchow 2000). The projected outcome portrayed by the banks was a situation in which the cities were put back into a position where they could act with financial autonomy and where they were able to finance their crucial tasks such as infrastructure. As a solution to the pressing problems and a way to attain such a promising future, the banks suggested the rationalization of local debt policy as an alternative to austerity measures. This could be achieved mainly through the exploitation of swaps as the key instruments that would enable cities to execute a more flexible debt management. Besides derivatives use, this new approach consisted in a continuous observation of the market, the use of variable interest rate loans, foreign currency loans, and the introduction of a risk management framework. However, especially on the municipal level, derivatives such as swaps are the most

important element of debt management (Trampusch and Spies 2015). This would help to lower the growing borrowing expenses in a safe and politically painless way. Thus, *swaps represented the causal bridge* between the present situation (financial paralysis) and the *imagined future state (financial relief/political autonomy)*: “All in all an increasingly active finance and debt management is imperative for municipalities, in order to reduce the interest burden and thereby create relief in cities budgets” (VÖB 1995, p. 29). Following this narrative, banks framed cities’ existing high interest burden as the result of missed opportunities. As a result, banks tried to persuade their public- sector clients of a new interpretation¹⁰ of their debt situation that fundamentally differed from their traditional view. As will be shown below, public agencies and other bodies joined the chorus soon after and the swap story became the dominant narrative in municipal finance.

Against this background of massive differences in character between the old and new debt policies, it is far from self-evident that municipalities followed the story presented by the banks. Rather, it confronted municipalities with a large degree of uncertainty when they decided to use swaps. Most treasurers had little practical experience with these instruments that obviously required a rethinking of old routines. Derivatives use meant leaving the well-known path of decision making under perceived certainty for the achievement of a promising, but also uncertain, future. Now city treasurers needed to form their own estimates of expected interest rates in the attempt to realize higher interest savings. However, it is in the nature of these instruments that their eventual outcome is always uncertain.

Having outlined the swap story as our explanatory variable (initial condition), in the following we test specific mechanisms that help us to understand how a bank could reduce city treasurers’ uncertainty, i.e., how it “has been able to convince its clients” (WestLB 1999, p. 36) of the swap story and shaped their expectations. In the next section, we analyze whether the hypothesized “calculating gains”-mechanism was present in the early adopter cases of City 1 and City 2.

Early Phase (Cities 1 and 2): Modeling, Forecasting and Anticipated Economic Gains

In the early phase of swaps adoption, banks were not only the originators (VÖB 1995) of the story, but also its main tellers. In an attempt to increase its market share in public-sector finance, Deutsche Bank, for example, installed seven centers of expertise across the country, which “were specifically oriented towards the needs of municipalities” (Deutsche Bank 2000; see also

Handelsblatt 2000).¹¹ This facilitated a systematic and more targeted distribution of the swap story through bank advisors on site. Not only national but also international banks directly contacted German municipal authorities, sent information brochures (Commerzbank 1999; VÖB 1995), and presented the swap story in person. From the late 1990s, the banks' story was increasingly knocking on open city hall doors. Through direct contact with the banks, the story was brought into the cities' administrations in 1998 (City 1) and in 2004 (City 2) respectively. As hypothesized, the main motivation of the cities' treasurers to listen to the banks' story was the hope of improving the performance of their debt administration tasks in this early stage. They were seeking efficiency gains, not least because a large proportion of their accumulated debt was attributable to interest rate payments. At a time of massive budget cutbacks in the face of growing deficits, both cities were desperately in search of any savings potential that could contribute to fiscal consolidation (in order to comply to the proposed and authorized HSK).¹² As the treasurer of City 1 put it: "The city fears being pressed down by the huge mountain of debt ... We don't have the money to pay interest and in order to do this we have to get new short-term loans and that's why the snowball rolls faster and faster" (regional press). During the 1990s, City 1 already took serious measures to consolidate its budget, which included modernization initiatives such as the transformation of the city administration into a service provider in accordance with the German version of New Public Management reforms in 1994.

The treasurer further argues that the reason for already applying swaps in the 1990s was to reduce borrowing costs (regional press).¹³ The authorities of City 1 carried out more than thirty derivatives transactions between 2001 and 2005 alone (City 1 court decision). They were even open to complex derivative products offered by Deutsche Bank such as spread ladder interest rate swaps that include a risky leverage effect. The treasurer mainly aimed to reduce crippling debt: either through the use of swaps or through any other means (City 1 court decision). The cities' motivation was mainly the perceived opportunity to achieve economic gains and the content of the expectation was mainly anticipated interest payment reductions.

Similarly, in the case of City 2—burdened with an accumulated debt of 92 million euros in 2004—the city officials' expectations were governed by the hope for material gains: "The city administration expects a not inconsiderable amount of interest savings from a successful active interest rate management" (City 2 official document). Earning money from the volatility of interest rates is what the then-treasurer expected from using swaps (regional press). Similar to City 1, the city was open to different complex derivatives such as ladder swaps or foreign

currency swaps which had been offered by Commerzbank in 2004 and which the banks had promised would reduce borrowing costs.¹⁴ Thus, the content of the expectational outcome was of a material nature: both cities anticipated positive material consequences from the use of swaps in the form of (large) interest savings.

There is a considerable amount of evidence for the presence of the mechanism in the early adopter cities, as predicted above. Both cities were exposed to and used calculative devices, had different future scenarios present, and came to the conclusion that the risk from the instruments was limited and controllable. Together, these factors built up confidence in conditions of uncertainty. In both cases, the banks (Commerzbank and Deutsche Bank) presented swap instruments based on mathematical formula. City 1 calculated different future scenarios by using the formula and filling it with parameters resulting from imagined future market rate developments in order to prognosticate the respective possible outcomes. They calculated with advantageous as well as with adverse interest rate developments. These calculations as well as the banks' presentation of the swaps' advantages clearly reduced the perceived uncertainty inherent in these transactions. More specifically: the prognoses transformed uncertainty into perceived controllable risk. The city believed that the risks were limited and under control, not least due to the formulaic depiction of the swap properties (City 1 court decision) and to the fact that the banks' informational material included only a limited sample of historical data. Deutsche Bank plotted the development of the spread between the 10 month Euribor rate and 2 month Euribor rate of the past ten years in a graph, which excluded any inverse yield curve phases. This presentation led the city to belief that the long-term interest rates would continue to be slightly higher than short-term interest rates in the upcoming years. They therefore considered the probability of the occurrence of an adverse development (decreasing spread) in the future to be rather low (City 1 court decision). According to the city's credible statements to the court, bank advisors downplayed the possibilities of losses as well: the advisor underlined that the negative scenario would not occur on the basis that this has never been the case in the previous years: "with probability bordering on certainty the risk will not materialize" (City 1 court decision). So sure were the city authorities of the deals' positive outcome that they waived a risk ceiling (cap), which would have meant restrictions on possible losses, but simultaneously a reduction of potential gains (City 1 court decision).

In City 2 as well, the swap story appeared credible in light of information on the historical development of the yield curve: In the last thirty years it was observable that long-term interest

rates have always been higher than short-term interest rates; there was only one phase of an inverted yield curve around the reunification ... therefore, and because of lower short-term interest rates, the administration decided to manage the city's debt actively (City 2 official document).

The city gathered debt management concepts and offers from different banks before they decided to use swaps. The presentation by Commerzbank on their “active debt management” concept, made to the city in early 2004, convinced the authorities as it best reflected the cities’ needs (City 2 official document).¹⁵ Its content gives further evidence that the swap story produced economic expectations (interest payment reductions) as predicted by the “calculating gains” mechanism. Commerzbank embedded the swap narrative in economic models and simulations of different future interest rate scenarios. Through these estimations and calculations, the bank under-pinned the narrative with concrete information on future outcomes that seemingly convinced the city officials: They gave Commerzbank the advisory mandate for debt management issues and entered into derivative deals with the bank (City 2 interview, September 2016). Interest rate savings after optimization through swaps were depicted without any reference to possible risks: through the use of a “Doppelswap” on an existing fixed-term loan raised from Sparkasse in 1997 with a maturity until 2005, Commerzbank prognosticated an interest rate reduction of 44,000 Euros, and by entering into a “Leveraged Schweizer Franken Carry Swap” based on the same loan, the bank predicted savings of as much as 73,000 Euros. In order to optimize an existing variable loan at 3-months Euribor as the reference interest rate, the bank suggested a “Leveraged Spread Swap” that included—as the name suggests—a risky leverage effect. The bank calculated that while the city received the 3-M-Euribor from the bank (which thus equaled the interest it needed to pay Sparkasse), the city had to pay “ $1.80\% + 5 \times (12\text{-M-Euribor} - 3\%)$, if $5 \times (12\text{-M-Euribor} - 3\%) > 0$ ” to the bank. The bank promised that a significant savings potential would result from such a transaction. These forecasts presented swaps as the rational solution to existing problems and motivated the officials to act as though the interest rate would develop in the promised manner (City 2 interview, September 2016). While these prognoses focused on the potential economic gains, they obviously downplayed possible risks and resulting losses (City 2 official document; City 2 interview, September 2016), a fact that seems to be characteristic of the early phase of derivatives adoption (Stoffers 2014). The advisory mandate given by City 2 to Commerzbank also included continuous reporting on market developments and analyses always included a projection of future earnings that helped the city to form expectations regarding swap deals.

Before the city has agreed on the first contracts, city officials viewed the incurring of losses as a calculable risk and expected interest savings to the amount of 500,000 Euros until 2009 (regional press).

We found almost no evidence for an orientation of the two cities towards others. Although in the early phase informal exchanges between single cities cannot be totally excluded, our selected cities seem rather to have calculated the costs and benefits of the introduction of swaps independently from others. Furthermore, City 1 was widely praised for its innovative debt reduction program from which it could be concluded that the city anticipated positive social consequences with the introduction of swaps, such as being perceived as a pioneer. However, the existing material does not support such a claim; rather, it indicates that economic considerations were predominant. The same holds true for City 2. Although Commerzbank pointed to successful reference cities in its presentation, City 2 was the first city to use swaps in its region and had the self-perception of being a pioneer, independent from others.

To sum up, the “calculating gains” mechanism could be traced in both cases. Treasurers of the early adopter cases under study were both willing to hear what the banks (as main storytellers) had to tell because they were seeking efficiency gains due to their crippling debt burden (motivation). They were both persuaded by a story told in times of crisis projecting a desirable material future (expectational outcome) because of calculative devices (properties of the story) that focused on economic benefits and encouraged the perception that risks were under control. In the next section, we analyze whether the “fearing social losses” mechanism is present in our two late adopter cases.

Late Phase (Cities 3 and 4):an Unquestioned Myth and Fearing Social Losses

As can be seen in Fig. 1, more and more municipalities introduced derivatives. After the sharp increase in the rate of adoption starting in 2003, a critical number of adopters (the threshold of about 50% or 73 adopters) was reached at the end of 2004. Thus, when City 3 and City 4 introduced swaps in 2005 and 2006 respectively, the swap story had already become popular in the municipal landscape. Municipal practitioners report that in the 2000s “it was seen as modern to transform fixed interest loans into variable loans through derivatives. ... Generating savings ... was the motto in times of ‘derivatives-hype’” (Stoffers 2014). Beside the cities’ peers, there were further crucial actors who became additional storytellers. Leading municipal associations

such as the North Rhine-Westphalia Local Authorities Confederation (StGB NRW), the German Association of Cities, the Government of the State of NRW (Ministry of the Interior and Municipal Affairs) and supervisory as well as auditory agencies in North Rhine-Westphalia (the Kommunalaufsicht and the Gemeindeprüfungsanstalt NRW) all contributed to the widespread perception that using derivatives was a necessary component in the efficient handling of local debt. For instance, the StGB NRW regularly organized seminars together with WestLB starting in 2005, where the banks could tell their story to hundreds of local decision makers and where early adopter cities reported their successful experiences with the products. Officials such as the mayor of City 3 attended such events and stated that the different possibilities of derivatives usage were explained and always presented in a positive light (City 3 interview, February 2016). In addition, the association distributed success stories through its regularly published magazine, which helped to underpin the common impression. The swap story gained additional credibility from regional authorities through systematic recommendations by the Gemeindeprüfungsanstalt (GPA) NRW and by two decrees (Runderlasse/Derivateerlasse) issued by the Ministry of Interior of the State government in 2004 and 2006 (City 3 interview, February 2016; City 4 interview, March 2016). The supervisory agency GPA NRW, newly founded in 2003, explicitly distributed the swap story across many municipalities: “Between 2004 and 2006 the GPA NRW showed those municipalities various possibilities of optimization including the utilization of derivatives, where the agency found considerable shortcomings regarding a modern interest rate and debt management” (Jäger 2011). The Ministry’s decrees were not formulated as compulsory, but rather as a recommendation: “They slightly nudged us” (City 4 interview, March 2016).

All in all, as hypothesized, the swap story developed into a common understanding or a social expectation among the relevant actors in the field during the 2000s and was perceived as such by the officials of City 3 and City 4. The use of derivatives was “widely understood to be a necessary component” of a rationalized debt policy. Societal expectations are evident in statements from treasurers such as “We were just jumping on the bandwagon, as others already had” (City 4 interview, March 2016) and “We were swimming with the tide” (City 3 interview, February 2016).

The additional storytellers reduced the initial perceptions of uncertainty relating to swaps and created pressures to conform. As proposed by the “fearing social losses” mechanism, orientation towards the relevant others and the exposure to an existing consensus regarding the

use of swaps motivated the late adopter cities to listen to the swap story. In both cities, requests from members from the city council served as an impetus in this regard:

“Then, suddenly, the discussion was raised by politicians from the main committee: Are we running our municipal finance business similarly to the major cities, which employ staff solely for the observation of financial markets and who are working with so-called derivatives? Are we doing that in City 3, too? ... If the others do it, we can’t just stand by and watch. If there are any possibilities to resist our rising debt—to oppose it with positive measures—with certain kinds of business on the other side, we should do it” (City 3 interview, February 2016).

While politicians in City 3 pointed to the choices and professional adoption of the innovations of major cities, in City 4 the county was the point of reference: “The county is doing it, and at the last county meeting their treasurer reported that he has generated considerable profits. Why are we not doing it here?” (City 4 interview, March 2016).

In addition, the WestLB advisor offered swap deals while mentioning that City 4 would very soon be the only municipality in the region not adopting the innovation (Court decision City 4). With the order from the council to obtain information about relevant possibilities, the treasurer of City 3 contacted the Hausbank (savings bank), which coordinated an initial meeting with WestLB and the treasurer of a neighboring city. As was the case in the early adopter cities, the bank worked with historical data and graphs; it presented “the wide world of finance such as the development of the Euribor, Dollar or of the Swiss Franc,” brought it down to the city’s needs (City 3 interview, February 2016) and used scenarios in order to forecast possible future outcomes. According to the treasurer, the bank dismissed the negative scenarios they displayed as “nearly impossible” (City 3 interview, February 2016). Yet what was more important for City 3 than the properties of the story itself, was its trust in the advisors of their Hausbank (savings bank), resulting from its long-term relationship with WestLB. The savings bank advisors were present at every sales meeting with WestLB and were perceived as the cities’ security. The reason was simply that the treasurer was convinced that he and his colleagues in the administration did not possess the appropriate depth of knowledge to fully grasp the complexity of the financial products: “We just lacked the expertise to do such business” (City 3 interview, February 2016). Thus, the inability to calculate was compensated for by the reliance on the expertise of trusted others. In City 4, similar calculative devices were presented.

However, the city lacked the know-how to assess the possible calculations stemming from a “scenario calculator” provided by WestLB (City 4 court decision).

After initial skepticism, it seemed that City 4 widely accepted the story, since it perceived the swap agreements as simply “safe transactions” (City 4 interview, March 2016). The treasurer of City 3 agreed to the swaps in the first place because he was confronted with disapproval for failing to conform to societal expectations:

“I have to admit, it was a really bad time for me. I was mad at myself because I had been misled by politicians and their talk and I had the impression the politicians from the city council thought we were stupid because the municipalities around us were doing this business. Why are you not doing it then? And why are you not capable of doing so? Under pressure, I was misled into doing it ultimately, just to realize that I should have better kept my hands off it after all” (City 3 interview, February 2016).

Thus, for the treasurer, the anticipated social loss resulting from being perceived as incompetent by the members of the city council were more important for following the story than potential economic gains. The same holds true for City 4. However, here it was not only the council, but also the highly respected county treasurer whom they feared to disappoint:

“The treasurer of the county, who was a strong proponent of derivatives use and who had already engaged in this for years – he started with Yen etc. – blamed us for being backward ... he told us how much money he earns with active debt management. ... He was a complete expert. Yeah, and when we sat together with him, I got a guilty conscience for not having done it for my own city. And then later, in the course of the consultations by WestLB, what I’d heard earlier from him just got confirmed” (City 4 interview, March 2016).

It was the personal story of successful transactions that enhanced confidence, rather than the story’s properties. As in City 3, the story produced an anticipation of social consequences that outweighed considerations of expected economic gains in City 4. This is particularly noticeable by the fact that in 1999 a first attempt by WestLB to convince the city of swaps failed. The city rejected the proposals and remained reluctant for many years. Only additional storytellers and their expectations prompted the treasurer to follow the swap story:

“For many years I had inwardly struggled and resisted doing these things. But later on, at some point I could do nothing else than put them into practice” (City 4 interview, March 2016).

It was not the pressure to economize, but rather the peer pressure exerted by others. Accordingly, the anticipated social losses that would have followed a continuation of non-adoption overrode expectations of interest savings.

3.4 Conclusion and discussion

This paper has demonstrated the importance of stories in the formation of expectations in the case of swaps use among local governments in Germany. The reason for the rapid spread of complex financial instruments among city treasurers is strongly connected to the swap story, whereby treasurers were told that swaps would transform the present municipal state of fiscal stress to an imagined future state of more fiscal leeway. In order to account for this causal relationship, thus how the swap story’s narrative structure links these two images of the municipalities’ present and future fiscal situation, we hypothesized that stories affect expectations by means of two analytically distinct mechanisms – “calculating gains” and “fearing social losses” – both of which operate under different scope conditions (early vs. late adopters). Conducting theory-testing process tracing, we found confirming evidence for these two mechanisms in four typical cases, two cities representing the early phase (City 1 and City 2) and two representing the late phase (City 3 and City 4) and in which the X and Y were present.

We found support for the importance of calculative devices such as financial analysts’ economic modeling, simulations and forecasts – that underpin the swap story – in the formation of primarily economic expectations in City 1 and City 2. In particular, the presentation of forecasts by the banks as the main storytellers was embedded in a narrative that persuasively focused on the future economic gains arising from swap agreements and neglected their potential downsides to a large degree. Possible disadvantageous economic outcomes were characterized and perceived as calculable events, to which very low probabilities of occurrence were ascribed. Simulations of debt portfolio developments based on market prognoses produced concrete projections of future savings resulting from different swaps, while

neglecting the perceived likelihood of losses. These calculative devices made the swap story credible and shaped economic expectations in City 1 and City 2. As late adopters, City 3 and City 4 introduced swaps at a point in time at which the swap story was already established as “state of the art” in German municipal finance. The derivatives trend was characterized by more than a hundred local governments that have used the instruments as the normal means of managing their local debt until the mid-2000s. Furthermore, powerful actors from the field, such as State governments, leading city associations as well as supervisory and auditory authorities, entered the scene as proponents and additional storytellers. Although calculative devices were not absent, there are several indications of a greater significance stemming from interdependencies, such that anticipated future social losses seem to have been pivotal for Cities 3 and 4. Success stories of other municipalities were repeatedly told by banks and peers (City 4), local politicians pointed to the successful practice of other cities (City 3 and City 4) and the regulator both recommended the practice and initiated a concrete institutional framework (City 3 and City 4). As a consequence, late adopters were able to overcome uncertainty by embracing the view of the relevant others, which lent the original story told by the banks the required credibility. In addition, treasurers of City 3 and City 4 felt pressure to behave appropriately and were afraid of being perceived as backward or lagging behind in the future if they continued to reject the introduction of swaps.

Our results have several implications. First, the role of stories in the formation of expectations (Beckert 2016; Emirbayer and Mische 1998) and economic developments (Akerlof and Shiller 2009; Holmes 2009) has attracted the interest of both sociologists and economists. While it is widely acknowledged that stories are decisive in the projection of imagined future states, we know little about the exact causal relationship between a story and the consequences actors’ anticipate for their actions. This paper addressed this connection and provided an answer to the question of how such imaginaries of the future function (Beckert 2013). Our four case studies of swaps in municipal finance support the proposition of the existence of two analytically distinct time-dependent causal mechanisms governing how stories contribute to the production of expectations in the context of financial innovations: by “calculating economic gains” (at an early adopter stage) and by “fearing social losses” (at a later stage). Furthermore, we found that these two mechanisms also led to two different manifestations of expectations: *economic expectations*, on the one hand, are actors’ beliefs about the material consequences of a potential action-course (e.g., higher savings, efficiency) and are dominant at an early stage as a perceived opportunity. *Societal expectations*, on the other hand, are actors’ beliefs about the social

consequences of a potential action-course (e. g., evaluation by others) and are dominant at the later stage as a perceived threat. In the latter case, the expectations of others outweigh economic reasoning, which is why the properties of a story matter less than the number of “story-followers.” We do not claim that these two mechanisms are exclusive or that calculation disappears in later stages of story diffusion. Rather, the ideal-typical distinction highlights two analytically distinct processes of expectation formation involving the same story as the independent variable but resulting in different contents of expectations.

Second, our analysis echoes the need for a clear distinction between the economic literature that emphasizes how financial market actors’ irrational behavior reflects innate psychological biases (Akerlof and Shiller 2009) or public signals (Bikhchandani et al. 1992) and the literature in organization theory on the diffusion of “myths,” “fashions,” and “fads.” In this regard, it is important to note that the “fearing social losses” mechanism (imitation), which unfolds in the late diffusion phase, is not the same as herding behavior understood as either a virus or a signaling process. Imitation here is not an automatic process that unfolds like a virus, but rather a genuine social process: actors observe others and expect social gains from following a widely accepted story. Nor is imitation a signaling game, whereby interpreting the signals of the majority’s behavior and the consequences of this behavior are revealed to potential followers. Following the herding argument, City 4 would have revised its expectations and decisions regarding derivatives when the swap fiasco of its neighboring city became public (leading to losses in the millions). This was, however, not the case: the treasurer followed the existing fashion and interpreted the losses as an extraordinary event of individual failure (City 4 interview, March 2016). This allows us to derive an interesting starting point for further research: How should we analyze the resilience of expectations once they have emerged as an institutionalized fashion? What happens if anticipated expectations do not materialize in the future and are instead followed by disappointment? What role does the media play in covering financial scandals on changes in expectations?

Third, since the focus of this paper is on the causal mechanisms through which stories affect public finance directors’ expectations regarding and their decisions to introduce financial innovations, it makes a contribution to the still thin literature on the financialization of the (subnational) state and its debt management (e. g., Fastenrath et al. 2017; Pacewicz 2013; van der Zwan 2014: FN 13; Trampusch 2015; Wang 2015). Our paper is a first step toward revealing the causal forces behind this process. Our results suggest that a story originating in the financial

sector generated a shift in the sense-making of public officials (Fligstein et al. 2017) and thereby paved the way for the logic and practices of financial markets to enter into the public sector. It is important to note that municipal derivatives use can be observed not only in Germany, but rather on an international scale. As the typical cases for the late adopters in this study demonstrate, in order to understand why local governments financialize it is not sufficient to consider the client–broker or bank–municipality relationship. If we want to understand the whole (temporal) unfolding of this financialization process, we need to take into consideration a broader actor constellation that helps us to grasp why municipalities made their budget dependent upon financial market uncertainties.

Notes

1. The exact dates of the four interviews cited in the paper appear in the Appendix.
2. Although Beckert agrees that calculation affects the formation of expectations, he depicts calculation as leading to fictionality as well: “calculative assessments of outcomes should – under conditions of uncertainty – be considered fictions themselves” (Beckert 2013: 234).
3. Our understanding of rationality follows that of Jon Elster: “The action is the best way for the agent to satisfy his desire, given his belief; the belief is the best he could form, given the evidence; the amount of evidence collected is itself optimal, given his desire. ... Both the belief and the desire must be free of internal contradictions. ... The action must not only be rationalized by the desire and the belief; it must also be caused by them and, moreover, caused ‘in the right way.’ Two similar conditions are imposed on the relation between belief and evidence” (Elster 1986: 16).
4. Granovetter (1978) also distinguishes between two phases of adoption but explains the time dependence differently. According to Granovetter, the decisions of others feed into individual cost – benefit calculations and, hence, preferences. We thank one of the reviewers for drawing our attention to this.
5. Signaling is also prominent in “information-based theories of imitation” in economics that entail the theory of herd behavior and the idea of informational cascades (Banerjee 1992; Bikhchandani et al. 1998; Scharfstein and Stein 1990; Shiller 1995; see Lieberman and Asaba 2006 and Ordanini et al. 2008 for reviews). In basic terms, actors follow the majority because their actions convey signals about the value of a possible course of action. Here, however, actors do calculate and weigh incoming information. Hence, herd behavior is fragile and small shocks such as a public information release can dislodge an informational cascade—turning a fashion into a fad (Bikhchandani et al. 1992).
6. According to Hall (2003: 373–74), ontology contains “the fundamental assumptions scholars make about the nature of the social and political world and especially about the nature of causal relationships within that world. ... Ontology is ultimately crucial to methodology because the appropriateness of a particular set of methods for a given problem turns on assumptions about the nature of the causal relations they are meant to discover”.
7. In the deterministic view, “each part of a mechanism is conceptualized as an individually necessary element of the whole” (Beach and Pedersen 2013: 31). Hence, mechanism analysis concentrates on what “is constant in mechanism” (Mayntz 2004: 245). This leads to mechanism analysis being conducted in a mechanistic way by studying the “interactive influence of causes on outcomes and in particular how causal forces are transmitted through

the series of interlocking parts of causal mechanism to contribute to producing an outcome” (Beach and Pedersen 2013: 25). In their review on the methodological literature on process tracing, Trampusch and Palier (2016: 442) argue that in the current debate authors can be grouped according to these two ontologies of determinism vs. probabilism. They argue that “this difference between viewing mechanisms as univocal links between X and Y or as ‘generative mechanisms’, as Renate Mayntz (2004: 245) puts it, has ... important implications on how process tracing is conducted” (Trampusch and Palier 2016: 442).

8. We focus on NRW alone due to data availability and societal relevance. In order to select typical early and late adopter cities, we needed a whole population of cases. As this could not be done for the whole of Germany, we have focused on one federal state. We selected NRW due to data availability (a comprehensive survey on municipal swap use carried out by The Association of Taxpayers in NRW (BdSt 2009) exists only for NRW) and because NRW is – with approximately 18 million people – the most populous federal state, meaning that the outcome of swap deals has a large societal effect.
9. This is a simplification of Rogers’ categorization which distinguishes between “innovators” (first 2.5%), “early adopters” (the next 13.5%), the “early majority” (the next 34%), the “late majority” (the next 34%), and “laggards” (the last 16%) among adopters (Rogers 1983: 245 ff.).
10. See Fastenrath et al. (2017) for the shift in the sense-making frameworks in debt policy at the central government level.
11. The bank also organized large events such as the “Zukunftstag 2000 – Gemeinden und Regionen,” attended by 650 municipal representatives, where the bank provided information about the opportunities in debt management, amongst other areas (Handelsblatt 2000).
12. City 1 had present HSKs from the early 1990s and City 2 since 2003.
13. From here to the end of the paper, the following refers to sources explained in the appendix: “regional press,” “City X interview”, “City Y court decision”, and “City Z official document”.
14. They also entered into these deals with Commerzbank until the first scandals became public (City 2 interview, September 2016)
15. The city also contracted several derivatives with the bank in the following years: “They have offered several useful instruments” (City 2 interview, April 2016).

References

- Abrahamson, E. (1991), 'Managerial Fads and Fashions: The Diffusion and Rejection of Innovations', *The Academy of Management Review*, 16 (3), pp. 586–612.
- Abrahamson, E. (1996), 'Management Fashion', *The Academy of Management Review*, 21 (1), pp. 254–285.
- Akerlof, G. A. and Shiller, R.J. (2009), *Animal Spirits. Wie Wirtschaft wirklich funktioniert*, 1st ed. (Frankfurt am Main: Campus).
- Banerjee, A. V. (1992), 'A Simple Model of Herd Behavior', *The Quarterly Journal of Economics*, 107 (3), pp. 797–817.
- BdSt (Bund der Steuerzahler Nordrhein-Westfalen e.V.). 2009. *Swap-Umfrage: Der BdSt zieht Bilanz*. Accessed August 20, 2013. <https://www.steuerzahler-nrw.de/Swap-Umfrage-Der-BdSt-zieht-Bilanz/29033c35300i1p137/index.html>.
- Beach, D. (2016), 'It's All about Mechanisms—What Process-Tracing Case Studies Should be Tracing', *New Political Economy*, 21 (5), pp. 463–472.
- Beach, D., and Pedersen, R. B. (2013), *Process-Tracing Methods. Foundations and guidelines* (Ann Arbor: University of Michigan Press).
- Beach, D. and Pedersen, R. B. (2016), 'Selecting Appropriate Cases when Tracing Causal Mechanisms', *Sociological Methods & Research*, 45: 1–35, ahead of print. <http://smr.sagepub.com/content/early/2016/01/13/0049124115622510.full.pdf+html>. (Accessed 17 January 2017).
- Beckert, J. (2013), 'Imagined Futures: Fictional Expectations in the Economy', *Theory and Society*, 42 (3), pp. 219–240.
- Beckert, J. (2016), *Imagined Futures. Fictional Expectations and Capitalist Dynamics* (Cambridge, Massachusetts: Harvard University Press).
- Bennett, A. and Checkel, J. T. (2015), *Process Tracing. From Metaphor to Analytic Tool. Strategies for Social Inquiry* (Cambridge, UK: Cambridge University Press).
- Beunza, D. and Garud, R. (2007), 'Calculators, Lemmings or Frame-Makers? The Intermediary Role of Securities Analysts', *The Sociological Review*, 55 (S2), pp. 13–39.
- Bikhchandani, S., Hirshleifer, D. and Welch, I. (1992), 'A Theory of Fads, Fashion, Custom, and Cultural Change as Informational Cascades', *Journal of Political Economy*, 100 (5), pp. 992–1026.
- Bikhchandani, S., Hirshleifer, D. and Welch, I. (1998), 'Learning from the Behavior of Others: Conformity, Fads, and Informational Cascades', *The Journal of Economic Perspectives*, 12 (3), pp. 151–170.
- Birkholz, K. (2008), *Aktives Kommunales Debt Management. Wege zu mehr Effizienz bei der kommunalen Fremdfinanzierung* (Bern: Haupt).
- Commerzbank (1999), *Der Einsatz von Derivativen bei Gebietskörperschaften* (Frankfurt am Main: Commerzbank).
- Czarniawska, B. (2002), 'The Fashionable City', in: B. Czarniawska (ed) *A Tale of Three Cities* (Oxford: Oxford University Press), pp. 131–43.
- Czarniawska, B. (2004), *Narratives in social science research* (London, Thousand Oaks, Calif.: Sage Publications).

- Deutsche Bank (2000), *Die Kommunen sind auf dem Weg zum modernen Dienstleister erfreulich gut voran gekommen*. Umfrage des Instituts für Demoskopie Allensbach im Auftrag der Deutschen Bank. Frankfurt am Main.
- DiMaggio, P. J. and Powell, W. W. (1983), 'The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields', *American Sociological Review*, 48 (2), pp. 147–160.
- Elster, J. (1983), *Explaining Technical Change: A Case Study in the Philosophy of Science* (Cambridge, UK: Cambridge University Press).
- Elster, Jon, ed. 1986. *Rational Choice*. Oxford: Blackwell.
- Emirbayer, M., and Mische, A. (1998), 'What Is Agency?' *American Journal of Sociology*, 103 (4), pp. 962–1023.
- Esser, H. (1999), *Soziologie. Spezielle Grundlagen. Band 1: Situationslogik und Handeln* (Frankfurt/Main: Campus).
- Falleti, T. G. (2016), 'Process Tracing of Extensive and Intensive Processes', *New Political Economy*, 21 (5), pp. 455–462.
- Fastenrath, F., Schwan, M., and Trampusch, C. (2017), 'Where States and Markets Meet: The Financialisation of Sovereign Debt Management', *New Political Economy*, 22 (3), 273–93.
- Fligstein, N., Brundage, J. S. and Schultz, M. (2014), *Why the Federal Reserve Failed to See the Financial Crisis of 2008: The Role of "Macroeconomics" as a Sense making and Cultural Frame*, IRLE Working Paper, No. 111–14.
- Fourcade-Gourinchas, M. and Babb, S. L. (2002), 'The Rebirth of the Liberal Creed: Paths to Neoliberalism in Four Countries', *American Journal of Sociology*, 108 (3), pp. 533–579.
- Gakieh, S. F. (2008), *Modelling Inflation Expectations. The Case of Iran* (Dissertation: Halle (Saale)).
- Gerring, J. (2007), *Case Study Research: Principles and Practices* (Cambridge, UK: Cambridge University Press).
- Granovetter, M. (1978), 'Threshold Models of Collective Behavior', *American Journal of Sociology*, 83 (6), pp. 1420–1443.
- Golden, B. R. (1992), 'The Past is the Past – Or is it? The Use of Retrospective Accounts as Indicators of Past Strategy', *Academy of Management Journal*, 35(4), pp. 848–860.
- Hall, P. A. (2003): 'Aligning Ontology and Methodology in Comparative Research', in J. Mahoney and D. Rueschemeyer (eds) *Comparative Historical Analysis in the Social Sciences*, (Cambridge, New York: Cambridge University Press), pp. 373–404.
- Handelsblatt (2000), *Know-How soll als Trumpf dienen. Deutsche Bank sieht sich im Wettbewerb um öffentliche Kunden gerüstet*, September 11, <http://www.handelsblatt.com/archiv/know-how-soll-als-trumpf-dienen-deutsche-bank-sieht-sich-im-wettbewerb-um-oeffentliche-kunden-geruestet/2004176.html> (Accessed: 13. February 2017).
- Holmes, D. R (2009), 'Economy of Words', *Cultural Anthropology*, 24 (3), pp. 381–419.
- Hopfe, J., Kummerow, B. and Lobers, A. (2011), 'Die öffentliche Verschuldung Kommunales Schulden- und Zinsmanagement im besonderen Fokus', in: B. Behnke-Hahne and W. Veldboer (eds) *Praxishandbuch Kämmerei* (Berlin: Schmidt), pp. 365–386.
- Jäger, R. (2011), *Zins-Swap-Geschäfte der Kommunen*, Vorlage 15/1019 (Düsseldorf: Ministerium für Inneres und Kommunales des Landes Nordrhein-Westfalen).

- Kennedy, M. T. and Fiss, P. C. (2009), 'Institutionalization, Framing, and Diffusion: The Logic of TQM Adoption and Implementation Decisions among U.S. Hospitals', *The Academy of Management Journal*, 52 (2), pp. 897–918.
- Kolar, A. (1996), 'Hammersmith Meets Orange County: Wishing upon a Star with Tax-payer Money in the Municipal Bond Derivative Market', *Washington University Journal of Urban and Contemporary Law*, 49 (1), pp. 315–349.
- Kraemer, K. (2010), 'Propheten der Finanzmärkte', *Berliner Journal für Soziologie*, 20 (2), pp. 179–201.
- Kuhlen, R. (2016), *Übersicht Prozesse: Swap-Geschäfte zwischen NRW Kommunen und Banken*. Data base compiled for Master thesis *Swaps als neues Instrument für kommunales Schuldenmanagement* (Cologne: University of Cologne).
- Lieberman, M. B. and Asaba, S. (2006), 'Why Do Firms Imitate Each Other?', *Academy of Management Review*, 31 (2), pp. 366–385.
- MacKenzie, D. (2006), 'Is economics performative? Option theory and the construction of derivatives markets', *Journal of the History of Economic Thought*, 28 (1), pp. 29–55.
- Mahoney, J. (2001), 'Beyond Correlational Analysis: Recent Innovations in Theory and Method', *Sociological Forum*, 16 (3), pp. 575–593.
- March, J. G. and Olsen, J. P. (2009), 'The Logic of Appropriateness', *The Oxford Handbooks of Political Science (Oxford Handbooks Online)*.
<http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/97801995484-53.001-.0001/oxfordhb-9780199548453-e-034> (Accessed: 13. February 2017).
- Mayntz, R. (2004), 'Mechanisms in the Analysis of Social Macro-Phenomena', *Philosophy of the Social Sciences*, 34 (2), pp. 237–259.
- Meyer, J. W. and Rowan, B. (1977), 'Institutionalized Organizations: Formal Structure as Myth and Ceremony', *American Journal of Sociology*, 83 (2), pp. 340–363.
- Muth, J. F (1961), Rational Expectations and the Theory of Price Movements, *Econometrica*, 29 (3), pp. 315–335.
- Nikolaeva, R. (2014), 'Interorganizational Imitation Heuristics Arising from Cognitive Frames', *Journal of Business Research*, 67 (8), pp.1758–1765.
- Ordanini, A., Rubera, G. and DeFillippi, R. (2008), 'The Many Moods of Inter-organizational Imitation. A Critical Review', *International Journal of Management Reviews*, 10 (4), pp. 375–398.
- Pacewicz, J. (2013), 'Regulatory Rescaling in Neoliberal Markets', *Social Problems*, 60 (4), pp. 433–456.
- Piotti, G. (2009), 'Cost Reduction through Relocation, or the Construction of Myths in Discourse', *Competition & Change*, 13 (3), pp. 305–326.
- Preda, A. (2007), 'Where Do Analysts Come from? The Case of Financial Chartism. *The Sociological Review*, 55 (S2), pp. 40–64.
- Rogers, E. M. (1983), *Diffusion of Innovations* (New York: The Free Press).
- Rona-Tas, A., and Guseva, A. (2001), 'Uncertainty, Risk, and Trust: Russian and American Credit Card Markets Compared', *American Sociological Review*, 66 (5), pp. 623–646.
- Sahlin, K. and Wedlin, L. (2008), 'Circulating Ideas: Imitation, Translation and Editing', in: R. Greenwood, C. Oliver, R. Suddaby, and K. Sahlin *The Sage Handbook of Organizational Institutionalism* (London: Sage), pp. 218–242.

- Salchow, F. (2000), 'Innovatives Finanzmanagement. Chancen nutzen - Risiken begrenzen', *Finanzwirtschaft - Zeitschrift zum Haushalts-, Finanz- und Steuerrecht der öffentlichen Verwaltung*, 11, pp. 244f.
- Scharfstein, D. S. and Stein, J. C. (1990), 'Herd Behavior and Investment', *The American Economic Review*, 80 (3), 465–479.
- Seawright, J., and Gerring, J. (2008), 'Case Selection Techniques in Case Study Research', *Political Research Quarterly*, 61 (2), pp. 294–308.
- Shackle, G. L. S. (1964), *General Thought-Schemes and the Economist* (London: Woolwich Polytechnic).
- Shiller, R. J. (1995), 'Conversation, Information, and Herd Behavior', *The American Economic Review*, 85 (2), pp. 181–185.
- Sinclair, T. J. (2005), *The New Masters of Capital. American Bond Rating Agencies and the Politics of Creditworthiness* (Ithaca: Cornell University Press).
- Smart, G. (1999), 'Storytelling in a Central Bank. The Role of Narrative in the Creation and Use of Specialized Economic Knowledge', *Journal of Business and Technical Communication*, 13 (3), pp. 249–273.
- Stinchcombe, A. L. (1986), *Stratification and organization. Selected papers* (Cambridge, UK, New York: Cambridge University Press).
- Stoffers, C. (2014), *Kommunales Schuldenmanagement. Von der Schuldenverwaltung zum Schuldenmanagement*.
https://www.haufe.de/oeffentlicher-dienst/haushalt-finan-zen/kommunales-schuldenmanagement/von-der-schuldenverwaltung-zum-schuldenmanagement_146_221438.html (Accessed: 13. February 2017).
- Tansey, O. (2007), 'Process Tracing and Elite Interviewing. A Case for Non-Probability Sampling', *PS: Political Science & Politics*, 40(4), 765–772.
- Tolbert, P. and Zucker, L. G. (1983), 'Institutional Sources of Change in the Formal Structure of Organizations: The Diffusion of Civil Service Reform, 1880–1935', *Administrative Science Quarterly*, 28, pp. 22–39.
- Trampusch, C. (2015), 'The Financialisation of Sovereign Debt: An Institutional Analysis of the Reforms in German Public Debt Management', *German Politics*, 24 (2), pp. 119–136.
- Trampusch, C. and Palier, B. (2016), 'Between X and Y: How Process Tracing Contributes to Opening the Black Box of Causality', *New Political Economy*, 21 (5), pp. 437–454.
- Trampusch, C. and Spies, D. C. (2015), 'Was treibt Kommunen zu Spekulationsgeschäften? Eine Analyse der Swap-Geschäfte von Kommunen in Nordrhein-Westfalen', *Politische Vierteljahresschrift*, 56 (1), pp. 104–129.
- van der Zwan, N. (2014), 'Making Sense of Financialization', *Socio-Economic Review*, 12 (1), pp. 99–129.
- VÖB (Bundesverband Öffentlicher Banken Deutschlands) (1995), *Neue Wege für das Finanz- und Zinsmanagement der Kommunen. Eine Information und Entscheidungshilfe der öffentlichen Bankengruppe* (Bonn: Bundesverband Öffentlicher Banken Deutschlands).
- Wahlers, M. (2004), 'Kommunen nutzen Derivate zur Reduzierung der Zinslast. Freiräume für erforderliche Investitionen durch ganzheitliches Konzept zum aktiven Schuldenmanagement schaffen', *Börsen-Zeitung*, 66, p. B5.

- Wang, Yingyao (2015), The Rise of the ‘Shareholding State’: Financialization of Economic Management in China, *Socio-Economic Review*, 13 (3), pp. 603–625.
- WestLB. 1999. *Annual Report 1999*. Düsseldorf: WestLB.
- Westphal, J. D., Gulati, R and Shortell, S. M. (1997), ‘Customization or Conformity? An Institutional and Network Perspective on the Content and Consequences of TQM Adoption’, *Administrative Science Quarterly* 42 (2), pp. 366–394.
- Whitley, Richard (1986), The Transformation of Business Finance into Financial Economics: The Roles of Academic Expansion and Changes in U.S. Capital Markets. *Accounting, Organizations and Society* (Special Issue Accounting, Knowledge Power), 11 (2), pp. 171–192.

Appendix

Interviews

The semi-structured interviews were conducted with city officials between February and November 2016. Each interview lasted between 60 and 90 minutes and was held in German. All statements are reported anonymously, so citations cannot be linked to the interviewee or the city they worked for. Translations for German quotations are our own. Anonymous transcripts or notes containing longer passages of the quoted text are available on request.

Table 2: Interviews

Interview	Date
City 1	November 4, 2016
City 2	September 12, 2016
City 3	February 29, 2016
City 4	March 3, 2016

Other Sources

We analyzed court decisions resulting from litigation between cities and banks as well as official documents, all of which we have anonymized. We also systematically consulted the regional press of each city we investigated.

Table 3: Other Sources

Source	City
Court decisions	City 1, City 4
Official documents	City 2
Regional Press	City 1–4

Chapter 4

Crisis, Expectations and Policy Change US and German City Swaps Disasters

Abstract

Policy analysis literature has not fully grappled with the conundrum, of why major policy failures (crises, scandals) lead to major or radical i.e. transformative policy change in some instances, while in others policies change only incrementally. By bringing the literature on uncertainty and the formation of expectations into the policy analysis literature, this article argues that the mode of policy change after major scandals depends on changes in expectations. Developing a two-step model, we first assume that periods of crisis evoke moments of uncertainty which lead to changes in expectations, defined as beliefs about the consequences of alternative courses of action. The anticipated consequences of a specific policy may drive policy change. Secondly, we suggest that crises induce transformative policy change when agents modify their expectations radically and use the existing uncertainty due to a crisis to challenge the status quo. Alternatively, if expectations are altered only incrementally, policy change is also incremental. Using the method of process tracing, we illustrate this model of anticipated processes in a paired comparison on municipal swaps disasters in Philadelphia in the U.S. and Würzburg in Germany. Our theory of how expectations influence policy change makes a novel contribution to policy analysis literature.

Key words: policy change, crisis, expectations

(under review in *World Politics*)

4.1 Introduction

In accord with Peter Hall (1993), policy analysis literature (e.g. Boin, Hart, & McConnell, 2009: 90; Hogan & Doyle 2007) often defines transformative policy change as a third order effect, thus a change of a policy paradigm and its hierarchy of goals, whereas incremental change comprises change in the policy instruments (second order) and their settings (first order). Recently, confirmed by resilient policies and institutions despite major interruptions such as the Global Financial Crisis (GFC) (e.g. Schmidt & Thatcher 2013: 145-285), the question of why crises, scandals, policy failures, or disasters *sometimes* induce radical policy change and sometimes do not is still puzzling. Consequently, various distinguished policy scholars of the Advocacy Coalition Framework (ACF), policy agenda setting studies, and the multiple streams of framework or learning models all agree that more theoretical and empirical work has to be done (e.g. Birkland 2016: 117; Boin, Hart, & McConnell 2009: 82; Krause, Yi, & Feiock 2016: 177; Nohrstedt 2008: 257, 263). For example, Nohrstedt (2008: 258) contends that “the question of why some crises result in major policy change while others do not” is an “intriguing issue”; and Krause, Yi, & Feiock (2016: 178) state that we still lack a “comprehensive theory” on how “program ineffectiveness” and “fiscal stress” may make an impact on policy termination.

By suggesting and probing a two-step model on the relationship between scandals and policy change our theory of how expectations influence policy change makes a novel contribution to policy analysis literature. Our model combines the literature on uncertainty and expectations (e.g. Basta 2017; Beckert 1996, 2016; Blyth 2002, 2003; Boin, Hart, & McConnell 2009; Radaelli 1999) with the literature on the relationship between crisis and policy change. In the first step, it assumes that periods of major crises, scandals, and policy failures evoke moments of uncertainty (similar Boin, Hart, & McConnell 2009: 81) which make expectations about the anticipated consequences of a specific policy important drivers of policy change. In accordance with Boin, Hart, and McConnell (2009: 83), we define crisis as “events or developments widely perceived by members of relevant communities to constitute threats to core community values and structures”; “[u]nscheduled events” (85); “big and bad for the community at hand?”

¹Uncertainty means that calculations and the assignment of probabilities to outcomes of an action are impossible (Beckert 2016: 43). Consequently, in policy-making processes, expectations, defined as beliefs about the consequences of alternative action-courses (Esser, 1999, chapter 7; Shackle 1964: 13), may become more important. The study of such processes comprises in essence the analysis of anticipated processes. As, according to Blyth (2003: 257),

“change occurs when expectations diverge and conventions falter” (similarly: Beckert 2016: 263-268), in the second step we claim that expectations may have an impact on policy change in moments of crisis. We suggest that crises induce major policy change if change agents alter their expectations radically and use uncertainty, due to a crisis, to challenge the status quo. If expectations are altered only incrementally, policy change is correspondingly only incremental. Using the method of process tracing, we illustrate this model in a paired comparison of municipal swap disasters in the U.S. and Germany.

Recent municipal swap policies that involved major losses and an intense public critique, and where respective city councils decided either to stop or to continue using interest rate swaps, constitute potential cases for illustrating the use of this model. Through interest-rate swaps or currency-rate swaps – which are the derivative instruments most frequently used by municipalities (O’Hara 2012: 250) – contracting partners ‘swap’ future interest rate payments. Depending on the development of interest rates, gains or losses occur. In various cities in the U.S. and Europe, municipalities experienced disastrous fiscal losses, with intense media and public outcry as a result (Kirkpatrick 2016; Pérignon & Vallée 2017; Fastenrath, Orban, & Trampusch 2017).

Following Tarrow’s (2010: 249) recommendation for paired comparison research designs, we have selected two cases – the municipal swap scandals in Philadelphia and Würzburg – which are “comparable but exhibit different processes or outcomes”. Since the 1990s, officials of these two cities (the potential “change agents” such as mayors, members of the city council, finance directors and treasurers) agreed to use swaps in order to manage their public debt, which in both cities had to be explicitly authorized by the city councils. In Philadelphia, due to the fiscal fiasco generating a wide-scale public debate, the city council has abandoned swaps, which means a transformative policy change. By contrast, in Würzburg the city council gave the city treasurer the ordinance to do new but different swaps (second order) and with better risk management procedures (first order), despite the crisis experienced; thus there was only incremental policy change. These two cities represent different national economic and political systems (e.g. liberal vs. coordinated market economy, presidential vs. parliamentary democracy, competitive vs. unitary federalism). At the municipal level, however – and this is decisive for our comparison – their local fiscal policy regimes are not only comparable but share crucial institutional conditions in the legal, fiscal and political context,² in particular in those which – according to recent studies (Khumawhala & Ranasinghe 2016; Pérignon & Vallée 2017; Singla 2016;

Trampusch & Spies 2015) – determine variation in municipal swap policies in Germany and the U.S. They are self-governed cities, the city council is the main policymaking body in municipal swaps with a low degree of autonomy of treasurers in swap decisions, they have experienced steady fiscal stress, and there was no change in governing political parties or ideology in our study period. Due to the similarities we view these causal factors as having been controlled for.

In order to explain why similar experiences in similar political-institutional contexts launch divergent municipal swap policy changes we employ process tracing in our within-case analysis (Rohlfing 2013; Trampusch & Palier 2016). We follow Rohlfing (2013: 36) and define process tracing “as a method for the collection of observations in order to be able to reconstruct the process that leads to the outcome of interest”. Considering Rohlfing’s (2013: 31) notion that the “fit between theory and method is essential in theory-guided research” our process analysis also acknowledges that our two-step model theorizes an *anticipated process* to explain the outcome under study. According to Rohlfing (2013: 34),

“a hypothesis explaining an outcome with anticipated processes focuses on the considerations that actors make before coming to a decision and/or committing a specific action. The consequences that actors expect to unfold if they make a specific action accounts for why they perform this action that then results in the outcome.”

Our paper is structured as follows: Combining the literature on modes of policy change with the literature on uncertainty and expectations (Basta 2017; Beckert 1996, 2016; Blyth, 2002, 2003; Boin, Hart, & McConnell 2009; Radaelli 1999), the second section theorizes our two-step model which links crisis with the two different modes of policy change and explains the logic of our process tracing analysis. In section three, we first introduce our paired comparison design by illustrating the similar legal, fiscal and political contexts of municipal swap activities and then map urban swap policies and city officials’ expectations before the crisis. Section four is comprised of our actual process tracing analysis on the “anticipated processes” launched by the swap disasters in Philadelphia and Würzburg which resulted in different dynamics of policy change. The fifth section presents the core implications of our analysis for political science in general.

4.2 Crisis, expectations and policy change

In policy analysis there are various strands of literature which explicitly analyze the relationship between crises and policy change.³ Although these approaches follow different causal explanations of policy change (Pierson 1993; Streeck & Thelen 2005; Jones et al. 2016; Nohrstedt 2008: 259) and how crises may have an impact on policies, most of them identify one major gap in the literature: They agree that the variability of policy change (transformative vs. incremental change) is not easily explained and that more empirical and theoretical work needs to be done in this respect (Birkland 2016: 117; Boin, Hart, & McConnell 2009: 82; Nohrstedt 2008: 257-263; van der Heijden & Kuhlmann 2017).

Combining the literature on uncertainty and expectations (e.g. Basta 2017; Beckert 1996, 2016; Blyth 2002, 2003; Boin, Hart, & McConnell 2009; Radaelli 1999) with the literature on policy change, this paper argues that policy research on crises should pay more attention to the issue of how crises evoke moments of uncertainty which make rationality a variable. Uncertainty is created “by the complexity of causal relationships in the economy” (Beckert 1996: 814) and means that calculations and the assignment of probabilities to outcomes of actions are more difficult (Beckert 2016; Fastenrath, Orban and Trampusch 2017). Consequently, in moments of crisis, expectations may become a major causal factor triggering policy change.

How can we conceptualize expectations triggering policy change if crises evoke moments of uncertainty?

First, when we define – with Peter A. Hall (1993: 279) – a policy paradigm as the “framework of ideas and standards that specifies not only the goals of policy and the kind of instruments that can be used to attain them, but also the very nature of the problems they are meant to be addressing”, expectations transpose a paradigm into assumptions of intended policy outcomes. Expectations are specific statements about the future, hence anticipated consequences of a future course of action. Following Beckert (2016: 263-268), we argue that expectations may induce deviations from existing routines, which may drive the search for alternative profit opportunities and policy alternatives. As soon as expectations are institutionalized, for instance through policies or practices, change will occur if they are altered. Taking up previous conceptual suggestions by Hall (1993) and Blyth (2002: 42-43), Beckert (2016: 266) suggests that expectations follow a life cycle similar to policy paradigms and that crises will lead to change if anomalies result in a loss of confidence in existing expectations, which “stimulates

new, more persuasive imaginaries” (similar: Blyth 2003: 257-8). If confidence in former expectations is not lost, policies will likewise remain stable. Here, we can also refer to Boin, Hart, and McConnell (2009: 81-82) who argue that uncertainty induced by crisis may lead to a unique situation of “frame contests”. They claim that crises may launch a contest “to exploit this crisis-induced opportunity space”, so that “[c]rises typically generate a contest between frames and counter-frames concerning the nature and the severity of the crisis, its causes, the responsibility for its occurrence or escalation, and implications for the future”. While frames tend to look backwards in trying to explain or give a specific interpretation of a crisis (Boin, Hart, & McConnell 2009), our focus on expectations emphasizes the importance of anticipated consequences for the eventual policy (Beckert 2016). Hence, referring to the recent study by Basta (2017), the impact of expectations on policy change in moments of crisis may be comparable to the impact of prospectively framed events on politics. In his concept of retrospectively vs. prospectively framed events, Basta (2017: 23) has demonstrated that prospectively framed events may or may not evoke transformative change because transformative political events are socially constructed. While he defines prospectively framed events as “occurrences that actors know will take place, but of whose outcome they are uncertain”, retrospectively framed events are “sudden, unexpected occurrences whose meaning is created after they take place” (Basta 2017: 1-2).

Secondly, for our empirical analysis it is also important to decide what would count as a major change of expectations (especially, in our cases of municipal swap deals) and how this relates to transformative policy change. Here, we focus on the intensity of changes in expectations which we define as a function of changes in their directions. Radical change can occur if expectations move from positive (gains of swaps) to negative (loss of swaps). It therefore follows that small changes such as changes in the content of positive expectations or movements from positive to neutral are not counted as transformative (third order change) but only as incremental change (second and first order change).

From this follows, finally, that – in moments of crisis – a change from positive to negative expectations (defined in the above sense) may align with paradigm change (thus, third order, transformative, policy change) while relatively resilient positive expectations precondition incremental policy change (second and first order change). If change agents challenge the status quo by replacing their previous positive expectations with negative ones transformative policy change occurs. This relationship between expectations and transformative policy change has to

be distinguished from how expectations may align with first and second order change. In that case those involved may be well prepared to change their beliefs and practices with regard to technical, instrumental, ‘non-core’ aspects of a policy” (Boin, Hart, & McConnell 2009: 90). Consequently, they change the policy instruments or settings only because they still transpose the old policies’ underlying paradigm into neutral or adapted positive anticipations of the intended policy outcomes. In effect, we hypothesize that – if in moments of uncertainty evoked by policy failures – policy makers expect that policy will be unworkable in the future, they will discontinue it, whereas if they expect that it will be still workable, they will not.

Our reasoning ends in a two-step model of anticipated processes which in our cases are related to transformative or incremental change: In the first step, we hypothesize that scandals evoke moments of uncertainty; challenged by uncertainty actors’ expectations’ change or resilience become crucial for the intensity of policy change; in the second step, we assume that expectations may change, and if city officials altered their expectations radically from positive to negative with regard to the outcomes of swap policies, then transformative policy change i.e. paradigm change and termination of swap policies will occur. If expectations are altered incrementally only second and first order policy change follows, hence, instruments are modified. Instead of speculative swaps only swaps for hedging purposes are used or swap settings change such as engaging better risk management procedures.

In our analysis of these anticipated processes in Philadelphia and Würzburg, we follow Rohlfing’s (2013: 36) recommendation and conduct our process analysis as follows: First, the *starting point* of the process we trace is an exogenous event, hence, the swap crises and uncertainty whose severity we also document by the public crisis narrative which evolved in both cities. According to Nohrstedt (2008: 258), it is important to document the *severity of a crisis* because incremental or no change may also only occur because of the “fact that the crisis was not severe enough”. Moreover, we document the existence of uncertainty by evidence that reveals policy makers were overstrained by the complexity of the situation because they failed to understand the technical details of the outcomes of interest rate swaps. Secondly, the *relevant process* we analyze is the decision-making one at the end of which the outcome is either to end swap use or continue with it because of the expectation of change. Thirdly, we *collect evidence* which indicates “that the political actors did reflect upon the hypothesized anticipated processes” (Rohlfing 2013: 36), hence, we scrutinize public documents such as financial reports, hearings, laws, court decisions, finance and local press articles⁴ and statements of key

informants directly involved in the process. These were collected by six in-depth semi-structured interviews⁵ to reconstruct the decision-making process and here especially assess expectations before and after municipal swap disasters. Our paired comparison of the anticipated processes begins for Philadelphia in 2010 and for Würzburg in 2006, when both cities were confronted with policy failure and a swap crisis. It ends for Philadelphia in 2013 when the city councillors clearly decided to stop swap use and when they even enacted a resolution that supported a state-wide swap ban (policy change). For Würzburg it ends in 2010 when the city council gave the city treasurer the power to adopt new swap policies with different instruments and settings, despite major crises.

4.3 The comparable cases, pre-crisis swap policies and expectations

Legal, Political and Fiscal Contexts of the Cities' Swap Activities

Before we test our causal model on the cases of Philadelphia and Würzburg, we start with a description of the relevant legal, political and fiscal context of the cities' swap activities. This will provide not only important background information but will also justify the case selection and our paired comparison research design. Although our two cities are in different countries with different economic and political systems, as has already been said, with respect to their local fiscal policy regimes, the countries are comparable. In both the local authorities are self-administered and responsible for public service delivery (Heinelt & Hlepas 2006: 26), and therefore regularly confronted with fiscal pressure (Kirkpatrick 2016; Trampusch & Spies 2015). In addition, on average, they are not only similar with regard to their fiscal and political-administrative capacities but have similar local tax autonomy (Jefferey, Sellers, & Lindström 2007: 617, 620). One might argue that the fact that U.S. municipalities rely more heavily on capital market funding (Kirkpatrick 2016; Sbragia, 1979: 9; Weber 2010) while for German municipalities' equalization transfers play a greater role in adjusting their balance sheets (Buettner 2007: 18), constitutes a problem for our comparison. However, these conditions let us anticipate that not Würzburg but Philadelphia should have continued with swaps, especially as in the U.S. the influence of the finance industry in local finances is much stronger (Kirkpatrick 2016; Weber 2010).

Moreover, because in the U.S. city governments' local autonomy also varies across states (Bowman 2017: 1119; INT_1), it is more important for our analysis that the two cities Philadelphia (in Pennsylvania) and Würzburg (in Bavaria) share crucial institutional conditions in law, finance and politics which may have an impact on municipal swap policies. The

similarities we outline are as follows: First, both cities are self-governed, the city councils are the policy-making body in municipal swaps, and treasurers have little autonomy in their local debt policies and use of municipal swaps. Secondly, both have experienced intense fiscal stress since the 1990s and in response to that have shifted to the use of interest rate swaps (IRS); this fiscal distress continued in the 2000s. Thirdly, it is to be highlighted that in neither city has party government, hence political ideology, changed since the crises. Recent studies by Khumawhala & Ranasinghe, 2016; Pérignon & Vallée 2017; Singla 2016; Trampusch & Spies, 2015⁶ on the variation in municipal swap policies in Germany and the U.S. identified these as major causal factors, yet despite the similarities there are distinctly different modes of policy change in reaction to municipal swap disasters. To put this in other words: Our cases “exhibit different process or outcomes” but they are comparable (Tarrow 2010: 249).

Table 1: Legal, Political and Economic Contexts of the Cities’ Swap Activities

	Legal Context	Fiscal Context (1990-2010)	Political Context
Philadelphia	Self-government (Home Rule Charter) State law (Pennsylvania) ⁷ Swap authorization: Debt Act (amended by Act 23) (2003) Approval by city council Low autonomy of treasurer appointed by mayor	Fiscal crisis starts in 1990 (due to reduction of federal aid) High indebtedness and debt service costs Swaps use since 1990	Domination of Democrats in city council Municipal election every two years Democratic mayor
Würzburg	Self-government (Basic Law, BayGO) State law (Bavaria) Swap authorization: <i>Derivateerlass</i> (1995) ⁸ Approval by city council; municipal companies are controlled by city council Low autonomy of treasurer elected by City council	Fiscal distress since late 1990s (due to reduction of business tax) High indebtedness and debt service costs Swaps use since 1999	Diverse city council and partisan politics 2008 Social-democratic (SPD) mayor ⁹

Source: Own compilation.

As both cities are part of federal political systems, the budgetary conditions are respectively regulated by Pennsylvanian and Bavarian state law. However, both cities have political and fiscal autonomy in accordance with their right of self-administration, which also affects their swap activities. In Philadelphia, the power to enter into swaps is a Home Rule power of the city; and the city and its component units are expressly authorized to use swaps since the Pennsylvanian Legislature enacted Act 23, which amended the Debt Act in September 2003 after heavy lobbying by the finance industry (Braun & Selway 2008). This swap bill empowers municipal entities to enter into swap agreements in order to hedge interest rate risk or reduce interest costs, but does not allow speculation with swaps. The authority to enter into swaps must be enacted by an ordinance of city council, which can be part of an ordinance for bond issuance (City of Philadelphia 2009, 2013a). The city controller signs off on all debt deals, the city council approves them, and the mayor oversees them (City of Philadelphia 2012: 43). Based on the principle of municipal self-government, Bavarian municipalities have similar autonomy when it comes to funding and debt management including using swaps. In 1995 the Bavarian Ministry of Interior (BStMI) implemented a derivatives decree (*Derivateerlass*), that like the Pennsylvanian swap bill states the legality of municipal swap use, but prohibits speculative transactions¹¹ (BStMI, 1995). It further designates the city council as responsible for signing swap contracts.¹²

In both cities the treasurers have little autonomy in deciding about swap policies (INTs_1,5) and are elected or appointed by politicians. In Würzburg they are elected by the city council, see article 43 (1) of the Bavarian Local Government Law (*Gemeindeordnung für den Freistaat Bayern*, GO), and in Philadelphia they are appointed by the mayor, see PA Cons. Stat. §§3013-14, 3111 (2016). Although, the analyzed swaps that produced losses in the case of Würzburg were conducted by the Würzburger Versorgungs- und Verkehrs-GmbH (WVV; Public Utility and Transport Company), city officials were responsible. In this company the city is not only the single shareholder (WVV 2003-2015) but it is legally prescribed (Article 92 GO) that it must retain “an appropriate influence through the supervisory board or a corresponding council” of the company: eight of the fifteen members of the WVV’s supervisory board were members of the city council, and, in addition, the mayor and the city treasurer were also board members (WVV 2003-2015). Consequently, city officials exerted political control over the WVV’s swap strategy, while the company’s managers, who are elected by the supervisory board, exercise only the specific operational decisions on swaps (Bissinger 2011, chapter 3.2;

INTs_4,5). Therefore, in both Würzburg and Philadelphia political players from the city council were the most forceful in approving the swap contracts.

Another crucial common feature of the two cases is the tremendous fiscal problems that have arisen. In the 1980s, Philadelphia was confronted with huge financial difficulties and by 1990 was on the verge of insolvency. This fiscal crisis was the result of a “basic, long-term structural” and a “short-term cash-flow problem” (Crone 1990: 1). The bad financial situation continued in the 2000s with another low in the years following the Global Financial Crisis. The city of Würzburg, which was known as a financially solid major Bavarian city until the mid-1990s, has been confronted with severe fiscal distress since then. In 2003 and 2004 the city suffered large budget deficits. As with Philadelphia, the city has made strong efforts to cope with the fiscal distress. Although, as a German city, Würzburg could not become insolvent there existed the threat of temporarily losing financial autonomy, even if not to the market as is the case in the U.S. (e.g. Kimhi 2010: 369), but to the federal state of Bavaria through a so-called *Haushaltssicherungskonzept* (budget consolidation concept) (Geißler 2009: 93-94). Thus, both cities sought desperately for ways to reduce their deficits. In sum, they experienced similar tremendous fiscal stress throughout the 1990s and 2000s which leads us to assume that fiscal and debt problems cannot explain the variation in policy changes with regard to swaps.

In the political context, whereas there was a clear dominance of Democrats in Philadelphia local politics for the whole study period¹³, in Würzburg the city council was more diverse but, according to our interviewees (INTs_4,5,6), partisan politics have not traditionally played a role in city politics. In the following, we map local swap policies and city officials’ positive expectations, before the cities experienced their swap disasters.

Cities’ Pre-Crisis Policies and City Officials’ Pre-Crisis Expectations

Before the scandals, swaps were a legitimate financial instrument in both cities. Philadelphia was the first major U.S. city to execute a swap, in 1990 (Dickson: 1990), but swaps were increasingly embraced only after the 2003 law. Since then, the city has entered into several fixed payer swaps with large investment banks as counterparties to the transactions. The city and the Pennsylvania Intergovernmental Cooperation Authority (a state body created in 1991 in the course of the city’s fiscal crisis to act on behalf of the city) entered into 20 separate swap transactions from 1990 to 2007, for a total notional amount (fixed amount of principal) of \$3.3 billion (City of Philadelphia 2012: 78-79). According to a former city treasurer, Winkler, most

of the swaps served the purpose of advanced refunding and were fixed payer swaps in which the city agreed to receive a floating rate and make a fixed rate payment (City of Philadelphia, 2012: 91). Another former city treasurer, Blakney, describes the optimistic pre-crisis expectations of swaps as follows: “The city hoped to save half a million in debt service over an ordinary bonds issue” (The Bond Buyer 1993). Winkler explained when trying to reconstruct the city officials’ expectations at the time of entering into these swaps at a city council hearing as follows:

“In going back and looking at the swap transactions and trying to imagine specifically why the city of Philadelphia used these swaps, we believe there were three reasons. The first was to save interest costs versus fixed rate bonds. The second was to lock in interest rates today for a financing that they wanted to do at some point in the future where they weren't able – they hadn't gotten to that call date that I referred to earlier. And then the third option was to front-load savings; that is, to extract a cash payment up front, sometimes tens of millions of dollars, which was taken into the budget at that time and used for other purposes” (City of Philadelphia 2012: 89-90).

These reasons reflect the pre-crisis expectations which were positive regarding swaps: interest cost savings, protection from rising interest rates and the chance of front-load savings. The school district of Philadelphia likewise hoped to lock in savings according to the swap advisor of the district during that time (City of Philadelphia 2012: 44).

In the mid-1990s German cities also greeted the financial innovations with unwarrantedly optimistic expectations. The Free State of Bavaria was the first German federal state which legalized the use of municipal derivatives (Frischmuth & Richter 2007: 45). Würzburg introduced the financial instruments in 1999 (Main-Post 2006c; WVV 2004). Between 1999 and 2006 the WVV entered into at least 15 swaps (WVV annual reports, 2003-2006; LG Würzburg 2008). The swaps differed in type, complexity, maturity and counterparty. WVV signed simple payer swaps, but also entered into derivatives with more complex interest formulae such as quanto swaps or CMS spread ladder swaps with Deutsche Bank, Bayerische Hypovereinsbank, Commerzbank and Bayerische Landesbank (WVV 2004). In 2001, for example, WVV entered into an interest rate swap, with a basic amount of €4.1 million and a maturity of 25 years, so that the swap contract will not end until 2026 (WVV 2013: 50). As with Philadelphia, Würzburg, city officials’ pre-crisis expectations were positive (INT_4). The

WVV emphasized that it had used swaps since 1999, hoping to avoid interest rate risks, to optimize the debt portfolio and to maintain flexibility and leeway in liquidity procurement (WVV 2005: 99, Annual Report 2004). In 2002, the city council adopted the city treasurer's proposal to use derivatives (restricted to one third of the debt portfolio) in order to secure low interest rates (Main-Post 2002b). In the same year, the city treasurer Dr. Uwe Schreiber proposed the option of using IRS in the city's debt management in the expectation of hedging interest rates and saving money on the city's debt (Main-Post 2002a). The WVV managers expected IRS to be appropriate instruments for managing their liability and in order to hedge their interest rate risk exposure. At first they realized the expected financial benefits (Main-Post 2006a). They earned almost €1 million on the contracts. Since their first forays into swaps, the management's expectations have grown. In 2003 the WVV agreed to sign a Risk Management Service Contract with Deutsche Bank (LG Würzburg 2008). The utility's managers anticipated optimizing the financial outcomes through the use of swaps. In accordance, swaps to the notional value of approximately €50 million were used to reduce the funding costs of the construction of the €50 million first combined gas and steam plant in Würzburg that was intended to produce cleaner energy for the city (HKW 2013; Main-Post 2006c; Przybilla 2008). After having outlined the cities' pre-crisis swap policies and city officials' positive expectations, the next section displays the swap disasters and how they generated moments of uncertainty and launched the anticipated processes of policy change.

4.4 Transformative policy change in Philadelphia and incremental change in Würzburg

In the analysis of our two-step model on the anticipated processes, firstly, we trace the starting point, the swap disasters both cities experienced and how the swap crises generated moments of uncertainty. In the second step, we analyze the relevant decision-making processes, at the end of which Philadelphia's city council decided on transformative policy change and Würzburg's on incremental change. In both cities officials reflected upon their expectations but while Philadelphia's expectations radically changed and successfully challenged the status quo, in Würzburg there was only an incremental move.

Swap Crises and Uncertainty in Philadelphia and Würzburg

Indeed, both cities were soon confronted with fiscal disasters which evoked uncertainty in the sense that it became impossible for city officials to determine in a rational way the outcomes of their swap deals. In Philadelphia, the first swap did not bring the expected financial benefits (The Bond Buyer 1993). The anticipated half a million savings did not materialize, although

the swap did not produce large losses. This looked different more than ten years later in the course of the GFC, when instead of expected rising interest rates, rates dropped. Far from saving money, the use of swaps significantly increased the city's costs on bonds compared with issuing fixed-rate bonds (DiStefano 2012b). In order to avoid further losses, the city wanted to get out of the swap transactions. However, only the cities' counterparties had the right to terminate the IRS contracts and so the city and its component units had to pay large sums in termination payments (City of Philadelphia 2001-2015). Between 2004 and 2011, this amounted to about \$269 million.

Facing these unexpected outcomes of their swap transactions, city councillors were uncertain about how exactly the losses were produced, how high the actual losses were and following from this how they should proceed with swaps (INT_1). Our interviewees confirmed that this uncertainty was fostered by the complexity of the financial products and the opposing statements about losses that made it impossible to come to a rational decision (INTs_1,3). The complexity of swaps became obvious when councillor Kenney stated at a Council Hearing in 2012 which was convened, among other reasons, to try to understand the complicated instruments: "I've been dealing with them for months and months now and still there's certain nuances that I'm not aware of" (City of Philadelphia 2012: 4) and "[What] I'm trying to figure out in my own brain is whether or not we should be doing these things at all ever" (City of Philadelphia 2012: 145). The former treasurer Winkler similarly emphasized the complex character of the instruments:

"Swaps and their interplay with credit markets is complicated. It's a complicated subject and not one that many non-financial people find easy to follow, especially we financial people sometimes may lapse back into financial lingo. So I'll try my best to do this in [as] plain English as I can" (City of Philadelphia 2012: 83).

Closely connected to their inherent complexity is the impossibility of an actual determination of the outcome (pay-offs) of swaps before maturity; in Philadelphia not all swaps have terminated, so that their outcomes will be realized only in the future. Using different methods and assumptions in their calculations, the council was confronted with different possible future losses: The Pennsylvania Budget and Policy Center estimated a loss of about \$170 million on the city's outstanding and terminated swaps in July 2011 and projected further losses of approximately \$244 million (Ward 2012). These numbers were contested by calculations presented by the city's financial department: According to the deputy treasurer James Laham

the possible loss (present value) ranged between \$2.6 and \$45 million (City of Philadelphia 2012: 113).

For the City of Würzburg events unfolded differently. A currency swap that was used in the early 2000s developed differently from how it was expected (OLG Bamberg 2009). However, the resulting losses have not been revealed by WVV. The IRS that were expected to save the city massive borrowing costs became a huge liability, at least since 2005. Instead of the expected gains, losses were piling up (see Court decision LG Würzburg 2008; WiWo 2008). A reasonable estimate of the value of the WVV swap portfolio in 2004 amounted to minus €1.5 million, which further grew to minus €4.8 million at the end of 2005. The blow came when the spread between short- and long-term interest rates developed inversely as expected in 2005 – the spread became smaller instead of larger – so that the CMS spread ladder swaps alone produced huge losses, to the sum of €2.8 million. Similarly the value of the ladder swap, for instance, moved from plus €67 thousand at the end of 2004 to almost minus €2 million within one year. The impending losses became real and other accruals amounting to €3.5 million were entirely used for termination payments to Deutsche Bank among others: the city sustained a total loss of €4.1 million (Court decision LG Würzburg 2008; WiWo 2008), which meant a direct cut of profit distribution to the city of approximately €3 million in 2006 (Main-Post 2006a).

These unintended consequences also evoked uncertainty with regard to swap use (INTs_4,6), as demonstrated by a council hearing held in November 2008. Former treasurer Christian Schuchardt (CDU) presented and asked the council for permission to expand the use of swaps in a new active portfolio-management framework in April 2008. However, the council was uncertain because of the swap crisis and so the councillors asked for an information hearing (City of Würzburg 2008a: 142; Main-Post 2008a; INT_4). As with Philadelphia, city councillors were overstretched by the complexity of the financial instruments: councillor Schmitt stated in the hearing that the first presentation of swaps in April 2008 had been too complex for him, so he asked for time to consider the problem and proposed a hearing (City of Würzburg 2008a: 150). He further pointed to the uncertainty of the interest rate development, that “can change like the weather” and is obviously hard to project (City of Würzburg 2008a: 150). Councillor Friedl argued in the same way by asking whether now was the time to use fixed interest rate debt: “... may be the time has come to create planning security instead of gambling” (City of Würzburg 2008a: 157).

Thus, both cities experienced an intensive crisis characterized by tremendous negative financial outcomes resulting from IRS transactions. That the two crises were really severe enough to generate moments of uncertainty can be documented by the public crisis discussions which evolved. For both cities the financial losses hit the headlines in regional, national and even in the international press (The Economist 2008), hence, establishing a specific public crisis narrative. The public became fully aware of the IRS failures. Thus, the swap losses led to a large outcry involving NGOs, research institutes, the media and courts.

In Philadelphia, investigations began into the experience of the Bethlehem Area School District led by Pennsylvania's state auditor, Jack Wagner. It gave a major impetus to the public perception of a crisis. The report published in 2009 found that due to fees and termination payments, IRS led to much higher costs for the School Districts' taxpayers than if it had issued a fixed-rate note. Jack Wagner concluded: "swaps are nothing more than a form of gambling with public funds" and "any benefits that these deals may confer (...) pale in comparison with the enormous risks involved, risks that may lurk for literally years in the future" (Wagner 2013: 1). Wagner further underlined his criticism by stating that "the fundamental guiding principle in handling public funds is that they should never be exposed to the risk of financial loss. Swaps (...) should have no role in government, where it is the taxpayers' money that is at stake" (Wagner 2009: 44). The auditor general diagnosed the problem as one of deceptive marketing by investment banks and too risky financial instruments which were used illegitimately by city officials (Wagner 2009, 2013).

The Pennsylvania Budget and Policy Center (PBPC)¹⁴ published a second report in 2012 drawing attention to the cities' swap problem. The report was presented at a 2012 Philadelphia City Council session (INTs_1,3). Echoing the auditor's report, the PBPC blamed the swap losses on the financial service industry's tactic to induce local governments to use risky financial products. This "Big Banks: Too Big to Trust" campaign was joined by the local non-profit organization "Fight for Philly" which likewise argued that greedy banks were to blame because they marketed complex financial products (INT_3).¹⁵ But it was not the bankers alone, who were blamed by the NGOs and the regional press: city officials came in for rigorous criticism. As a representative of Parent Power, a public-school parents' group, stated: "they were all in this together" (DiStefano 2012a). The swap deals gained more attention in the national and regional news as a result of the activities by PBPC, together with those of the

organization Fight for Philly, such as a press conference and policy briefing where the findings of the report were discussed with city council members, the media, and citizens (Fight for Philly 2012a, 2012b; INTs_1,3). This crisis narration was mirrored in the following public criticism as expressed through statements in the regional media and several organizations (INT_3).

Despite the relatively lower losses, compared with Philadelphia, the regional and national press started drawing public attention to Würzburg's IRS crisis in 2006 and it remained of high salience until 2009. The former mayor and chairman of WVV supervisory board, Pia Beckmann, brought the IRS losses into the light of day by informing the regional press herself. The crisis narration was quite similar to that in Philadelphia. The media presented Würzburg's IRS activities as an illegitimate practice of "gambling frivolously away taxpayers' money" (Hus 2008; Przybilla 2008; Rottwilm 2007) or "speculating and juggling with public funds" (Hammer 2007; Hesse 2008; Main-Post, 30 June 2006). The IRS crisis was framed as the result of a failure of management. The WVV managers were accused of too risky behavior, while the councillors who were part of WVV's supervisory board were heavily criticized for their inaction. In the regional press Würzburg's mayor, Beckmann, was accused by the opposition party FDP inter alia of not having fulfilled her duties as a leader; the councillors were reproached for lack of financial expertise (Main-Post, 1 June 2007). The FDP argued that councillors who are housewives or teachers do not have experience of complex financial transactions (Main-Post 2006e).

Another peak of public attention took place in 2008, when the first trial of Deutsche Bank began. Unlike the other banks, Deutsche Bank did not agree on a settlement, so that WVV decided to take legal action and go to court in order to recoup some of the lost money (INT_4). However, the WVV came away empty-handed: The Higher Regional Court (OLG) of Bamberg stated that the WVV's losses were self-inflicted and so there was no justification for compensation. The court ruling focused more attention on the public crisis in Würzburg: For example, the Association of Taxpayers, *Bund der Steuerzahler Deutschland* (BdSt), put a lot of the blame on the City of Würzburg and the WVV. In its annual black book in 2008 the BdSt called it a case of the irresponsible waste of taxpayers' money (BdSt 2008: 28-29) and reinforced the crisis narrative that was already under way in the regional and national press. Under the headline "speculation with tax money" the association compared the WVV swap deals with "bets, with which you can lose everything". The BdSt further stated "the juggling with highly risky financial products was not without repercussions, (...) and in the end it might

be Würzburg's citizens and tax-payers who are going to lose this bet" (BdSt 2008: 28-29). The regional newspapers (Main-Post 2008b; Bayerische Gemeindezeitung 2008; and Tageszeitung (TZ 2009)) referred to the black book and echoed this criticism.

Philadelphia's transformative policy change

Applying our two-step model, this section shows that after the swap disaster in Philadelphia members of the city council – the main policymaking body in municipal swaps – altered their expectations from positive (gains from swaps) to negative (loss from swaps), while the treasurer's expectations remained the same (INT_3). The radical change in the city councillors' expectations made transformative change possible.

With regard to the after-crises policy expectations, the empirical material for Philadelphia suggests that a gap existed between the city's finance department and the council's expectations. The divergence between the city council and the treasury became most visible at a council hearing in October 2012, where different crisis diagnoses and derived expectations clashed (INTs_1,3). While Nancy Winkler, the former treasurer, clearly argued in favor of future swaps based on the positive expectation that the city would benefit, the city council expressed its deep concerns based on its negative expectations (INTs_1,3).

In Philadelphia, treasurers' expectations regarding swaps remained stable, despite the realization of millions of losses and an increasing public debate in Pennsylvania about legitimacy and a possible ban on the instruments for municipalities since 2009 (INTs_1,2). Former treasurers Rebecca Rhynhart as well as Nancy Winkler wanted to keep the ability to do swaps (Kaske 2010) since they continued to view swaps as "important tools to allow the City to generate savings, reduce risks, manage our investments and access the financial markets effectively" (Winkler 2013: 1). Together with the city's swap advisor, she opposed a possible ban because "there is nothing in Philadelphia's experience with swaps that warrants this extraordinary measure" (Winkler 2013: 1). The city's finance director, Rob Dubow, also wanted to retain "access to a useful tool" (Varghese 2013) and even hired a firm to lobby against a possible ban (Varghese 2013).

In stark contrast to the treasury, the city council's expectation clearly changed as a result of the swap crisis, and eventually the council demanded a termination of existing swaps and a stop on any future use of swaps (INT_3). The shift in expectations is nicely illustrated by councillor James Kenney, who was already part of the council when the city entered into the deals in the first place. Kenney states that, while at the time the council was led to believe that swaps were "good deal for the taxpayer" (City of Philadelphia 2012: 6), after the crisis he was convinced

of likely further losses if the instruments were not prohibited. He evidently opposed Winkler's view, when he stated:

“I know you said you want to have it as part of your toolbox, but I still think long term we're going to run into the same problem again when everybody forgets about the fiscal calamity we just went through and things get a little greedier, I think things then tend to happen” (City of Philadelphia 2012: 145-46).

While the then treasurer Winkler and the city's swap advisor spoke out against a state ban of municipal swaps (Winkler 2013; INT_3), councillor Kenney sponsored a City Council Resolution urging the Pennsylvania State Senate to enact a law, which would repeal the ability of municipalities to use swaps (INTs_2,3). Based on the disastrous experiences, he demanded discontinuation of the practice (INT_3). The city council accepted the public crisis narrative (see e.g. councillor Green's comments during the council Hearing 2012 in: City of Philadelphia, 2012: 133-136; DiStefano 2012b; INT_3), and unanimously passed the resolution sponsored by Kenney in 2013 (City of Philadelphia 2013c). Although, the council did not formally enact a law that would forbid the use of swaps at local level, they banned them de-facto. The financial department would have preferred to enter into new swaps in order to restructure the existing swap-portfolio but they knew that the council would not authorize this (INT_1).

Würzburg's incremental policy change

In Würzburg, not only the treasurer's but also the city council's expectations changed only incrementally and did not veer from positive to negative (INTs_4,5,6). As a result, policy change was incremental (Hall 1993). Hence, there was only a modification of the instruments in that only swaps that serve hedging purposes would be allowed and better risk management procedures enforced. Speculative swaps that were understood to have led to the crisis¹⁶ were banned.

In contrast to Philadelphia, the Würzburg city councilors maintained their positive expectation that swaps would save the city money in the future (INT_4). The WVV entered into new swap deals in 2009 following treasurer Schuchardt's proposal for the introduction of systematic swaps in April 2008. Despite some individual voices being raised against the speculative nature of swaps (City of Würzburg 2008a, 2009; Main Post 2008a), the city councilors agreed to the

proposal, because they expected that the swaps would be totally different from those that caused the crisis (Main Post 2008a; INTs_4,5,6). Thus, the expectations of councilors did not concern the core question of future use or no use of swaps (INTs_4,5), but rather that a modification of the instruments (e.g. only swaps for hedging purposes and no speculative swap use) and their settings (e.g. better risk management and independent professional advice) should enable the treasurer to use swaps to the benefit of the city (INTs_4,5,6). Both the city council's and the treasurer's expectations remained consistent or only changed incrementally (INTs_4,5), as did those of the WVV management. For example, in 2006 the WVV managers provided an assessment report on WVV's swap activities, which stated that in the future the WVV should not use "speculative" swaps any more in their aim of optimizing the interest rate structure (Main-Post 2006d). The report clearly differentiates between these types of swaps and those serving "hedging" purposes, which were already commonly used before 2003 (Main-Post 2006d). In early 2007 the WVV managers expressed their stable expectations regarding swaps by stating that they were not against swaps but would use them judiciously in future (Main-Post 2007). At the same time, they promised that such a swap failure "will not happen again" (Main-Post 2007) because new mechanisms have been developed for controlling deals better. The other central insight was that the problems could be traced back to the lack of proper risk management and that the flow of information to the supervisory board needed to be improved (Main-Post 2006d). Optimistic expectations that swaps are valuable tools for the financial management department's future is best illustrated by the number of new swaps entered into (policy stability): As well as two new IRS concluded on behalf of one of its daughter utility in 2009 and 2010, WVV organized nine commodity swaps in 2009 and forty alone in 2011 (WVV, 2009, 2010, 2011). So, after the scandals, the expectations within the WVV did not correspond to the public crises outcry, but focused on the improvement of risk management instead of the abandonment of swaps; this has been adopted by the city council and the WVV supervisory board as well (INTs_4,5,6)

The city treasurer Christian Schuchardt, who joined the city in 2007, proposed an active debt portfolio management approach including the systematic use of swaps in April 2008 (when salience of the WVV crisis was high). In line with the WVV management Schuchardt insisted that high-risk swaps such as CMS spread ladder swaps should be excluded from his plans (Main-Post 2008a; City of Würzburg 2009; INTs_4,5,6). According to Schuchardt (2013) "the widely perceived disasters with highly complex swap-constructions have led to neglect of positive connotations of an active debt management approach". However, Schuchardt is

convinced that cities should “prioritize debt management again because it is a permanent task, which is beneficial in every market situation. Also, from the treasurer’s perspective it brings more financial leeway than the neglect of subventions in the voluntary area” (Schuchardt, 2013; INT_5). Schuchardt expected that IRS are appropriate instruments for hedging future interest rate risks (City of Würzburg 2009) and could help to reduce the interest burden (Main-Post 2008a; Schuchardt 2013; INT_5). The treasurer hoped to achieve a direct budget discharge through the use of “double swaps” and beneficial financial outcomes by exploiting long-term interest rates by using swaps (City of Würzburg 2008b: 734-735). In 2009, Schuchardt introduced the first swap (Forward-Payer-Swap) with which he expected to secure long-term low interest rates.

In the end, it was not the treasurer alone who had positive expectations regarding swap use; the council also had similar expectations (INTs_4,6). This is the crucial difference from the Philadelphia case, where the majority of the city council heeded the public crisis pleading and radically changed its expectations.

4.5 Conclusion

In the policy analysis literature, the explanation of the effect of crises on transformative (third order change) vs. incremental policy change (second and first order change) is still insufficiently covered. Adopting a novel two-step model, this paper has highlighted the role of changing expectations and added to current understanding. Our paired comparison on the municipal swap scandals in Philadelphia and Würzburg has demonstrated the plausibility of our model. In Philadelphia great public outcry, media attention, and numerous investigations following the huge losses from swaps resulted in the de facto abandonment of swap policy by the city council. In Würzburg a similar swap fiasco and public outcry lead to only incremental change because the city council gave the city treasurer power to do new but less risky swaps. Drawing on the literature on uncertainty and expectations, our model assumes that crises generate moments of uncertainty, and it therefore follows that expectations, understood as the anticipated consequences of a specific policy, may change as well. Policies can be thought of as crystallized expectations because they represent institutionalized policy paradigms, instruments, settings, and related expectations. Therefore, policies may change if expectations are altered. Indeed, our analysis has revealed that in both cities the swap fiascos evoked moments of uncertainty but while in Philadelphia city officials’ expectations turned from positive to negative, in Würzburg city officials’ expectations on swap policies remained

positive. Generalizing Rohlfing's (2013) differentiation between process tracing of realized vs. anticipated processes, we conclude that a proper understanding of the dynamic interplay between politics, polities and policies may need to take hypotheses and theories on anticipated processes (instead merely of realized processes) more seriously.

The findings of our study generate the following contributions and implications and should encourage further studies on policy change.

Firstly, by theorizing the *role of expectations and their change in the analysis of policy change*, we contribute a novel micro-foundation to the policy analysis literature and theorize the role of anticipated processes in policy making processes. However, the findings of our study also imply that more theoretical and empirical work needs to be done to explore the conditions under which expectations change incrementally or radically in moments of crisis and uncertainty. Future research on policy change shall direct its attention to explain why policy makers adapt their expectations differently when confronted with crises and uncertainty. Our study's objective has been to demonstrate that it is reasonable for policy researchers to extend the synthesis between the expectations and policy change literature.

Secondly, through our research design of paired comparison we have controlled for the probable *impact of institutions*, thus the legal and political context, on policy and expectation change. Obviously, institutions play a major role in policy making processes, politics and the formation of expectations. However, the findings of our study of comparable municipalities with different outcomes also indicate that comparative politics beyond institutional analysis is important as well. Coming back to the explanation of divergent expectation change beyond the legal, fiscal and political context for which we controlled in our research design, the treasurers' and councilors' educational and professional backgrounds, their level of financial literacy, might have influenced the divergence in the change of their expectations.

Thirdly, this brings us to the *literature on the role of technocrats in public policies*. Here, we also add that public outcry and uncertainty evoked by scandals do not necessarily lead to disempowerment of politicians in favor of technocrats – as our case of Philadelphia has demonstrated. City treasurers can be conceived as technocrats, defined as a sub-group of bureaucrats or professionals who possess specialized knowledge, expertise and education (Radaelli 1999). The Philadelphia city council has shown that democratic politics still count even though situations of uncertainty and complexity challenge politicians. Further studies

should investigate under which conditions crises lead to de- or re-politization. Even in highly complex policy fields, such as public swaps, the power of technocracy does not seem to be unlimited.

Fourthly, we contribute to recent studies on the *financialization of public finance and debt*. According to our findings, it seems reasonable to argue that in order to understand the adoption of financial market behavior in public debt and finance it is important to scrutinize how expectations are formed. As long as, even in moments of fiscal scandals and major losses, politicians believe that financial innovations bring about positive consequences (positive payoff) for the state or city, they will further financialize debt management and financial management, which may be harmful to taxpayers' pockets.

Notes

1. In this paper, we use the terms crisis, scandal, disaster, and policy failure synonymously.
2. For a description of the local fiscal policy regimes and legal and institutional frameworks of municipal swap policies in the two cities see section 3.1 “*Legal, Political and Fiscal Contexts of the Cities’ Swap Activities*”.
3. The relationship between crisis and policy change is discussed in the following subfields: ACF, policy agenda setting studies, the multiple streams model, the punctuated equilibrium concept or learning models (Baumgartner & Jones, 1991; Birkland, 1998, 2006, 2016; Boin, Hart, & McConnell, 2009; Dunlop & Radaelli, 2013; Hall, 1993; Kingdon, 1995; Krasner, 1988; Nohrstedt, 2008, pp. 257, 263).
4. Media articles for Philadelphia were collected via the regional newspapers listed in Nexis with the search terms (municipalit* AND swap*) OR (municipalit* AND derivative)*. For Würzburg, we systematically collected articles published in the regional newspaper Main-Post as well as collected the national newspaper via Nexis with the search terms (Kommune* AND swap*).
5. The semi-structured interviews were conducted with city officials between November, 2017 and March, 2018. To protect our interviewees from judicial prosecution, all statements are reported anonymously. Please note that due to the fiscal disasters and the fear of liability a lot of city officials declined our interview requests.
6. Please note that in their policy termination theory which they applied to climate protection initiatives by U.S. local governments Krause, Yi, & Feiock (2016) highlight fiscal stress, program ineffectiveness, and political ideology as major causes for ending policies.
7. Most relevant sections: Pennsylvania Consolidated Statutes, Title 53, §§3151, 5510, 8002, 8281, 8284, and 8285 (2016).
8. Most relevant sections: BStMI (1995, §§ 5.3, 8); *Bayerische Gemeindeordnung* (GO), article 71-72 and 108; for an informative overview see VÖB (2006, p. 16).
9. This change from a CSU to an SPD mayor is not relevant as the mayor has no decision-making power in swap policies.
10. The City’s Home Rule Charter does not specifically address swaps, but states that the City may exercise all powers of local self-government.
11. Speculative transactions are defined here as those that have no connection with specific loans or borrowings and those which are entered into only in order to generate profits.
12. However, the power can also be delegated to the mayor, which is not the case in Würzburg.
13. For decades the Democratic Party has held a majority in the city council and provides the mayor.
14. The PBPC is a non-partisan, non-profit policy and advocacy organization that focuses on tax equity and the impact of state and federal budget decisions on working families in Pennsylvania communities.
15. Fight for Philly is a grassroots coalition of residents, community groups, neighborhood associations, faith organizations, and labor groups (<http://fightforphilly.org/>).
16. The city council authorizes the treasurer to use „receiver swaps“, “payer swaps”, ”Doppelswaps”, “forward-payer-swaps”, “caps and floors”, but “foreign currency swaps”,

“Swap-Options” and “CMS Swaps without ex-ante risk restriction” are excluded (City of Würzburg, 2009, p. 32).

References

- Basta, K. (2017), 'The Social Construction of Transformative Political Events', *Comparative Political Studies* (online first). <https://doi.org/10.1177/0010414017740601>.
- Baumgartner, F. R. and Jones, B. D. (1991), 'Agenda Dynamics and Policy Subsystems', *The Journal of Politics*, 53 (4), pp. 1044–1074.
- Bowman, A. O'M (2017), 'The State-Local Government(s) Conundrum: Power and Design', *The Journal of Politics*, 79 (4), pp. 1119–1129.
- Bayrische Gemeindezeitung (2008), 'Bund der Steuerzahler in Bayern legte Schwarzbuch vor: „Spitze des Eisbergs“ öffentlicher Verschwendung', *Bayrische Gemeindezeitung*, October 23.
- BdSt (Bund der Steuerzahler Deutschland) (2008), *Die öffentliche Verschwendung: Ein Schwarzbuch des Bundes der Steuerzahler* (Wiesbaden: Bund der Steuerzahler Deutschland).
- Beckert, J. (1996), 'What is Sociological about Economic Sociology? Uncertainty and the Embeddedness of Economic Action', *Theory and Society*, 25 (6), pp. 803–840.
- (2016), *Imagined Futures: Fictional Expectations and Capitalist Dynamics* (Cambridge, MA: Harvard University Press).
- Bhatti, S. (2014), *Dirty Deals: How Wall Street's Predatory Deals Hurt Taxpayers and What We Can Do About It* (New York: Roosevelt Institute).
- Birkland, T. A. (1998), 'Focusing Events, Mobilization, and Agenda Setting', *Journal of Public Policy*, 18 (1), pp. 53–74.
- (2006), *Lessons of Disaster. Policy Change after Catastrophic Events* (Washington, DC: Georgetown University Press).
- (2016), 'Conceptualizing Resilience', *Politics and Governance*, 4 (4), pp. 117–120.
- Blyth, M. (2002), *Great Transformations: Economic Ideas and Institutional Change in the Twentieth Century* (Cambridge, UK: Cambridge University Press).
- (2003), 'The Political Power of Financial Ideas: Transparency, Risk, and Distribution in Global Finance', in: J. Kirshner (ed) *Monetary Orders: Ambiguous Economics, Ubiquitous Politics* (Ithaca and London: Cornell University Press), pp. 239–259.
- Boin, A., Hart, P. and McConnell, A. (2009), 'Crisis exploitation: Political and Policy Impacts of Framing Contests', *Journal of European Public Policy*, 16 (1), pp. 81–106.
- Braun, M. and Selway, W. (2008), 'Hidden Swap Fees by JP Morgan, Morgan Stanley Hit School Boards.' *Bloomberg*, February 1.
- BStMI (Bayrisches Staatsministerium des Inneren, für Bau und Verkehr) (1995), *Derivative Finanzierungsinstrumente für Kommunen, insbesondere SWAP-Geschäfte* (München: Bayrisches Staatsministerium des Inneren, für Bau und Verkehr).
- Buettner, T. (2007), *Equalization Transfers and Dynamic Fiscal Adjustment: Results for German Municipalities and a US-German Comparison*, Institute for Federalism and Intergovernmental Relations, Working Paper, 07/2007.
- Cataldo, A. L. (2004), 'Trends in the Region: A Year of Pennsylvania's Swap Law Adds Up to \$3.5B in Deals', *The Bond Buyer*, September 20.
- City of Philadelphia (2001-2015), *Comprehensive Annual Financial Reports*. http://www.phila.gov/investor/Financial_Reports.html.

- (2009), *City of Philadelphia Swap Policy December 2009*. http://www.phila.gov/-investor/pdfs/Swap_Policy_December.pdf.
- (2013a), *City of Philadelphia Swap Policy April 2014*. <http://www.phila.gov/investor/pdfs/SwapPolicyRevised52013.pdf>.
- (2013b), *Meeting of the Council of the City of Philadelphia: April 4, 2013*.
- (2013c), *Urging the State Senate of Pennsylvania to enact SB 293, a measure that will repeal the legal ability of all municipalities to enter into financially risky qualified interest rate management agreements, commonly known as "swaps.": Resolution No. 130232*.
- (2012), Council of the City of Philadelphia. Committee on Rules. *Public Hearing Investigating the Use of Qualified Interest Rate Management Agreements by the City and School District*, October 23.
- City of Würzburg (2008a), 7. *Sitzung des Hauptausschusses*, WP-2008/2014, 24 November.
- (2008b), 15. *Sitzung des Hauptausschusses*. WP-2008/2014, December 4.
- (2009), 28. *Sitzung des Stadtrates*. WP-2008/2014, July 23.
- Crone, T. M. (1990), 'Philadelphia's Fiscal Crisis'. Presentation to the Board of Directors Federal Reserve Bank of Philadelphia. December 20. <https://www.philadelphia-fed.org/-/media/publications/historical-archives/PhilaFiscalCrisis1990.pdf>.
- Dickson, S. (1990), 'Philadelphia First Major City to Do Interest Rate Swap Deal', *The Bond Buyer*, March 26.
- DiStefano, J. N. (2012a), 'PhillyDeals: Activists Push Philadelphia to Recoup Losses on Interest-Rate Swaps', *The Philadelphia Inquirer*, January 18.
- (2012b), 'PhillyDeals: Interest-Rate Swap Strategy Backfires, Costs City \$186M', *The Philadelphia Inquirer*, October 24.
- Dunlop, C. A. and Radaelli, C. M. (2013), 'Systematising Policy Learning: From Monolith to Dimensions', *Political Studies*, 61 (3), pp. 599–619.
- Esser, H. (1999), *Soziologie. Spezielle Grundlagen. Band 1: Situationslogik und Handeln* (Frankfurt a.M.: Campus Verlag).
- Fastenrath, F., Orban, A. and Trampusch, C. (2017), *From Economic Gains to Social Losses: How Stories Shape Expectations in the Case of German Municipal Finance*, MPIfG Discussion Paper 17/20.
- Fight for Philly (2012a), *From City Hall: Press Conference and Policy Debrief on Interest Rate Swaps*, January 19. <http://fightforphilly.org>.
- (2012b), *Local, National Press Cover our Swaps Policy Briefing*, January 31. <http://fightforphilly.org>.
- Frischmuth, B. and Richter, P. (2007), *Kommunales Zins- und Schuldenmanagement. Musterdienstanweisungen, landesrechtliche Regelungen und Praxisbeispiele* (Köln: Deutscher Städtetag).
- Geißler, R. (2009), 'Kommunalrechtliche Steuerungsansätze der Haushaltskonsolidierung: Haushaltssicherungskonzepte im Vergleich', *KWI-Gutachten 4*, University of Potsdam.
- GO (Gemeindeordnung für den Freistaat Bayern), *GVBl. P*, 796, BayRS 2020-1-1-I.
- Hall, P. A. (1993), 'Policy Paradigms, Social Learning, and the State: The Case of Economic Policymaking in Britain', *Comparative Politics*, 25 (3), pp. 275–96.

- Hammer, T. (2007), 'Fiasko in Würzburg', *Die Zeit*, July 13. <http://www.zeit.de/online/2007/29/querdax-wuerzburg-stadtwerke>.
- Heinelt, H. and Hlepas, N.-K. (2006), 'Typologies of Local Governments', in: H. Bäck, H. Heinelt and A. Magnier (eds) *The European Mayor. Political Leaders in the Changing Context of Local Democracy* (Wiesbaden: VS Verlag), pp. 21–42.
- Hesse, M. (2008), 'Banken als Verführer', *Süddeutsche Zeitung*, January 11.
- HKW (Heizkraftwerk Würzburg GmbH) (2013), *Umwelterklärung 2013* (Würzburger Versorgungs- und Verkehrs-GmbH).
https://www.wvv.de/de/media/downloads/downloadcenter/-header/unternehmen/verantwortung/nachhaltigkeit/umwelterklaerungen/hkw/130830_-umwelterklrung_hkw.pdf.
- Hogan, J. and Doyle, D. (2007), 'The Importance of Ideas: An A Priori Critical Juncture Framework', *Canadian Journal of Political Science*, 40 (4), pp. 883–910.
- Hus, C. (2008), 'Wenn der Kämmerer zockt', *Die Zeit*, May 8.
- Jones, M. D., Peterson, H. L., Pierce, J. J., Herweg, N., Bernal, A., Raney, H. L. and Zahariadis, N. (2016), 'A River Runs Through It: A Multiple Streams Meta-Review', *Policy Studies Journal*, 44 (1), pp. 13–36.
- Kaske, M. (2010), 'A Call to Stop Swaps', *The Bond Buyer*, January 29.
- Khumawala, S., Ranasinghe, T. and Yan, C. J. (2016), 'Why Hedge? Extent, Nature, and Determinants of Derivative Usage in US Municipalities', *Journal of Accounting and Public Policy*, 35 (3), pp. 303–325.
- Kimhi, O. (2010), 'Chapter 9 of the Bankruptcy Code: A Solution in search of a Problem', *Yale Journal on Regulation*, 27 (2), pp. 351–396.
- Kingdon, J. W. (1995), *Agendas, Alternatives, and Public Policies* (New York: Longman).
- Kirkpatrick, L. O. (2016), 'The New Urban Fiscal Crisis. Finance, Democracy and Public Debt', *Politics & Society*, 44 (1), pp. 45–80.
- Krasner, S. D. (1988), 'Sovereignty. An Institutional Perspective', *Comparative Political Studies*, 21 (1), pp. 66–94.
- Krause, R. M., Yi, H. and Feiock, R. C. (2016), 'Applying Policy Termination Theory to the Abandonment of Climate Protection Initiatives by U.S. Local Governments', *Policy Studies Journal*, 44 (2), pp. 176–195.
- LG Würzburg (Landesgericht Würzburg) (2008), *Urteil vom 31. März 2013, Az. 62 O 661/07*.
- Main-Post (2002a.), 'Es wird mir zu heiß, das ganz allein zu tragen', *Main-Post* September 24.
- (2002b), 'Jetzt günstiger Schulden machen', *Main-Post*, October 14.
- (2006a), 'Risikoreiche Spekulationen reißen Loch in WVV-Bilanz', *Main-Post*, June 30.
- (2006b), 'Standpunkt: Wo war die Aufsicht', *Main-Post*, June 1.
- (2006c), 'Wolf: Ich bin unaufgeregt und total cool', *Main-Post*, July 3.
- (2006d), 'Der Wirtschaftsprüfer wird jetzt gefeuert', *Main-Post*, August 3.
- (2006e), 'Mehr Finanzexperten in den WVV-Aufsichtsrat', *Main-Post*, August 11.
- (2007), 'Das wird uns nicht wieder passieren', *Main-Post*, February 16.

- (2008a), ‘Swaps in Würzburg ein Reizwort’, *Main-Post*, April 22.
- (2008b), ‘Verschwendung angeprangert’, *Main-Post*, October 10.
- (2008c), ‘Mit Schulden auf dem Geldmarkt spielen’, *Main-Post*, December 1.
- Nohrstedt, D. (2008), ‘The Politics of Crisis Policymaking: Chernobyl and Swedish Nuclear Energy Policy’, *Policy Studies Journal*, 36 (2), pp. 257–78.
- O’Hara, N. (2012), *The Fundamentals of Municipal Bonds* (Hoboken, NJ: Wiley)
- OLG Bamberg (Oberlandesgericht Bamberg) (2009), *Urteil vom 11.05.2009. AZ 4 U 92/08*.
- PBPC (The Pennsylvania Budget and Policy Center). 2012. *Bank Swap Deals Continue to Cost Philadelphia City, School District*. January 18. <https://www.pennbpc.org/media-clips-bank-swap-deals-continue-cost-philadelphia-city-school-district>.
- Pennsylvania Consolidated Statutes (2016).
- Pérignon, C., and Vallée, B. (2017), ‘The Political Economy of Financial Innovation: Evidence from Local Governments’, *The Review of Financial Studies*, 30 (6), pp. 1903–34.
- Pierson, P. (1993), ‘When Effect Becomes Cause: Policy Feedback and Political Change’, *World Politics*, 45 (4), pp. 594–628.
- Przybilla, O. (2008), ‘Nachkarten um verzockte Millionen’, *Süddeutsche Zeitung*, February 13.
- Radaelli, C. M. (1999), ‘The Public Policy of the European Union: Whither Politics of Expertise?’, *Journal of European Public Policy*, 6 (5), pp. 757–74.
- Rohlfing, I. (2013), ‘Varieties of Process Tracing and Ways to Answer Why-Questions’, *European Political Science*, 12 (1), pp. 31–39.
- Rottwilm, C. (2007), ‘Kommunen verwetten Milliarden Steuergelder’, *Manager-Magazin*, August 27.
- Sbragia, A. M. (1979), *The Politics of Local Borrowing: A Comparative Analysis* (Centre for the Study of Public Policy, University of Strathclyde).
- Schmidt, V. A., and Thatcher, M (eds) (2013), *Resilient Liberalism in Europe's Political Economy* (Cambridge, UK: Cambridge University Press).
- Schuchardt, C. (2013), ‘Die neuerliche Notwendigkeit’, *Die Sparkassen Zeitung*, June 14.
- Sellers, J. M. and Lindström, A. (2007), ‘Decentralization, Local Government, and the Welfare State’, *Governance*, 20 (4), pp. 609–632.
- Shackle, G. L. S. (1964), *General Thought-Schemes and the Economist. The Second Woolwich Economic Lecture* (London: Woolwich Polycentric Press).
- Singla, A. (2016), *Fair or Foul: Motivations for Government Use of Debt-Related Derivatives*, unpublished manuscript.
- Streeck, W. and Thelen, K. (eds) (2005), *Beyond Continuity: Institutional Change in Advanced Political Economies* (New York: Oxford University Press).
- Tarrow, S. (2010), ‘The Strategy of Paired Comparison: Toward a Theory of Practice’, *Comparative Political Studies*, 43 (2), pp. 230–59.
- The Bond Buyer (1993), ‘When Swaps Go Bad: Philadelphia’s Deal Provides a Lesson in Basis Risk for Issuers’, *The Bond Buyer*, December 06.
- The Economist (2008), ‘Snakes and Ladders’, *The Economist*, February 21.

- Trampusch, C. and Spies, D. C. (2015), ‘Was treibt Kommunen zu Spekulationsgeschäften? Eine Analyse der Swap-Geschäfte von Kommunen in Nordrhein-Westfalen’, *Politische Vierteljahresschrift*, 56 (1), pp. 104–29.
- Trampusch, C. and Palier, B. (2016), ‘Between X and Y: How Process Tracing Contributes to Opening the Black Box of Causality’, *New Political Economy*, 21 (5), pp. 437–54.
- TZ (Tageszeitung) (2009), ‘So wird unser Geld verpulvert’, *Tageszeitung*, March 8.
- Varghese, R. (2013), ‘Philadelphia Can’t Explain Its Swaps Yet Fights Ban: Muni Credit’, *Bloomberg*, April 5. <https://www.bloomberg.com/news/articles/2013-04-05/philadelphia-can-t-explain-its-swaps-yet-fights-ban-muni-credit>.
- Van der Heijden, J. and Kuhlmann, J. (2017), ‘Studying Incremental Institutional Change: A Systematic and Critical Meta-Review of the Literature from 2005 to 2015’, *Policy Studies Journal*, 45 (3), 535–54.
- VÖB (Bundesverband Öffentlicher Banken Deutschlands)(1995), *Neue Wege für das Finanz- und Zinsmanagement der Kommunen. Eine Information und Entscheidungshilfe der öffentlichen Bankengruppe* (Bonn: Bundesverband Öffentlicher Banken Deutschlands).
- Wagner, J. (2009), *A Special Investigation of the Bethlehem Area School District, Lehigh/Northampton Counties* (Harrisburg: Pennsylvania Department of the Auditor General).
- (2013), *Testimony of Former Auditor General Jack Wagner*. Senate Committee on Local Government, Hearing on SB 901 - 904. <http://local-government.pasenategop.com/-wp-content/uploads/sites/62/2013/09/wagner.pdf>.
- Ward, S. (2012), *Too Big to Trust? Banks, Schools, and the Ongoing Problem of Interest Rate Swaps*. (Harrisburg: Pennsylvania Budget and Policy Center) <http://pennbpc.org/sites/pennbpc.org/files/TooBigSwaps.pdf>.
- Weber, R. (2010), ‘Selling City Futures: The Financialization of Urban Redevelopment Policy’, *Economic Geography*, 86 (3), pp. 251–274.
- Winkler, N. (2013), *Testimony of Nancy Winkler, Treasurer, City of Philadelphia*. Senate Committee on Local Government, Hearing on SB 901 - 904. <http://local-government.pasenategop.com/files/2013/09/winkler.pdf>.
- WiWo (Wirtschaftswoche) (2008), ‘Geld zurückholen’, *Wirtschaftswoche*, March 19.
- WVV (Würzburger Versorgungs- und Verkehrs GmbH) (2003-2015), *Annual Reports 2003-2015*.

Appendix

Table 2: Interviews

Interviewee	Date	Place	Reference
Philadelphia City Official Administration	November 29, 2017	Telephone	INT_1
Pennsylvania State Official	December 9, 2017	Telephone	INT_2
Fight For Philly Political director	February 28, 2018	Telephone	INT_3
Würzburg City Councillor	January 11, 2018	Telephone	INT_4
Würzburg City Official Administration	February 12, 2018	Telephone	INT_5
Würzburg City Councillor	March 7, 2018	Telephone	INT_6

Chapter 5

Crisis Prone Public Financiers

Coping with Competition in the German Mortgage Banking Industry

Abstract

This study of the historical emergence of a crisis-prone business model in the German mortgage banking industry in the pre-crisis decades argues that an increased competitive pressure was the initial condition that explains this development. Aiming at crafting a minimally sufficient explanation for the outcome, this article has constructed a conglomerate causal mechanism derived from an integrated approach to the embeddedness of economic action from economic sociology. Based on the assessment of various primary and secondary sources, this explaining-outcome process-tracing analysis demonstrates that the examination of coping activities of banks, confronted with intensified competition, requires taking all three embedding social structures (institutions, cultural frames and network structures) and their relationship into account: only considering the subsequent shifts in all three structures together is sufficient to explain the outcome. In addition, the analysis contributes to the literature on the state-finance nexus by highlighting the banks' business with public debt as well as the diverse roles in which the state interacts with the financial industry as a "competitor", "borrower", "regulator", "economic policy maker" and "supervisor" and how the respective political decisions have influenced mortgage banks' business models.

Keywords: economic sociology, integrated approach to embeddedness, banking crisis, German mortgage banking, state-finance nexus, public debt, explaining-outcome process tracing

(submitted to *Politics and Society*)

5.1 Introduction

In the ten years since the outbreak of the global financial crisis, social sciences have increasingly dealt with its causes, characteristics and consequences as central research themes (Lounsbury & Hirsch 2010; Wolfson & Epstein 2013; Mayntz 2017). Several studies from political economy and economic sociology focus on the tectonic shifts in the national financial sectors of all advanced capitalist economies in the pre-crisis decades that were made possible by deregulatory reforms and ultimately led to these crisis developments (Davis 2009; Hardie & Howarth 2013). Certain bank business models – mainly characterized as market-based or investment banking implying extraordinary deliberate exposure to risk – have been identified as particularly vulnerable, creating instability throughout the banking sectors (Hardie & Howarth 2009; Mayntz 2017). The question of what has caused the emergence of specific bank strategies and business models is examined primarily for the US and UK (Fligstein & Goldstein 2012; Bell & Hindmoor 2015), while the literature largely misses out systematic historical analyses for specific banking groups and markets in other European countries. For Germany, which was also severely affected by a banking crisis in 2008, the focus of the few existing studies is largely reduced to the analysis of the famous three pillar banking groups (commercial, public sector and cooperative banks) that have been increasingly engaged in international investment banking activities since the 1980s (Seikel 2013; Trampusch, Linden & Schwan 2014; Detzer et al. 2017). However, some of the most intriguing cases of the German banking crisis lead us outside the three pillar universal banking groups (Laeven & Valencia 2010). Next to the *Landesbanken* and the big commercial banks, it was private mortgage banks that specialized in public sector lending, which ran, shortly before or in the course of the crisis, systematically into problems. The demise of Hypo Real Estate (HRE), with its spectacular rescue and nationalization, is only the most prominent crisis case from this specialist banking group (Sanio 2008; Expertenrat 2011). Thus, this explaining-outcome process-tracing study aims to explain why several German mortgage banks ended up in a highly risky business model that was prone to crisis.

Why is studying the crisis-hit German mortgage banking industry substantively and theoretically important? This is the case, first, because it is a crucial facet of the German banking crisis that required huge sums of taxpayers money to rescue banks from the brink of insolvency (Expertenrat 2011). Second, it is a particularly puzzling outcome because these specialist banks were regulated much stronger than the German universal banks and, by law, were only allowed to conduct risk-free mortgage and public-sector lending business. This highly regulated environment was originally introduced as safeguards for the covered bonds (*Pfandbriefe*), which

the banks use as their main funding source. In accordance with the highly restrictive German Mortgage Banking Act (HBG), the covered-bonds-issuing banks are also closely monitored by state supervisory agencies. Thus, from a theoretical point of view, the historically based strong presence of the state in this banking segment is particularly interesting. Although, several amendments and extensions of the HBG – that, in many details, determine business activities of these banks – have been implemented since it came into force in 1900, the main tenets centred on the prevention of risky bank behaviour are understood to have remained unwavering (Goedecke et al.1997: 79). Thus, in contrast to other crisis-hit banks, they were not allowed to conduct investment banking or proprietary trading activities, and they were not involved in the asset-backed commercial paper market and the market for mortgage-backed securities (Hardie & Howarth 2013; Fligstein & Habinek 2014; Fuller 2016; Thiemann & Lepoutre 2017). German mortgage banks conducted rather a traditional banking model, where the granted loans to mortgage and public sector borrowers remained on balance sheet, and credit risks were low because the issued bonds (*Pfandbriefe*) were conservatively collateralized (Fuller 2016).

Therefore, analysing this banking group is also theoretically interesting because it can be better classified as traditional banking rather than market-based, which is often found to be the source of the crisis (Hardie & Howarth 2013: 25). Based on their competitive advantage to issue *Pfandbriefe* (covered bonds), they were also supposed to have largely operated outside the intense competition between the universal banks (Fuller 2016). Consequently, the banks were perceived by the public and the markets as “boring banks” and “patient financiers” rather than “risk-takers” or “gamblers”. Thus, many politicians and commentators were shocked when several of these banks that focused almost exclusively on public sector lending had to be rescued closely before and in the course of the crisis (Von Heusinger 2005; Groth 2010; Bundestag 2009a; Expertenrat 2011). Hence, this begs the question: how can we explain that, in this highly regulated sector, a crisis-ridden business model could evolve over time? Based on the historically strong role of the state and the corresponding restrictive regulatory environment in which the banks operated, the further question arises as to what role the state-bank relationship played in this process and, in particular, why the state could not prevent the outcome to occur.

In order to answer these questions, following the deductive path of explaining-outcome process tracing (Beach & Pedersen 2019: 286), this paper combines mechanisms from an integrated approach to the embeddedness of economic action from economic sociology (Krippner & Alvarez 2007; Beckert 2010) into a conglomerate mechanism that helps “crafting a minimally sufficient explanation” for the outcome under study (Beach & Pedersen 2019: 284). The crafted

three-part mechanism is hypothesized to be triggered by the initial condition “intensified competition”, which is increasingly understood in the political economy literature as one crucial cause of systematic bank risk-taking and, thus, of the emergence of a crisis-prone business model (Bakir 2012; Bell & Hindmoor 2015; Mayntz 2017). Although single studies give first indications as to what the causal process between intensified competition and the emergence of a risky business model looks like (by highlighting the role of institutions, ideas and structures), the concrete mechanism is still, largely, black-boxed, obscuring the manifold relations between the state and banks in this process (Gamble 2015). The hypothesized “coping with competition” mechanism incorporates the three different types of embeddedness (institutions, culture and network structures), and the respective “mechanisms through which actors change the structural composition of market fields” to cope with competition (Beckert 2010: 606). According to Beckert (2010), such an integrated approach to embeddedness that incorporates the three approaches – “markets as institutions”, “markets as cultures” and “markets as networks” – is necessary to comprehensively understand changes in a market or sector.

The main findings of the study are the following: first, the explaining-outcome process-tracing study shows that we need to go back to the 1960s and trace a long-term causal process; we have to combine different mechanisms into a conglomerate mechanism to sufficiently explain the evolution of a crisis-hit business model in German mortgage banking. Since, with the crafted causal mechanism, a sufficient explanation of the outcome has been achieved, the value of integrated approach to embeddedness for capturing fundamental causal dynamics in a sector is underlined. Changes in one social structure (here, institutions), induced by coping activities of the actors facing intensified competition, subsequently lead to changes in the other two structures (cultural frames and network structures) based on the actors’ interpretation and, eventually, to the outcome under study. Second, unpacking the state-banks relations, the study shows that the state is involved in all parts of the causal process and, thus, has an important influence on the banks’ activities. As a policy-maker, the state influences the degree of competition in the financial sector; as the “regulator”, it generates or restricts additional profit opportunities for banks (which are also in its interest) by changing the law; as a “supervisor”, it ratifies shifts in the cultural consensus of the field and advocates the interests of the established banks; and as a “borrower”, it delineates the possible ways in which banks can generate profit. From these different roles, conflicts of interests can emerge, such as between a cost-minimizing public debt manager and the banking supervisor who wants stable and sufficient profitability for the banks to guarantee the stability of the banking system.

The paper is structured as follows: the next section, the outcome to be explained as well as the case selection and the methods and data are described. In the third section, a three-part mechanism is presented that is derived from the economic sociological literature on the embeddedness of economic action. Concrete empirical expectations are formulated. In the fourth section, the theoretical anticipations are then confronted with the empirical record for each part of the mechanism. The paper ends with the conclusions of the previous analysis.

5.2 Outcome to be explained: The crisis prone business model in German mortgage banking

Probably the most spectacular case of the German banking crisis occurred exactly ten years ago, when the German private mortgage bank Hypo Real Estate (HRE) was rescued with an unprecedented amount of state funds and was later nationalized (The Economist 2009; Hardie & Howarth 2009; Detzer et al. 2017: 199-200). Just as Northern Rock in the UK had experienced a year earlier, the HRE was unable to refinance itself in September 2008 and was, therefore, faced with a liquidity bottleneck that it was unable to overcome on its own (Handelsblatt 2008). What exactly brought HRE into this predicament? Which business model did the bank follow that brought it to doom? According to conventional wisdom held by many politicians, the Lehman crisis in the US in 2008 was the decisive factor that brought HRE into crisis (Bundestag 2009a; Schumann 2009). However, on closer analysis, it becomes evident that Lehman was only the last straw that broke the camel's back (Bundestag 2009a; Hellwig 2011; INT_5).¹ It was apparent the bank was already pursuing a crisis-prone business model that was, to a large degree, attributable to the former public sector finance mortgage bank Deutsche Pfandbriefanstalt (DePfa), which it had acquired in 2007 (Bundestag 2009a; Hellwig 2011). Although DePfa was mainly involved in long-term state financing – a banking business which is generally regarded as risk-free – the bank had a huge risk-exposure in its books. In line with the bank's focus on public finance, these risks stemmed neither from a possible default of their debtors nor from structured credit products such as asset-backed or mortgage-backed securities, which brought some *Landesbanken* to their knees (Bundestag 2009a: 11). The root of the trouble was that DePfa's profitability was based on excessive maturity transformation, i.e. the short-term refinancing of long-term loans, resulting in extreme interest rate and liquidity risks (The Economist 2009: 81; Expertenrat 2011; INT_5). DePfa was refinancing public sector loans (up to thirty years) via short-term covered bonds (*Pfandbriefe*) and even by raising money on the short-term money market through repos. The essential rationale behind this business policy is to increase the net interest income² (and, with it, the return on equity) by producing a larger

difference between the interest rate the bank receives for the loan granted and interest it must pay investors for the refinancing (the so-called interest spread). In accordance with the typical structure of the yield-curve, borrowing short-term is usually cheaper. Hence, by granting long-term loans and financing them through short-term borrowing, the net interest income increases. Thereby this practice is highly speculative: the bank tries to boost margins by betting on lower short-term interest rates when refinancing long-term loans (with expected higher interest rates) short-term.³ The short-term refinancing of HRE was increasingly realized via the short-term interbank market, on which mortgage banks depend compared to, for example, Northern Rock, because they cannot fall back on deposits for refinancing due to the lack of a branch network. Extreme maturity transformation and massive dependence on short-term refinancing on the interbank market was, therefore, highly negligent and dangerous (Admati & Hellwig 2013; INT_5). Thus, the bank's business model was based on speculation regarding the future development of interest rates and the yield curve, where the outcomes are always uncertain. The German banking supervision consisting of the Bundesbank and BaFin agreed that, by refinancing a huge block of long-term public sector assets on the basis of money market refinancing of six to nine months, HRE's business model was extremely risky, and the then- BaFin president, Jochen Sanio, even called the HRE a prime example of this highly crisis-prone business model (Bundestag 2009c).

However, HRE was not an isolated case (Bundestag 2009c: 72; INT_1,2,3,5), as Sanio (2008) emphasized at the annual reception of the Association of the German Pfandbrief Banks, "if you look closer at the German mortgage banking sector (...) then you know it is not only the Hypo Real Estate group that had to struggle with crisis-prone developments. It was only the most recent example, but by no means the only one", and he further demanded "that the times of Germany's secret gamblers should now be over for good". With the latter statement, Sanio referred to a much-noticed article in the financial magazine *Euromoney*, which had already exposed the high-risk and speculative business model of several mortgage banks in 1999 (Walker 1999). Almost a decade before the crisis, the financial supervisory authorities were also addressing this issue and warned that the maturity transformation and speculation of some mortgage banks was getting out of hand (Börsen-Zeitung 2000).⁴ Banks such as Düsseldorf Hypothekenbank, Allgemeine Hypothekenbank Rheinboden, Hypothekenbank in Essen, Dexia and DePfa, at the time, were adopting the business model described, which was to lead them into crisis one by one in the following years, beginning with AHBR which came into trouble in 2002 and was then protected from insolvency by the Deposit Protection Fund in 2005 (e.g. Von

Heusinger 2005; FAZ 2008, 2009; FTD 2011; I&F 2008, 2012; Betram 2015). These banks shared the focus on public finance business. As Sünderhauf (2006: 34) shows in his sector-wide empirical analysis, the level of interest rate risks that mortgage banks take on from maturity transformation increases with the volume of public sector lending business. Today, from these “secret gambler” public finance banks, there is no one left and the processing of the problems has occupied the acquiring banks up to the recent past (Otto 2018).

The question arises: how can we explain why these specialist banks developed such a risky business model in the pre-crisis decades, ending up in huge problems?

In order to explain this important historical outcome, in the following section in accordance with the deductive variant of explaining-outcome process tracing – that follows, largely, the steps of theory-testing process tracing, “where an existing cause and mechanism is tested to determine whether it can account for the outcome” (Beach & Pedersen 2019: 286) – a “conglomerate” three-part mechanism is crafted from the mélange of mechanisms derived from an integrated approach to the embeddedness of economic action. The mechanism consists of an initial condition (X), the outcome to be explained (Y) described above, a disaggregated mechanism (M) that links X and Y as well as scope conditions under which the mechanism is understood to operate. From this theoretical specification of the mechanism, case-specific predictions for the three parts are formulated and, afterwards, confronted with collected empirical material. Primary sources (annual bank reports, reports from the association of the German mortgage banks, official documents) are combined with secondary literature, the national and international financial press as well as six semi-structured interviews with central actors involved in the process, as well as experts on the subject to cross-check the validity of findings (triangulation) (Beach & Pedersen 2019: 212). The scope conditions that allow the mechanism to occur are the following: first, the separation in the German financial system between universal banks (three pillars) and specialist banks, which, with regard to mortgage banks, was maintained until 2005, when the outcome to be explained had already occurred. This separation and the status of a specialist bank meant, on the one hand, that mortgage banks had a clear refinancing advantage over the universal banks due to their *Pfandbrief* privilege, which they only shared with the Landesbanken. On the other hand, maintaining the principle of specialty meant limiting risk simultaneously. The business area was limited to risk-free mortgage and public sector lending. As a result, banks have not been able, as commercial banks or Landesbanken have been doing since the 1980s, to establish an investment banking branch and draw profits from trading activ-

ities on a larger scale. The mortgage banks were not allowed to do any of this. The amendments to the Mortgage Bank Act in the second half of the 20th century did nothing to change this cornerstone of “risk limitation through speciality”. Second, an important context for the operation of the mechanism is seen as the slipping of Germany into the debt state since the 1960s (Streeck 2013: 74-75, 2014; Ullmann 2017). What is important here is the steady rise in the state’s borrowing requirements, which, although ebbed somewhat in the 1980s (due to consolidation efforts), rose sharply again with reunification in the 1990s. This increasing demand for credit on the part of the state, at all levels of administration, results in a continuous source of business for the mortgage banks specialising in long-term state loans and, thus, formed the basis of the crisis-ridden business model. Beginning with the initial condition (X) increasing competitive pressure on mortgage banks that evolved in the 1960s, the “coping with competition” mechanism is understood to work in the long term. As Beach and Pedersen (2013: 56) note, causal mechanisms differ in the time horizon in which causal forces produce an outcome: “a longer-term mechanism will look very different from a short-term mechanism”. Thus, the “coping with competition” mechanism has “causal impacts that first become significant only after they have been in action over a long period” (Beach & Pedersen 2019: 82), when thirty years after the mechanism was triggered, a highly risky and crisis-prone business model became apparent in the late 1990s.

5.3. Competition and the embeddedness of economic action

Social scientists increasingly discuss – among the large list of factors that have contributed to the crisis – intensified competition in a national financial services industry as one of the most important driving forces that explain shifts in bank strategies and increased bank risk-taking (Bakir 2012; Bell & Hindmoor 2015; Fligstein & Roehrkasse 2016; Mayntz 2017). Bell and Hindmoor (2015: 1) state, for example, “we find that banking markets with high levels of competition and low returns from traditional lending are likely to pursue risky forms of trading activities and are prone to financial crises”. Also, Fligstein and Roehrkasse (2016) find a statistically significant and positive effect between competitive pressure on financial firms and risk-taking and even fraudulent bank behaviour. Also, some studies from economics have found that competition enhances bank risk-taking behaviour that is understood to negatively affect financial stability (Keeley 1990; Hellmann et al. 2000; Allen & Gale 2000; Vives 2016). However, the concrete causal mechanism that transmits an increasing perceived and experienced competition among banks (X) into risky business models (Y) is still largely black-boxed. Although a few studies provide initial indications of how the causal process is to be understood

(Bell & Hindmoor 2015, Bakir 2012), most of them tend to model the relationship as rather static, according to which increased competition more or less automatically led to bank risk-taking. Furthermore, the few studies that have a more dynamic understanding of how exactly competitive pressures trigger bank behaviour share another shortcoming: they largely underexpose the role of the state in this process (Pardi 2014; Gamble 2015). The state is often reduced to its deregulatory financial policies – that are understood to be highly captured by the interest of finance – while the ongoing and varied relations between states and banks are insufficiently examined.

In order to overcome these shortcomings, this political economic research is combined with a broader or integrated view to the embeddedness of economic action from economic sociology that is in line with a Polanyian interpretation of the concept (Krippner 2001; Krippner & Alvarez 2007; Beckert 2007, 2010). Following such a broad view has three implications: first, three coordination problems (value assessment, cooperation and competition) which economic actors face in capitalist societies are the starting point of the analysis (Beckert 2009). Second, to investigate how actors cope with these coordination problems, one has to examine the three market embedding structures (institutions, culture and network structures) within which economic action takes place. Third, it implies to systematically analyse the reciprocal relationship between state and economic actors in resolving these coordination problems (Block & Somers 2014). These three building blocks are further detailed in the following.

First, Beckert (2007) stresses that it is not the embeddedness of the economy but, rather, the identification of the main coordination problems of economic actors that should be the departure point of economic sociological empirical analyses. In addition to the problems of cooperation and value, *competition* is seen as the fundamental problem that businesses in a capitalist market economy must face and about which they must look for possible solutions. Starting from the assumption that firms aim to create stable conditions which enable them to generate stable profits, the introduction or intensification of competition jeopardises this demanded stability and creates uncertainty (Fligstein 2001). This uncertainty regarding the survival of a firm results from different sources: competitors enter a field and specific line of business, initiate price competition, offer more attractive products, secure an increasing market share and may ultimately even drive the company out of the market (Fligstein 2001: 17). Still, it should be emphasized that competition is by no means viewed as naturally given, but its form and degree is assumed to be strongly dependent on the activities of the state (Beckert 2009: 258).

Second, adopting a broader Polanyian perspective on embeddedness allows us to analyse “the actual solutions market actors find for the identified coordination problems as a combination of all (...) types of embeddedness and their mutual interdependencies” (Beckert 2007: 15). The embeddedness of market relations and the possibility to influence market’s social structures (institutions, cultural frames and networks) enable actors to cope with increased competition and to reduce uncertainty caused by it (Fligstein 2001: 17; Beckert 2009: 257-259). However, the actors’ attempts to reconstitute stability does not necessarily generate success, but it is also possible that those coping activities end in unintended outcomes (Fligstein 2001: 17).

Third, Block emphasizes that “one would expect to find the root of economic crises in the particular fit between economic logics and state action” (Block 1990: 297-298). Older as well as newer studies in this diverse literature have explicitly focused on the mingling of political and economic interests (Carruthers 1996; Preda 2007) and, more recently, have studied public “fiscal institutions and national financial markets” as “complex, interlocking, coevolving systems” (Quinn 2017). Thus, the state plays a central role, be it in the political-institutional, cultural or structural embeddedness of economic action: “governments are deeply implicated in defining the various social structures that stabilize a market” (Fligstein 2001: 19).

Drawing on these building blocks, a “conglomerate causal mechanism” is specified below, based on Beckert’s (2010) remarks on the concrete mechanisms leading to change in a field or sector, aiming at crafting a minimally sufficient explanation “that accounts for all of the important aspects of an outcome” (Beach & Pedersen 2013: 18). In essence, based on empirical studies, Beckert (2010) argues that changes in one of the embedding social structures induced by actions of economic actors lead to subsequent changes in the others and that it is hence necessary not only to look at one but, rather, how economic action takes place in all the three structures to fully understand the changes in a specific sector. In this study, a perceived and experienced intensified competition in the market for mortgage banking represents the initial condition (X) that is expected to trigger a causal mechanism (M) to operate and that is assumed to cause the emergence of a crisis-prone bank business model (Y). The “coping with competition-mechanism” (M), further specified below consists of three sequentially consecutive parts. In the following, each part will be theoretically specified, based on the ensemble of perspectives on the embeddedness of markets: “markets-as-institutions”, “markets-as-culture” and “markets-as-networks”.

Political Embeddedness (institutions)

Political or institutional embeddedness (Zukin & DiMaggio 1990: 20-21; Fligstein 1996; 2001; Fligstein & McAdam 2012; Block 1990; Carruthers & Ariovich 2010) refers to the dependence of market actors on formal rules set by the state, which substantially enable them to achieve their main goal of stable profit generation. Legislation and laws enable and constrain activities of firms. This has effects on the relative profit opportunities of firms in a given field, resulting in a power struggle between market actors for the most advantageous regulation, i.e. regulation that gives them the greatest possible competitive advantage over the others. Fligstein and McAdam (2012) claim that it is principally the incumbents in a field (the largest companies) who are trying to defend or restore the status quo. Triggered by the destabilization of markets (by increased competition), these firms (or associations of firms) naturally turn to the state for help and lobby for legislation that they consider to be more advantageous, and which they expect to counter the competition problem (Fligstein 2001: 19).

However, this attempt to influence regulation will only be successful if firms persuade policy-makers, so the state regulator eventually grants the companies' wishes. Since conflicting interests usually exist between different market groups (fields), according to Fligstein (2001: 12), the state must decide either to take sides or not to intervene at all. However, the state has also its own power and interests that are "autonomous from economic elites, particularly when those elites disagree" (Fligstein 2001: 13). As current literature on the state-finance nexus shows, these autonomous interests of the state can, of course, be congruent with the interests of the regulated. Instead of narrow power arguments (in which the state meets financial institutions' wishes because it is subject to their structural and instrumental power), this literature illustrates that the institutional embeddedness of finance is rather a result of the mingling of political and economic interests (Carruthers 1996; Quinn 2017; Dutta 2017; Braun 2018; Trampusch 2018). Quinn (2017) shows, in her historical case study on the emergence of modern securitization, that the US government authorized the issuance of mortgage-backed securities in the late 1960s because of specific fiscal policy goals. Likewise, Trampusch (2018) demonstrates that deregulatory reforms are the result of a congruence of interests between the state and the financial sector: while the banks want more leeway for their activities, the state realizes that existing restrictive regulation is also detrimental for their own debt policy-making.

Derived from these theoretical considerations, evidence in the empirical material is expected to find that (the largest) mortgage banks, represented by the Association of German Mortgage Banks, lobby for a regulatory change because they hope for a possible solution to the increased competition problem (faced by all mortgage banks) they have identified. The banks are expected to lobby for more flexibility in their business activities (deregulation) and, at the same time, for maintaining their existing competitive advantages. The state, in turn, is expected to meet the banks' demands, from which it anticipates own benefits for its future fiscal policy.

Cultural Embeddedness (cultural/cognitive frames)

Markets are not only understood to be embedded in *institutions* but, also, in *culture* (Zukin & DiMaggio 1990; Carruthers & Babb 2000). The cultural embeddedness of economic relations refers “to the role of shared collective understandings in shaping economic strategies and goals. (...) Culture provides scripts for applying different classes of exchange. Finally, norms and constitutive understandings regulate market exchange, causing persons to behave with institutionalized and culturally specific definitions of integrity” (Zukin & DiMaggio 1990: 17). Fligstein (1990; 2001) has coined the term “conceptions of control” to grasp these cultural frames “that define what actions are legitimate and which outcomes most desired” and “that offer other actors identities” (Fligstein & McAdam 2012b: 291) in a field or market. These “conceptions of control” more specifically refer to a shared consensus or cultural understanding among market actors of how to make money in that field or sector, that help to reproduce the status quo (Fligstein 1996). According to Beckert (2010: 618) changing institutions can be the source for a change in these cognitive or cultural frames. Accordingly, Goldstein and Fligstein (2017) show that shifting regulations in the US have rendered the existing shared consensus among banks to be dysfunctional in serving to preserve the status quo, and leading firms to adjust their cultural frames. US banks have, in turn, shifted their underlying conception of control from one that was based on the division of labour and “relational banking” towards what they call an “industrial conception of control” based on vertical integration which is based on money-making through fee generation via the securitization process instead of traditional money making through interest spreads. An often-overlooked aspect regarding culturally embeddedness of markets is that the state is not only involved in markets through legislation but has close links to the market actors through its supervisory function (Thiemann & Lepoutre 2017). State supervisory actors are deeply implicated in the creation of and shifts in the shared cultural understanding in a field because they “ratify” a new conception of control (Fligstein &

McAdam 2012b: 297). Having state actors on board reinforces the legitimization process of new market strategies.

The empirical predictions derived from the literature on cultural embeddedness are the following: the new gained profit opportunities emerging from institutional changes are expected to render the existing conception of control as dysfunctional. To exploit these opportunities, actors are expected to shift the underlying conceptions of control in the mortgage-banking field, and previously illegitimate practices and strategies (deliberate risk taking) for making money become legitimate. In addition, the state is anticipated to play a crucial part in the construction of a new conception of control, as a source of legitimization and especially by “ratifying” it.

Structural Embeddedness (network structures)

The third social structure, in which markets are entrenched, was termed by Mark Granovetter (1985) as “structural embeddedness” and broadly refers to the interpersonal relationships that underlie economic action. The term ‘structure’ refers to the nature of these relationships. In this area of research, network analysis is often at the forefront, the fundamental premise of which is that companies position themselves relative to one another. A firm’s success is highly dependent on its relative position within a network. Thus, there exist disparate interests to reproduce or alter the established network structures. In the following, network structures are confined to what Beckert (2010: 612) calls “its simplest expression”, and what is at the centre of Fligstein and McAdam’s (2012) theory of fields: the struggle between incumbent and challenger firms. While incumbents are the established and most powerful actors in a field (e.g. operationalized as biggest market share), who try to maintain the status quo, challengers are less powerful but have an interest in changing their position (e.g. finding niches). Usually, challengers accept and have to adjust to actions and cultural frames set by dominant actors for the field. Abolafia (1996: 153), on the other hand, argues that challengers of the status quo sometimes become deviant innovators, who “will not come from the top tier firms nor from the already dominant, but rather from those firms with less access to the best customers and their pools of capital”. He further argues that these innovators “are deviant in the sense that their methods (means, strategies) are outside the currently accepted practices” (Abolafia 1996: 153), and they deliberately violate a cultural norm to better their relative position in the network structure through extraordinary profit generation. However, as Abolafia (1996: 154) shows in his case study on future markets, a previous shift in the cultural understanding in the field was

a “necessary and conducive condition” for the deviant action to take place. Also, Beckert (2010: 614) theorizes that a shift in the previous cultural frames leads to a shift in the network structures because this “make market actors aware of profit opportunities that have hitherto escaped their attention.” Deviant innovation from challengers leads to a considerable conflict with incumbents, “who fight the innovators tooth and nail” (Abolafia 1996: 154). Thus, the relations between incumbents and challengers can change from “cordial and cooperative” to “hostile and competitive” (Fligstein & McAdam 2012b: 293). If the innovation is successful, challengers can also become incumbents over time, which further threatens the position of incumbents and pressures them to adjust more in the deviant direction (Fligstein & McAdam 2012b). Confronted with such inner-field conflicts, incumbents appeal to the state for help to restore the old order (Fligstein 1996).

From these theoretical arguments, evidence, found in the empirical material, is expected to prove that the previous shift in the cultural frames has triggered a change in the relation between challenger and dominant mortgage banks. More specifically, it is expected that challengers became aware of the new profit opportunities due to the previous shift in the conceptions of control; they deliberately deviate from the legitimate business model because they anticipate to improve their relational field position by following the deviant business model (based on risk-taking). The deviance of the challenger banks is further expected to have shifted the relationships of the field members, from primarily cooperative to primarily competitive. The incumbent banks are, on the one hand, expected to adjust to the successful deviant business model, and on the other, they ask the state for help to constrain the deviant behaviour. The state supervisory agency (BaKred) is expected to take action that is in line with the incumbent banks. See below in table 1, the summary of the theoretical specification of the causal mechanism.

Table 1: Theoretical specification of causal mechanism

Parts of the causal mechanism	Entities and activities
Context	German banking system based on the separation between universal and specialized banks; the emergence of the German debt state (increasing public borrowing requirements from the late 1960s onwards)
Independent Variable	economic actors from a field perceive and experience increasing competitive pressure (initiated from state and non-state fields), which creates growing uncertainty regarding the survival of the firms in the field (<i>increased competition</i>)
Part 1 (n1 >)	economic actors (incumbents) who perceive their stable profit-making under threat (instability) seek to influence the rules of the game to enhance their competitive position (being able to resolve the competition problem); the <i>state</i> meets those regulatory demands (and creates new profit opportunities for the regulated) from which it anticipates own policy benefits (<i>political-institutional embeddedness</i>)
Part 2 (n2 >)	the new rules and the resulting new profit opportunities trigger a shift in the cultural understanding in the sector to legitimately exploit them; <i>state</i> supervisors are a crucial part of the new consensus/conception of control and <i>state</i> 's behavior is the reference for the legitimation process (<i>cultural/cognitive embeddedness</i>)
Part 3 (n3 >)	The changed conceptions of control trigger a shift in the structure of social relations in the field by making challengers aware of a promising, albeit deviant, way (profit opportunities) to improve their position against incumbents in the field; the struggle between incumbents and challengers develops into a fierce competition (with diverging cultural understandings); the <i>state</i> is expected to intervene on behalf of incumbents (<i>structural embeddedness</i>)
Dependent variable	the <i>state</i> 's failure to effectively regulate the "deviant" business model (based on excessive risk-taking) that was successful in the first years, led several "deviant" or "non-conventional" banks being brought under the wheels already in the run-up, but at the latest in the course of the crisis (<i>crisis prone business model</i>)

5.4. German mortgage banks under increasing competitive pressure (1960s-1974)

Profound structural shifts in the German banking industry, as well as macroeconomic, social and political developments of the 1960s and early 1970s caused an entirely changed competitive environment for the field of private mortgage banks. The most pervasive transformation influencing competition was a gradual dissolving of the division of labour in the mortgage market that manifested an extension of universal banking in the three pillar banking groups (VDH 1970; Hankel 1971; Goedecke 1973: 91; Ball 1990: 176).⁵ Up to the 1960s, mortgage banks could generate stable profits based on the existence of clear distinction between well-defined segments in the market (Redenius 2009: 47): mortgage banks that were giving long-term prime mortgages (refinanced through long-term *Pfandbriefe*) were not competing with building societies granting long-term second mortgages (refinanced through the Bauspar-System) or com-

mercial and savings banks that were providing interim financing through variable-interest and short-term loans (refinanced through deposit systems) (Goedecke 1979: 85; Wesselkock 1988: 190; Ball 1990: 176). The succeeding transition from this relatively stable configuration of the era of the traditional “organized mortgage banking” based on the division of labour (Goedecke 1969b) into an extension of universal banking of the three-pillar banking groups successively blurred the existing business boundaries regarding customers (rented or owner-occupied housing; high- or low-income group; individual or corporate lending) and the type of credit granted (prime and second mortgages), resulting in intensification of competition for market share in all sorts of segments.⁶ This aggravated struggle for borrowers and savers (investors) was not only confined to the three pillars, but evidently also crucially affected mortgage banks, since public sector and commercial banks increasingly entered the long-term (prime) mortgage-lending business as part of their universal banking strategy (Steffan 1963b: 410; Schröder 1969: 551; Goedecke 1973). While the invasion of commercial banks, which “have unmistakably taken front against the mortgage banks by offering fixed interest conditions – usually for a substantial part of the term – and also by using generous use of lending limits” (Schröder 1969: 551), became pervasive only in the late 1960s (VDH 1970, 1971); mortgage banks were already threatened by price competition initiated by insurance companies and public banks (Sparkassen and Girozentralen) at least since the early 1960s (FAZ 1960; Steffan 1963a: 59). The public sector Girozentralen were the direct competitors by becoming universal banks for short- and long-term lending business and by sharing the mortgage banks’ privilege to issue *Pfandbriefe* for their own refinancing (Letschert 1977).

On the borrowing side, primarily new public and savings bonds increasingly competed with mortgage banks’ *Pfandbriefe*. The federal government – under the lead of the minister of finance, Karl Schiller, and his assistant secretary, Wilhelm Hankel – launched, with the commercialized *Bundesschatzbrief*, deliberately, a new competitive fixed-interest security investment product in 1969 (Der Spiegel 1968: 65; Hankel 1971; Mülhaupt 1969: 653). This was an expression of a severe criticism raised by Hankel, who argued that the long-term *Pfandbriefe* of mortgage banks were “hostile to savers” in a high-interest-rate environment and produced a “Privilegienrente” for the banks, which led to heated debates between mortgage banks and different public officials in the early 1970s (Der Spiegel 1970; Hankel 1974, 1976; VDH 1970). The Hypobanks were, thus, involved in the intense power struggle between the state and private banks in the 1960s when Schiller had made it his mission to break the power of the private banks (Deeg 1999: 47-55; Seikel 2013: 103-106; Seikel 2017: 162-164; Fuller 2016: 173-174).

The main means to this end were seen in the strengthening of competition within the banking sector, which could be achieved via liberalization measures (deregulation of interest rates in 1967) as well as via public sector banks' business activities that should put private banks under pressure in all business areas. Another way of "securing competition through the behaviour of the state as a market partner" (Hankel 1974: 35) was then seen in the introduction of the *Bundesschatzbrief* that addressed small savers and combined short-termism and significantly better interest conditions than the usual *Pfandbriefe* (price competition). Overall, this was a severe attack on the traditional business model of mortgage banks that was defined by the entire transformation of long-term savings into long-term investments. The new public product made the "old" long-term *Pfandbriefe* obsolete, thus, mortgage banks were also forced to issue shorter dated *Pfandbriefe* (with simultaneous adjustment of their loan maturities), depriving them of their competitive advantage of the long-term fixed-rate annuity loans (Letschert 1977).

While mortgage banks could maintain their market share during the 1960s, the experienced increasingly competitive pressure in both their lending and borrowing business had an adverse effect on average profitability (operationalized by interest and profit margins). A study carried out by the Federal Supervisory Agency in 1971 revealed that the average interest margin in new lending was around 0.9% until 1961, fell to around 0.8% in 1965, and fell even further to only 0.39% by the end of 1970 (Goedecke 1977). Furthermore, one of the biggest (incumbent) mortgage banks reported "a reduction in overall interest margin in recent years as a result of intensified competition" in its 1971 annual business report (Rheinische Hypothekenbank 1972: 12). In the beginning of the 1970s, competition was expected to intensify due to the still increasing number of institutions entering the mortgage-lending business, and consequently, further burdens on profitability were anticipated to materialize (Rheinische Hypothekenbank 1971: 36).

5.5 The Realkreditreform (1969-1974): Political-institutional embeddedness

The empirical material confirms that, in this new competitive environment, the banks experienced the existing regulation as disadvantageous for their own group: firstly, because they perceived their business activities as much more regulated than those of all other banking groups competing with them; and, secondly, because some banks (primarily the public banks) benefited from further privileges (capital adequacy rules) which were to their detriment (Goedecke 1969b: 92). On the basis of intensified competitive conditions, the mortgage banks were striving for deregulation of the German Mortgage Bank Act (HBG), which they felt to be a corset

too tight in the face of increasing competition (VDH 1970: 38; Goedecke 1973). With this in mind, the Association of German Mortgage Banks stated in its 1969 Annual Report:

“Operating under the intensified competition in changing markets, the strict restrictions imposed on mortgage banks by the Mortgage Bank Act proved to be a handicap for this group. It was logical, therefore, that numerous publications, both from the circle of mortgage banks themselves and in journalistic articles, proposed an adaptation of the law to economic requirements, in particular a reduction in the provisions which hinder mortgage banks from competing” (VDH 1970: 37-38).

Matching the theoretical anticipations, the collected causal process observations demonstrate that mortgage banks lobbied for changing regulation due to perceived increased competitive pressure. Efforts to achieve greater flexibility in business operations began in early 1969 and ended in 1974 with the 5th amendment of the HBG, which was retrospectively understood as the central and ground-breaking reform of the mortgage banking industry for the following decades (VDH 2002: 123; INT_4). However, to achieve the best relative competitive position for the banks, the VDH lobbyists sought to accomplish greater flexibility in their business, while maintaining the specialist bank status for the banking group that provided them with the privilege and a competitive advantage over the other banking groups to issue *Pfandbriefe* (VDH 1970; INT_4).⁷ Against this backdrop, the banks could only demand regulatory changes that were in line with the specialty principle (VDH 2002). Under the impression of intensified competition in their core business, the specialist banks appealed to the state and submitted reform proposals to the responsible ministries in spring 1969 (VDH 1970). These included, in particular, the capital adequacy requirements, which were perceived as too high compared with those of public banks, and expressed in a restricted circulation limit for their *Pfandbriefe*, and here mainly for the public *Pfandbriefe* (bonds covered by public sector loans) (VDH 1970: 41-42). This issue was understood to be important and urgent, because the existing regulation prevented an expansion in the public sector lending business: single mortgage banks were already facing the circulation limit, meaning a lack of regulatory change would have meant that they had to either abandon their activities in this line of business or increase their funds (VDH 1970: 41-42; INT_4). In addition, a declaratory change in the public sector lending business from an ancillary to a main line of business was demanded. The mortgage banks had already reacted to the penetration of the Sparkassen and Landesbanken into the mortgage business in the 1960s, with a growing involvement in the public sector lending business (which was traditionally occupied by the public banks). Based on the expected expansion of public debt, the banks saw

new business opportunities in this area that could help them survive under the new circumstances. In addition, they also expected the commercial banks to participate in the public sector funding business in the future; this further reinforced the urgency of the reform from the mortgage banks' perspective. Furthermore, they demanded more freedom in business policy (i.e. granting of second mortgages, and approval to issue bonds not requiring cover) due to the activities of commercial banks in long-term loans and construction financing systems "from a single source" (VDH 1970: 38-39).

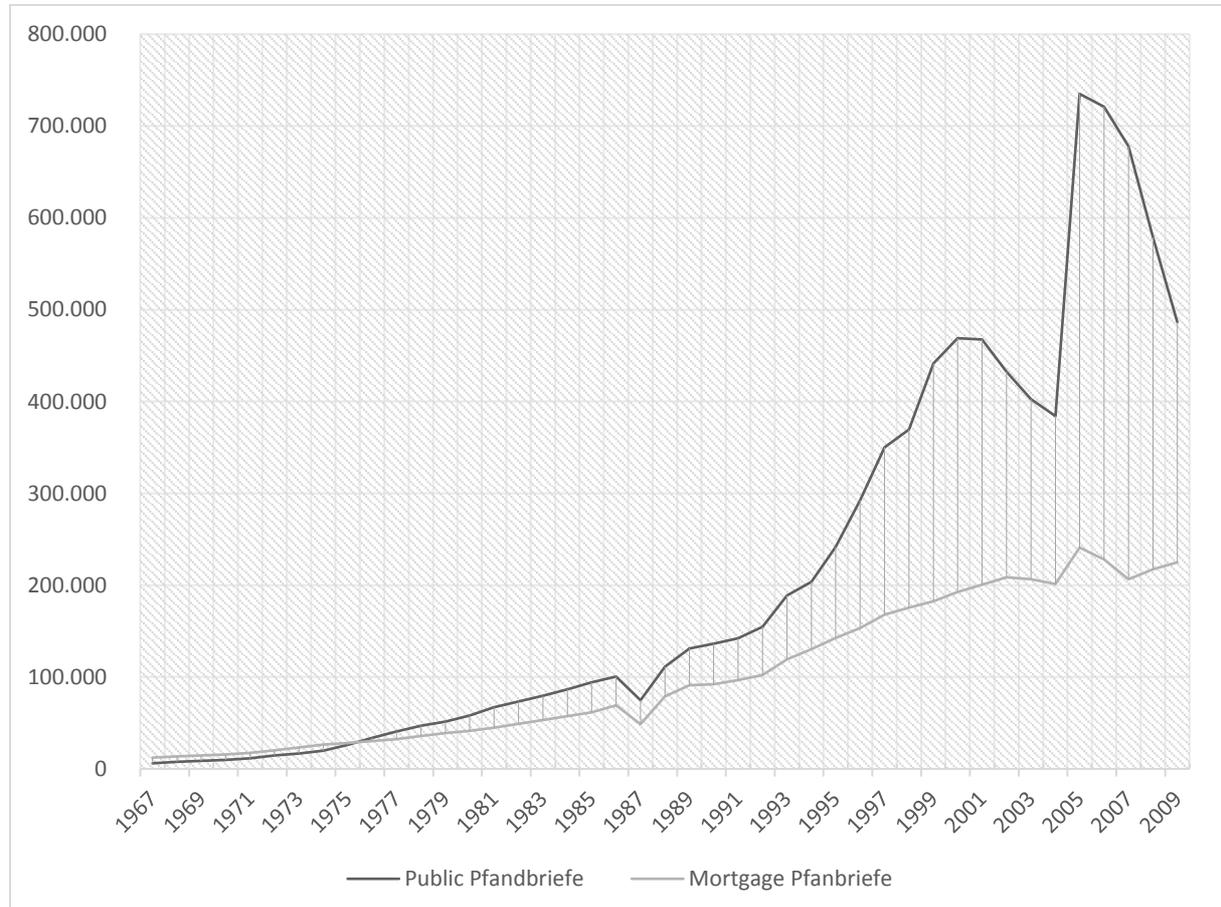
During the reform process, it quickly became clear that the state would meet the demands with regard to the public sector lending business (VDH 1978; INT_4 ; Bundestag 1973: 8). The lobbyists involved stated that, due to the state's own interest in these regulatory changes, it was not necessary to make major lobbying efforts for their demands in this area (VDH 1970; INT_4). Rather, both sides agreed that the proposed changes capture the realities that had already occurred (Bundestag 1973: 8), i.e. a stronger commitment of the mortgage banks to public sector lending and, on the other hand, the growing indebtedness of government agencies via bank loans, which were increasingly also granted by mortgage banks that made a "quiet indebtedness" possible for the state (Bundestag 1973: 9; VDH 1978; Tremer 1978: 118; Bellinger et al. 1979; Schulte-Kemper 1999: 29). Mortgage banks made a particularly suitable choice for the state because they specialize in long-term loans, which were of particular relevance to the state's debt policy with its long-term orientation, so that the policy-makers from the Bundestag formulated in the justification of the law amendment (Bundestag 1973: 8): "new amendments to law are necessary if mortgage banks should continue to be able to fulfil their important functions in financing housing construction and public-sector projects." As hypothesized, there existed a congruence of interests between the banks and government with regard to these HGB reforms, which manifested itself even more when, in 1970, state officials turned the focus of the reform away from competition equalization toward savings protection as a result of Hankel's criticism (Bundestag 1973: 40; Bellinger et al. 1979; INT_4). Although new savings protection regulations were now regarded by the federal government as the core of the reform, the alterations regarding the public sector lending business were never questioned (VDH 1972). In the end, next to smaller amendments regarding their mortgage lending business⁸, in agreement with the federal ministry of finance and the federal ministry of justice, public sector lending became the second main line of business (Bundesgesetzblatt 1974). The circulation limit, in particular for public *Pfandbriefe*, was expanded and even exceeded the limit for *Pfandbriefe* covered by mortgages (VDH 2002). Although the reform ultimately failed to meet the overall

expectations of the mortgage banks, new business opportunities were created in the municipal lending business, in particular those that had not previously been available to them (Bellinger et al. 1979).

5.6 From risk-aversion to controlled speculation (1975- late 1980s): Cultural embeddedness

Matching the theoretical expectations, the institutional changes underway with the mortgage loan reform (*Realkreditreform*) of 1974 reinforced the shift in the self-conception of mortgage banks, which had already begun in the 1960s, according to which they no longer perceived themselves as pure mortgage banks but, rather, as general banks for long-term credit, granting mortgage and public sector loans (Rheinische Hypothekenbank 1977; INT_4,6). This is also reflected in the new business concluded in the years following the reform and the ratio of mortgage *Pfandbriefe* (bonds covered by mortgage loans) to public *Pfandbriefe* in circulation (bonds covered by public sector loans), which in 1975 – the first year after the reform – for the first time received the larger share as is shown in figure 1 (see also VDH 1976, Rheinische Hypothekenbank 1977).

Figure 1: Public and mortgage Pfandbriefe in circulation issued by private mortgage banks (in Mio. €)(1967-2009)



Source: Annual Reports of the Verband Deutscher Hypothekenbanken (1968-2010), own calculations

Hence, the new gained profit opportunities in the public sector lending business provided by the changes in law were directly exploited in the years after their implementation. The banks were able to compensate losses in market shares in the mortgage-lending business by granting loans primarily to the German federal government and the federal Länder. The business with public debt was especially promising due to the expected ongoing growing borrowing requirements of the state (VDH 1977; Kolbeck 1988; INT_4), and because it allowed the banks an expansion of the overall business volume without increasing the banks' equity (Troost 1984). This first change in the cultural understanding of how money is earned in the field, which was based on the expansion of the lending business to public finance as the second – not only declaratory but, also, de facto – main line of business, was rapidly followed by a second, much more controversial cultural change in the sector that refers to a partial breach with one of the fundamental cultural norms that governed the field.

Until the 1970s, the mortgage banks generated stable profits (producing an adequate margin) by refinancing their long-term loans, with long-term *Pfandbriefe* at matching maturities, thus, without entering into any interest rate and liquidity risks (Redenius 2009). This was the traditional business model of mortgage banks, in which the principle of refinancing congruence (matching maturities) or the 'golden rule of banking' applied (Mülhaupt 1969; Goedecke 1973: 17; Goedecke & Kerl 1974: 61; Redenius 2009: 39; INT_3,4,6). Although maturity transformation was not explicitly prohibited by law, refinancing congruence was a norm that the banks derived from the overall concept of the Mortgage Bank Act, focusing on the diminution of risk of the business model to guarantee safety of *Pfandbriefe*, to which they closely adhered (Goedecke 1973; Goedecke & Kerl 1974: 56; Francke & Hudson 1984; INT_3,4). It was perceived as "a sacred cow" (Mülhaupt 1969: 254) for the mortgage bankers and "the dominant view of the sector" (Goedecke 1973: 17) was that maturity mismatching was speculation and an illegitimate practice, because it could lead to liquidity bottlenecks as stated in a joint publication of a leading mortgage banker and the banking supervisory authority:

"it is only possible to maintain liquidity at all times if the maturities of the lending business are generally matched by the same maturities of the refinancing funds. Maturity transformation in the form typical and usual for the refinancing structure of the savings banks working on the basis of deposit business is ruled out for the mortgage banks" (Goedecke & Kerl 1974: 57).

These mortgage bank practices, based on the group-specific principle of refinancing congruence, which had already been sharply criticized as outdated in the 1960s and early 1970s by

government officials and leading scientists (Der Spiegel 1960; Steffan 1963a: 106; Mülhaupt 1969; Bundestag 1973: 2; INT_4), was still intact until the 1970s. However, as expected from theory, this “conception of control” based on the avoidance of deliberate risk-taking, was increasingly perceived as dysfunctional, in particular in the public sector lending business that had already accounted for the largest share of the total business of almost all mortgage banks (Goedecke 1977; INT_3,4). With the strongly growing public indebtedness, since the mid-1970s, the German state used its special position in the market and the increasing competition in public sector lending between almost all banking groups to satisfy its borrowing needs at low costs (Tremer 1990: 26; Troost 1984; INT_4). While in the 1960s, the state’s borrowing requirements met only with a small supply, which was also reflected in conditions that were lucrative for the banks, in the 1970s supply grew when next to the Sparkassen, Landesbanken, mortgage banks and commercial banks entered the market for public finance. Furthermore, the state as a market partner (here, as a borrower) has a special position and market power that is derived from its ability to directly approach capital markets through the issuance of public bonds (Troost 1984; Häuser 1981). As a consequence, in the mid-1970s public sector lending developed into a pure buyer’s market in which the buyer (in this case, the state) can dictate the conditions, which meant that margins for mortgage banks were heavily decreasing so that lending – with congruent refinancing – resulted in only low, sometimes zero, or even negative margins (Troost 1984; INT_3,4).

In concrete numbers, the interest margin at the time of conclusion has fallen, on average, from half a percent in the 1960s to 0.3 to 0.2 in the mid-1970s (Goedecke 1979: 175; Troost 1984: 122-123). Thus, there was a clear difference in the interest margins they achieved in the mortgage business, where the margin was still between 0.5% (for residential mortgages) and 1.5% (loans on commercial properties) (Troost 1984: 123). The state received many complaints from mortgage banks who felt that state authorities should offer sufficient margins again similar to those in the real estate lending business (Rheinische Hypothekenbank 1977; VDH 1983; Troost 1984; INT_4). They accused the public authorities of fixing the interest rate on promissory notes at the same level as the bond market rate, which did not allow the mortgage banks any positive margin at the time of conclusion (Rheinische Hypothekenbank 1977, 1978; VDH 1978; INT_4). These requests to the state were, of course, due to its interest payment minimization approach not answered, so that the mortgage banks were left with an important decision: either they would withdraw from this line of business, which had become increasingly important in previous years, or they would have to contest the refinancing principle that had long defined

their field (VDH 1978; Goedecke 1979: 175).⁹ To generate a sufficiently positive margin from lending to the state, banks would increasingly have to carry out temporary maturity transformations based on speculation about future interest rate developments (VDH 1978: 31; Rheinische Hypothekenbank 1978: 11; Goedecke 1979: 175). Thus, to continue to exploit the profit opportunities created by the changed regulation, a deviation from the existing cultural consensus was indispensable (Redenius 2009).

The banks found it difficult to break with the norm, so it is frequently reported that they had to hold back in the public sector lending business because the state did not grant the corresponding margin (VDH 1978; Rheinische Hypothekenbank 1977). However, they drew, from the debt policy-making of the state, the legitimacy for a deviation from the norm. From their perspective, it was the state that forced them deliberately into speculation: “the state induces lenders to accept even temporary maturity mismatches” (Rheinische Hypothekenbank 1978: 11; see also Troost 1984: 123). The attitude that the state, with its zero-margin policy, would leave the banks no choice but to carry out incongruent refinancing, through which the public sector lending business could once again be run profitably, progressively gained ground (INT_4).¹⁰ And, so, the banks gradually began controlled refinancing-speculation “out of necessity” to generate a satisfactory profitability with the biggest incumbent banks as pioneers (such as Rheinische Hypothekenbank) (FAZ 1977, 1978; Redenius 2009: 48; INT_3,4,6). Even though, according to the banks, this initially happened within narrow limits, according to Goedecke, “public sector business developed into a speculative business” (FAZ 1978: 15).

With a further deterioration in margins over the 1980s (VDH 1983, 1984; Kolbeck 1988: 160-161; Ball 1990; Bundesbank 1992: 23), the new cultural consensus became more consolidated as hypothesized¹¹:

“the risks resulting from positive and negative maturity transformation is increasingly regarded as an acceptable risk for the honourable field of mortgage banks, without which it is simply no longer possible to achieve a margin” (DLK 1991: 25).

Instead of throwing the principle of congruent refinancing completely overboard, speculating with incongruities in the public sector business “increasingly gained the status of a trivial offence” (DLK 1991: 25). In this sense, the new consensus was also supported by the Banking Supervisory Authority (BaKred), which has always been in close dialogue with the Association of German Mortgage Banks (Kerl 2001: 328; INT_4). This becomes clear when one compares

the commentaries on the Mortgage Bank Act of 1979 and 1995, published jointly by the Association and BaKred, that were widely recognized in the sector (INT_3,6). While in the late 1970s banks were completely discouraged from any form of maturity transformation (Bellinger et al. 1979), in the 1990s the new consensus is illustrated by the following statement:

“the principle of matching maturities does not mean that any maturity transformation or any temporary financing gap in a mortgage bank’s business is excluded. The reduced possibility of securing the required interest margin for the term of the loans at the time when the agreement is concluded has encouraged mortgage banks to exploit interest rate effects” (Bellinger & Kerl 1995:154).

It was also agreed that these risky activities should be carried out only to a limited extent, while providing a solid source of profitability from the conservative traditional mortgage business (Schönmann 1984: 244; Reichstein 1985: 650; Hermann 1986: 636; INT_3,6), so the two lines of business were operated, on average, to approximately the same extent until the 1990s (Goedecke et al.1997). And although clear shifts in the understanding of how banks earn money in the public sector lending business took place, it was still assumed in the 1980s and at the beginning of the 1990s that “loans to the state, at least in the medium and long term from a profitability perspective, could not be a full substitute for business activities with private customers” (Troost 1984: 133). Thus, experts expected that the banks would, therefore, be more likely to withdraw from the line of business in the years ahead (Goedecke & Kerl 1990: 232).

5.7 The non-mortgage mortgage banks (1987-2000s): Structural embeddedness

While the expected disengagement from the public sector lending business did not occur, since the late 1980s a rather contrary development has been taking place, although the state continued its zero-margin policy. As it was expected from the theorized mechanism, existing smaller as well as newly founded challenger banks became aware of new profit opportunities through the changed cognitive frames (cultural understanding); however, their exploitation required a deviation from existing legitimate practices and business models (Day 2005; INT_2,3,6). The deviation from the new consensus described above consisted in the fact that a business model was now initiated which completely dispensed with traditional mortgage business and was, thus, based entirely on the meanwhile chronically low-margin and, therefore, speculative public sector lending business – i.e. the invention of “public-sector credit banks” or “non-mortgage

mortgage banks” as they had later been called (DLK 1990: 60; Walker 1999; Schulte-Kemper 1992; Schulte-Kemper 2004: 44; INT_1,2,3,6). A virtue was made of necessity (INT_3).

This is most clearly illustrated by the foundation in 1987 of the pioneer “public finance bank”, the Hypothekenbank in Essen, which, from the outset, deliberately focused on high-volume public sector lending, and made incongruities (violation of the principle of refinancing congruence), speculation and aggressive risk-taking the basis of its business model (DLK 1990; Schulte-Kemper 2004: 44; INT_2,3,6). While the capital for the founding of the bank was provided by the well-known German investor, Wolfgang Schuppli, the idea of a pure “public finance bank” came from Hubert Schulte-Kemper, a veteran of the mortgage banking business (Kreditpraxis 1987; Cünnen 2003; Osman 2008; INT_2,6). The idea had come to him while he was still working for Westfälische Hypothekenbank, where he had already been employed since 1973 (WiWo 1987; Cünnen 2003; INT_6). There he had witnessed the cultural change in the sector himself and had seen how money could be earned in the public sector lending business in a speculative but, then nevertheless, legitimate way, and he became aware of new profit opportunities imagining to just focus on these business activities (Cünnen 2003; INT_6). He was even surprised that nobody before him had come up with the idea of setting up a pure public finance bank (Cünnen 2003).

The deviation of this new model from the existing consensus and legitimate practices can be confirmed by the opposition that existed from beginning to end (INT_3,6; Schulte-Kemper 2004). This began practically as early as the bank’s founding process, when the banking supervisory authority rejected the founders’ plans to concentrate solely on public sector lending and insisted that the bank had also to pursue the more conservative (because better initial margin) mortgage lending business (INT_6). This was then done, albeit to a small degree: as the data on business activities show, the main focus was on public finance (Hypothekenbank in Essen 1988; DLK 1990). Although the banking supervisory authorities displayed a certain skepticism, the emergence of this business model was also due to their relatively liberal attitude to speculative activities in public sector lending in previous years, which left room for interpretation (Walker 1999; Artopoulos 2000). The door was opened by shifting the boundary of what legitimate practices are, as was stated in the sector’s mouthpiece “Der Langfristige Kredit”:

“according to current experience, the danger of trivial offences always lies in the fact that the boundary between the just acceptable breaking of the norm and an inexcusable violation of this norm can be so fluid, so dependent on circumstances and persons” (DLK 1991: 25).¹²

As hypothesized, other challenger banks such as the newly privatized Deutsche Pfandbriefanstalt (DePfa), Allgemeine Hypothekenbank (AHB), Düsseldorfer Hypothekenbank and Dexia Hyp Berlin followed EssenHyp's aggressive approach and engaged mainly in public sector business during the 1990s, contributing to a significant increase in the number of public Pfandbriefe issued in circulation, as shown in Figure 1 (Von Heusinger 1998; Walker 1999; Day 2005; Sünderhauf 2006; INT_1,2,3,6). Being smiled at by many established banks (INT_6) in the beginning, these deviant innovators achieved their goal to grow as quickly as possible and to outdo some incumbent banks in their balance sheet total (Schulte-Kemper 1988; Osman 2008; INT_6), which was made attainable due to a series of conducive conditions. Thus, as hypothesized, these challenger banks brought the existing incumbent-challenger structure in the field into disarray. Until then, the sector was perceived as quite homogenous and the challenger-incumbent structure was instead based on cooperation (INT_3,4; Letschert 1977). Over the years, however, a severe and sometimes even hostile rivalry developed between the incumbent banks, still dominant in the early 1990s, and which saw themselves as more traditional and conservative (including, for example, the Rheinische Hypothekenbank and the Deutsche Hypothekenbank) and the challenger banks, which increasingly put competitive pressure on the former due to their growing success (Walker 1999; Day 2005; Grippenutz 2005, INT_3). The phenomenal growth rates of the overall balance sheets and the profitability of deviant innovators were made possible among others by the reunification-related increase in public debt combined with the introduction of the Jumbo *Pfandbrief* in 1995, which made it possible to issue huge volumes of public *Pfandbriefe*, which in turn increased the volumes available for interest-rate speculation (Schulte-Kemper 1999; Walker 1999; Day 2005; INT_1,3).¹³

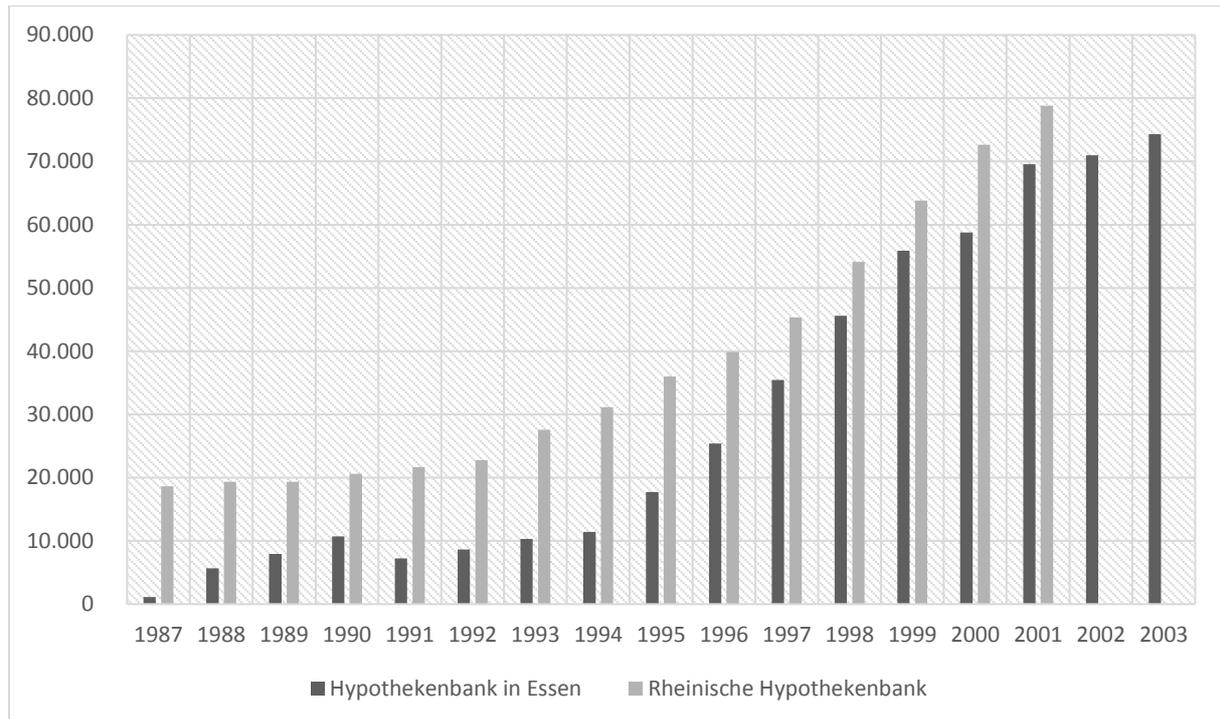
In addition, the availability and allowance by the BaKred to use derivatives as an ancillary business, helped the aggressive banks to create ever higher profits in the public sector lending business (Ahr 1995; Bellinger & Kerl 1995; INT_6). In the end, two business models were confronted: that of the "more conservative" still largest incumbent banks, which relied on a balanced distribution of mortgage and public sector lending business, and that of the aggressive challenger banks, which relied on broad risk-taking under the cover of risk-free public sector lending. Exemplary for these contrasting approaches were the Rheinische Hypothekenbank on the one hand, and the Hypothekenbank in Essen on the other, which RheinHyp's employee Ruchti compared as follows:

“The two banks are entirely different animals: the former is a slow growing, traditional and highly conservative organization, while the latter is an aggressive, trading-oriented

bank turning in a phenomenal growth rate which is unparalleled in German financial industry (...) it is like having a very reliable Mercedes-Benz sitting next to a very powerful and exciting Ferrari in the same garage” (Euroweek 1997).

The pressure exerted by deviant innovators can be exemplified by comparing the development of the balance sheet totals of these two banks during the 1990s (see figure 2).

Figure 2: Development of balance sheet totals (in Mio. €) of Hypothekbank in Essen (1987-2003) and Rheinische Hypothekbank (1987-2001)¹⁵



Source: Annual reports Hypothekbank in Essen (1987-2004) and Rheinische Hypothekbank (1987-2002)

The incumbent banks increasingly saw the status quo endangered, and thus heavily criticized the approach of the challenger banks; from their point of view, these banks or ‘gambling houses’ had “exploited the business opportunities in excess and by abusing the business model” (INT_3; see also Day 2005), and they saw them as a threat for stability of the entire field because “any downside in their actions had a negative impact on the whole market” (INT_3; see also Day 2005). Although the incumbent banks heavily disagreed with the “gamblers’” approach, the pressure to compete increased in the field due to the success of the latter, so they were increasingly unable to enforce their conception of control, and eventually moved in the direction of the deviant model.¹⁴ The inner-field competition for higher volumes and profits became fierce, and thus the risks became increasingly bigger (Otto 2018; INT_1,2,3). At first, all this happened, largely, under the radar of the public, and even the banking supervisory authorities had long failed to recognize the extent of these developments (Walker 1999; Day 2005). This

changed when, in the late 1990s, the national and international financial press became aware of the events, and articles were published that made wide waves in the markets, revealing the high-risk approach taken in the sector and calling the deviant innovator mortgage banks “Hypo-Hedge-Funds” (von Heusinger 1998) and “Germany’s secret gamblers” (Walker 1999; Day 2005; INT_1,6). At this point, the incumbent banks saw a chance to strengthen their position again: firstly, by sending a clear signal to the markets; and; secondly; by bringing the supervision to intervene on their behalf (INT_3). So, they used these publications to distance themselves clearly from the “secret gamblers”, and when the supervisors approached the banks (Artopoulos 2000; Day 2005; INT_1,3), they took the opportunity and used their still dominant position in the association seeking to limit the activities of the challenger banks (INT_3). For various reasons, the supervisory authorities had not perceived the extent to which the banks were being exposed to interest rate risks from excessive maturity transformation and other speculative activities (Walker 1999; Artopoulos 2000). This included, above all, the fact that the mortgage banks’ risks were not visible in the trading book (they were simply forbidden to trade), but were spread across the entire balance sheets, which was “no man’s land from a regulatory perspective” (Artopoulos 2000). In addition, according to mortgage bankers, supervisors were always at least one step behind (INT_3,6). So, they allowed, for example, the use of derivatives as an ancillary business in the expectation that they served solely to hedge positions, close mismatches and, thereby, help to manage risks in public sector lending (Bellinger & Kerl 1995). At the end of the 1990s, they found that they had also, to a large degree, served speculative purposes, i.e. the deliberate taking of interest-rate risks (Artopoulos 2000; INT_6). In 2001, against the will of the “public finance banks”¹⁶, a gentlemen’s agreement was reached between the association – led by incumbent RheinHyp’s Karsten von Köller – and the BaKred under which the banks agreed to disclose their interest-rate risks and access these through a traffic light system, however, only on a voluntary basis (FAZ 2001; Day 2005; INT_3). Although this certainly affected the banks, it did not prevent them from continuing with their underlying approach. For example, a former employee of Essenhyp confirms:

“This has already made things much more difficult. The ultimate task was then to manipulate and interpret the new regulation (traffic light system) as much as possible, and to find new ways to trick within the traffic light” (INT_6).

The fact that the bank has remained consistent to its previous approach, and that the supervisory authority was unable to prevent the following crisis developments with its measures, becomes clear, for example, in rating reports by Essenhyp in 2003 and 2005: “EssenHyp has a higher-

than-average risk profile in interest-rate risk-taking” (S&P 2003) or “outright market risk-taking is still an important element of the bank’s performance” and that the business model is still “based on position taking on interest movements and credit spread management” (S&P 2005). All in all, the empirical material confirms that the previous cultural shift triggered changes in the incumbent-challenger structure of the field. During the 1990s, the incumbent mortgage banks increasingly lost their power to determine the conception of control in the sector based on a more conservative or traditional approach. Challenger banks became successful with a highly risky business model that failed to be regulated effectively and turned out to be highly crisis-prone in the subsequent years, with several “public sector banks” becoming part of the German banking crisis.¹⁷

5.8. Conclusion

By crafting a minimally sufficient explanation for why several mortgage banks contributed to the banking and financial crisis in Germany, this paper has demonstrated that one has to trace a longer complex historical process that began in the late 1960s, when this entire banking group was confronted with an unprecedented increase in competition that unsettled the stable survival of the banks. To account for the puzzling outcome, thus, for the question why the highly regulated German mortgage banks entered into systematic excessive risk-taking, a conglomerate causal mechanism was hypothesized capturing the “coping with competition” activities of banks (aiming to influence the embedding social structures of the field) over time. Three sequential parts of the mechanism were derived from an integrated approach to the embeddedness of economic action from economic sociology (Krippner & Alvarez 2007) that assumes we need to consider all three embedding social structures (institutions, cognitive frames and networks) and their relations over time to understand changes in economic sectors (Beckert 2010). In accordance, intensified competition – as the main coordination problem that economic actors face in capitalist societies (Fligstein 2001, Beckert 2007, 2010) – is theorised as the initial condition that triggers the operation of a mechanism, in which economic actors, firstly, seek and achieve changing regulation to better their relative competitive position. Secondly, these changing institutions render existing cultural understandings (cognitive frames) of how to make money in the sector as dysfunctional and obsolete; in turn, the resulting changed cognitive frames lead to a shift in the incumbent challenger structure and, thus, to an increasing inner-sector competition that finally results in a transformation of the field and to the emergence of a crisis-prone business model. The mechanism is further understood to operate under the scope conditions of 1) the fragmented German banking system separating universal and specialist

banking and 2) steadily growing borrowing requirements of the state since the 1960s in Germany.

By conducting an explaining-outcome process-tracing analysis, this paper found the “coping with competition” mechanism to be a sufficient explanation in the case of the evolution of the crisis-prone business model in the German mortgage banking industry. The initial condition, intensified competition, that the mortgage banks faced became evident during the 1960s. On the one hand, it was actively promoted by the government and, on the other hand, resulted from the dissolution of the traditional division of labour in mortgage credit since public and credit banks were strengthening their universal banking approach. The savings banks increasingly competed in housing finance, the credit banks introduced financing systems from a single source, and the federal government introduced a competitive security that, accumulated, depressed the profit margins mortgage banks could achieve, so they saw their position progressively threatened. As hypothesized, the banks sought to resolve this problem by influencing their market-embedding social structures. First, since they perceived the existing regulation as disadvantageous to their group, they lobbied for more business opportunities, and achieved a certain new room to move, primarily, in the public sector lending business, while at the same time protecting their competitive advantage (*Pfandbrief* issuance) against the other banking groups. Second, to exploit the newly created profit opportunities resulting from the deregulatory reforms in 1974, a shift in the cultural understanding of how to make money in the sector became necessary. Since the mid-1970s, the imperative of the state to borrow as cheaply as possible has led to a chronic decline in margins in this line of business, which rendered the old field-defining risk-avoiding culture as dysfunctional to the survival of the field. Thus, the legitimized practices were extended to new speculative activities during the 1980s, which were framed as a “necessity to survive”, and were ratified by the banking supervision. These practices were framed as a trivial offence that banks have to conduct in reaction to the state’s borrowing behaviour, but which should only be carried out to a certain degree. This status quo became increasingly challenged in the 1990s by deviant innovators (new-founded mortgage banks and imitators) that made “virtue out of necessity” and created a business model based on public sector lending, thus on speculative practices. This new risky model created fierce competitive pressure in the sector, and upset the existing incumbent-challenger structure because it was extremely successful during the 1990s and the early 2000s. The failure of incumbent banks and the supervisory agency to restore the old status quo, and to effectively

regulate these activities, led to each of these banks falling apart, starting in the early 2000s, at the latest with the onset of the financial crisis.

These results have several implications as explaining-outcome process-tracing analyses have also ambitions that reach beyond the single case. First, the study shows that intensified competition was the initial condition that led to the emergence of crisis-prone bank business models. Current regulatory measures aimed at limiting interest-rate risk in the banking book (opposed to the trading book) of banks (EBA 2018) have been identified as one major problem, not only by German mortgage banks but, also, by banks around the world during the crisis. However, the question arises as to how far only symptoms are treated, while the root of the problem is not addressed. The complex question surfaces of how much competition do we want in the financial industry? How much competition is conducive to the stability of the financial system? In the years following the Great Depression, competition was deliberately restricted, which was followed by several decades without the occurrence of financial crises. Of course, answering these questions in a globalized world is even more difficult, but it is all the more important to ask these questions.

Second, the study underlines the value of an integrated approach to embeddedness. As illustrated in the theory-testing process-tracing analysis, a reduced approach that focuses on one type of embeddedness is not sufficient to explain the changes in the mortgage banking industry. Every part of the causal mechanism – and, thus, every change in the three embedding structures – is necessary, but only considered together are they sufficient to explain the outcome.

Third, in agreement with the recent literature on the state-finance nexus (Krippner 2011; Fligstein & Goldstein 2012; Trampusch 2018; Block & Somers 2014), the study has shown that crisis developments in the financial sector must always be understood as the result of an interplay of state and finance, which, however, cannot be reduced to regulatory interventions by the state. The state-finance nexus is much more complex: as this study has shown, the state in different roles was involved in every stage of the process, influenced all embedding structures and, thus, had a crucial influence on mortgage banks' crisis-prone business model. The state as “*policy-maker*” promoted competition in German banking through its own public banks and the issuance of its own competitive debt instruments, thus, triggering the “coping with competition mechanism”; as “*regulator*”, the state created new profit opportunities for the banks through flexibility enhancing regulation from which its own fiscal benefits were anticipated; as “*bor-*

rower”, the state, on the one hand, produces the assets for banks through their increasing borrowing requirements (basis of their business model), but at the same time increasingly used its powerful market position to achieve cost-minimization and, thus, put pressure on banks’ profitability that contributed to the banks’ cultural change. As a “*supervisor*”, the state, together with the association of German mortgage banks, determined the field consensus, thus it ratified shifts in the conceptions of control/cultural understanding of how money is made in the field, opening the door for deviant behavior. These different roles of the state in the financial industry may lead to conflicting objectives. In the case of mortgage banks, this is clearly illustrated by the conflict of objectives between a cost-minimizing public debt manager and a banking supervisor whose principal goal is to ensure the stability of the banking system, primarily achieved if banks are able to generate adequate profitability. As a consequence, future research should further unpack the state-banks relationship, deal even more intensively with the different roles of the state in market developments, and take a closer look at the respective circumstances.

Notes

1. The former HRE risk controller stated, in the Committee of Inquiry of the Bundestag, that “it is wrong to say that HRE got into trouble only because of the Lehmann bankruptcy (...) Lehman was rather the spark that led to the explosion, Lehmann was the coffin nail on it for me” (Bundestag 2009a: 55).
2. Which is the main source of income for mortgage banks.
3. According to Hellwig (2011), several banking crises – such as the US savings and loans crisis in the 1980s – have been caused by excessive maturity transformation and the resulting enormous interest rate risks in the banking books.
4. Sanio’s predecessor Artopeous (2000: 55) reports increasing speculation among mortgage banks: “we are observing a high degree of maturity transformation at some mortgage banks, much more than has been the case in the past.”
5. The problem of increasing competition faced by the mortgage banks was summarized by the well-respected chairman of one of the largest (incumbent) mortgage banks, Wolfgang Goedecke: “In the course of a trend towards universal banking that has intensified and become increasingly discernible in the banking industry in recent years expressed by a strategy that has been described as ‘full service’ or as a service offering ‘everything under one roof, even at the banks’, the mortgage banks as special credit institutions are exposed to growing competitive pressure not only in their lending business but also in their borrowing business” (Goedecke 1969b: 91).
6. Competition took place mainly between the different banking groups and not within the groups (the business activities of savings banks were, for example, regionally limited and they cooperated with the newly established Girozentralen/Landesbanken).
7. Goedecke (1969a: 17) states in 1969: “there has been no reason so far for far-reaching changes in substantive law. That may have been right back then. Meanwhile time has gone on. And today, the development of the credit industry, the desired free movement of capital and the increased competition in the long-term credit business are likely to make some changes to the law necessary. However, this is not to say that the mortgage banks wanted to give up their status as special credit institutions. The mortgage banks do not want to become universal banks. They only want existing competitive disparities to be eliminated. We continue to associate our status as a special credit institution with the *Pfandbrief* privilege, which has proved its worth in the course of the existence of the Mortgage Bank Act.”
8. The banks were allowed to issue bonds not requiring cover up to 1.5 times their equity and to grant “financing from a single source”, i.e. subordinated mortgages up to 10% of the mortgage portfolio (VDH 2002: 124).
9. Goedecke (1977: 175) states: “The mortgage banks, if they do not want to completely deny themselves this, their second main line business, often offer public-sector loans at the same refinancing conditions at the time of conclusion, in order to then later take advantage of favourable capital procurement opportunities to obtain an interest margin.”
10. Interviewee, who worked for the association at the time states: “the state had to know that it was driving the mortgage banks into speculation with its zero-margin policy” (INT_4).

11. To increase the profit margin on loans, the first months of the term were often financed with money market funds. This calculation is normally successful if there are no increases in capital market interest rates (Hermann 1986: 12).
12. In all the risky activities that followed in the 1990s, the supervision could no longer follow; it was always one step behind (INT_3, INT_6).
13. AHB trebled the size of its balance sheets between 1994–1999 alone, “and its peers were also growing rapidly” (Day 2005).
14. As is stated by a veteran mortgage banker: “If you act more risk-averse in such times, more reasonable, more conservative, then you’re the big bore, who doesn’t make money. The others can do it. There are always clever people in the supervisory boards, in the corporations. They say, “why don’t you do that? There is always the one who puts pressure on, ain’t there? These are the unhealthy sides of competition. Whereby this is not actually a mistake of the competition but a mistake of the people who misuse a business model” (INT_3).
15. The data series for Rheinhyp ends in 2001 as it was merged with Deutsche Hyp, Deutsche Hypothekenbank Frankfurt-Hamburg AG and Eurohypo Europäische Hypothekenbank to form Eurohypo AG in 2002.
16. They found it “unfair” and disadvantageous to just focus on interest-rate risks (which were associated with the public sector banks) and to exclude credit risks (associated with the more conservative banks) from the planned disclosure system.
17. This development was exacerbated in 2005, when the Mortgage Bank Act was replaced by the new *Pfandbrief* Act, abolishing the specialty principle which fueled competition even more strongly (Expertenrat 2011).

References

- Abolafia, M. Y. (1996), *Making Markets: Opportunism and Restraint on Wall Street* (Cambridge (Mass.): Harvard University Press).
- Admati, A. R. and Hellwig, M. (2013), *The Bankers' New Clothes* (Princeton: Princeton University Press).
- Ahr, W. (1995), 'Veränderungen im Kommunaldarlehensgeschäft. Hypothekenbanken passten sich dem Wandel im Schuldenmanagement der öffentlichen Hand', *Börsen-Zeitung*, 123, October 7, p.20.
- Allen, F. and Gale, D. (2000), *Comparing Financial Systems* (Cambridge, MA: MIT Press).
- Artopoulos, W. (2000), 'Podiumsdiskussion', in: Der Wissenschaftliche Beirat des Instituts für bankhistorische Forschung e.V. (ed) *Pfandbrief und Kapitalmarkt, 23. Symposium zur Bankengeschichte am 18.Mai 2000 im Hotel Frankfurter Hof in Frankfurt am Main auf Einladung des Verbandes deutscher Hypothekenbanken* (Frankfurt am Main: Knapp).
- Beach, D. and Pedersen, R. B. (2013), *Process Tracing Methods* (Ann Arbor: University of Michigan Press).
- (2016), *Causal Case Study Methods: Foundations and Guidelines for Comparing, Matching and Tracing* (Ann Arbor: University of Michigan Press).
- (2019), *Process-Tracing Methods*, 2nd ed., (Ann Arbor: University of Michigan Press).
- Ball, M. (1990), *Under One Roof. Retail Banking and the International Mortgage Finance Revolution* (New York: Harvester Wheatsheaf).
- Bakir, C. (2012), *Bank Behaviour and Resilience: The Effect of Structures, Institutions and Agents* (Basingstoke: Palgrave Macmillan).
- Beckert, J. (2007), *The Great Transformation of Embeddedness: Karl Polanyi and the New Economic Sociology*. MPIfG Discussion Paper 07/1.
- (2009), 'The Social Order of Markets', *Theory and Society*, 38, pp. 245–269.
- (2010), 'How Do Fields Change? The Interrelations of Institutions, Networks, and Cognition in the Dynamics of Markets', *Organization Studies*, 31 (5), pp. 605–627.
- (2013), 'Capitalism as a System of Expectations: Toward a Sociological Micro-foundation of Political Economy', *Politics & Society*, 41 (3), pp. 323–350.
- Bell, S. and Hindmoor, A. (2015), 'Masters of the Universe but Slaves of the Markets: Bankers and the Great Financial Meltdown', *The British Journal of Politics and International Relations*, 17 (1), pp. 1–22.
- Bellinger, D., Kerl, V., Barlet, K., and Fleischmann, R. (1979), *Hypothekbankgesetz – Kommentar* (München: Beck).
- Bellinger, D. and Kerl, V. (1995), *Hypothekbankgesetz – Kommentar* (München: Beck).
- Bertram, H. (2015), 'Leitartikel – Der Exportschlager wird zwanzig', *Immobilien & Finanzierung*, 11/2015, pp. 2–3.
- Block, F. L. (1990), 'Political Choice and the Multiple "Logics" of Capital', in: S. Zukin and P. DiMaggio (eds) *Structures of Capital – The Social Organization of the Economy* (Cambridge: Cambridge University Press), pp. 297–298.
- Block, F. L. and Somers, M. R. (2014), *The Power of Market Fundamentalism* (Cambridge (Mass.): Harvard University Press).

- Börsen-Zeitung (2000), 'Luxemburger Pfandbriefgesetz ein Problem - Artopoeus: Hypobanken unterlaufen deutsches Recht – Fristentransformation läuft aus dem Ruder', *Börsen-Zeitung*, 97, May 20, p. 10.
- Braun, B. (2018), 'Central Banking and the Infrastructural Power of Finance: the Case of ECB Support for Repo and Securitization Markets', *Socio-Economic Review* (online first).
- Bundesbank (Deutsche Bundesbank) (1992), 'Zur Geschäftsentwicklung der Realkreditinstitute seit Anfang der achtziger Jahre. *Monatsberichte der Deutschen Bundesbank*', April, 1992, 21–32.
- Bundesgesetzblatt (1974), Gesetz zur Änderung des Hypothekendarlehenbankgesetzes und des Schiffbankgesetzes, Jahrgang 1974, Teil I, No 24, March 14, p. 671.
- Bundestag (Deutscher Bundestag) (1973), Gesetz zur Änderung des Hypothekendarlehenbankgesetzes und des Schiffbankgesetzes. Drucksache 7/114.
- (2009a), 2. Untersuchungsausschuss, Stenografisches Protokoll Nr. 4 (öffentlich), May 20.
- (2009b), 2. Untersuchungsausschuss, Stenografisches Protokoll Nr.13 (öffentlich), July 8.
- (2009c), 2. Untersuchungsausschuss, Stenografisches Protokoll Nr. 17 (öffentlich), July 30.
- Carruthers, B. G. (1996), *City of Capital: Politics and Markets in the English Financial Revolution* (Princeton: Princeton University Press).
- Carruthers, B. G. & Ariovich, L. (2010), *Money and Credit: A Sociological Approach* (Cambridge & Malden, MA: Polity Press).
- Carruthers, B. G. and Babb, S. (2000), *Economy, Society: Markets, Meanings, and Social Structure* (Thousand Oaks: Pine Forge Press).
- Cünnen, A. (2003), 'Missionar und Macher', *Handelsblatt online*, 21 August 2003.
- Davis, G. (2009), *Managed by the Markets* (Oxford: Oxford University Press).
- Day, N. (2005), 'Hypo-Hedge Funds and Secret Gamblers', *Euroweek*, April 29, pp. 33–35.
- Deeg, R. (1999), *Finance Capitalism Unveiled: Banks and German Political Economy* (Ann Arbor: University of Michigan Press).
- Der Spiegel (1960), 'Die Phantasielosen', *Der Spiegel*, 48, November 23, pp. 44–46.
- (1968), 'Bundeschatzbrief – Zins und Superzins', *Der Spiegel*, 50, December 9, p. 65.
- (1970), 'Pfandbrief-Reform – Richtiges Nest', *Der Spiegel*, 37, September 7, p. 34.
- Detzer, D., Dodig, N., Evans, T., Hein, E., Herr, H. and Prante, F. J. (2017), *The German Financial System and the Financial and Economic Crisis* (Cham: Springer International Publishing).
- DLK (Der Langfristige Kredit) (1990), 'Hypothekendarlehenbank in Essen'. *Der Langfristige Kredit* 22+23, pp. 60–61.
- (1991), 'Spekulation'. *Der Langfristige Kredit*, 24, p. 25.
- Euroweek (1997), 'Pfandbriefe Make a Global Mark', *Euroweek*, November 1, pp. 28–33.
- EBA (European Banking Authority) (2018), Guidelines on the management of interest rate risk arising from the non-trading book activities, EBA/GL/2018/02, July 19.
- Expertenrat (Expertengremium der Bundesregierung) (2011), *Strategien für den Ausstieg des Bundes aus krisenbedingten Beteiligungen an Banken: Gutachten des von der Bundesregierung eingesetzten Expertenrats* (Berlin: Bundesfinanzministerium).

- FAZ (Frankfurter Allgemeine Zeitung) (1960), 'Schwieriges Hypothekengeschäft – Die Konkurrenz der Sparkassen und Versicherungen hat sich verschärft', *Frankfurter Allgemeine Zeitung*, March 16, p. 17.
- (1977), 'Kontrollierte Spekulation auf die Zinssenkung', *Frankfurter Allgemeine Zeitung*, March 25, p. 16.
- (1978), 'Rheinische Hyp: Der Zinssenkung nicht immer getraut', *Frankfurter Allgemeine Zeitung*, March 29, p. 15.
- (2001), 'Banken melden Zinsänderungsrisiken. Rheinhyp begrüßt Berichtspflicht', *Frankfurter Allgemeine Zeitung*, March 26, p.22.
- (2008), 'Düsseldorfer Hypobank in Schwierigkeiten', *Frankfurter Allgemeine Zeitung*, April 22, p. 15.
- (2009), 'Für die Schiefelage der AHBR mussten die Gewerkschaften bluten'. *Frankfurter Allgemeine Zeitung*, April 23, p. 23.
- Fligstein, N. (1990), *The Transformation of Corporate Control* (Cambridge, Mass.: Harvard University Press).
- (1996), 'Markets as Politics. A Political-Cultural Approach to Market Institutions'. *American Sociological Review*, 61 (4), pp. 656–673.
- (2001), *The Architecture of Markets: An Economic Sociology of Twenty-First-Century Capitalist Societies* (Princeton, N.J.: Princeton University Press).
- Fligstein, N. and Goldstein, A. (2012), 'A Long Strange Trip', in: K. D. Knorr-Cetina and A. Preda (eds) *The Oxford Handbook of the Sociology of Finance* (Oxford: Oxford University Press), pp. 339–356.
- Fligstein, N. and McAdam, D. (2012a), *A Theory of Fields* (Oxford: Oxford University Press).
- (2012b), 'A Political-Cultural Approach to the Problem of Strategic Action', in: D. Courpasson, D. Golsorkhi and J. J. Sallaz (eds) *Rethinking Power in Organizations, Institutions, and Markets* (Bingley: Emerald), pp. 287–316.
- Fligstein, N. and Habinek, J. (2014), 'Sucker Punched by the Invisible Hand: The World Financial Markets and the Globalization of the US Mortgage Crisis', *Socio-Economic Review*, 12 (4), pp. 637–665.
- Fligstein, N. and Roehrkasse, A. F. (2016), 'The Causes of Fraud in the Financial Crisis: Evidence from the Mortgage-Backed-Securities Industry', *American Sociological Review*, 81 (4), pp. 617–643.
- Francke, H.-H. and Hudson, M. (1984), *Banking and Finance in West Germany* (London: Croom Helm).
- FTD (Financial Times Deutschland) (2011), 'Das Gespenst der italienischen Zinskurve'. *Financial Times Deutschland*, November 28.
- Fuller, G. (2016), *The Great Debt Transformation: Households, Financialization and Policy Responses* (Basingstoke: Palgrave Macmillan).
- Gamble, A. (2015), 'Slaves to the Market: A Response to Bell and Hindmoor', *The British Journal of Politics and International Relations*, 17 (1), pp. 27–30.
- Goedecke, W. (1969a), 'Der Verkauf hat Vorrang', *Der Volkswirt*, No.35, 29 August 1969, in: W. Goedecke (ed) (1973) *Realkredit. Perspektiven und Probleme*. (Frankfurt a.M.: Fritz Knapp Verlag), pp. 10–20.

- (1969b), ‘Die Pfandbriefhypothek im Wettbewerb’, *Handelsblatt*, No.165, 29 August 1969, in: W. Goedecke (ed) (1973): *Realkredit. Perspektiven und Probleme* (Frankfurt a.M.: Fritz Knapp Verlag), pp. 91–97.
- (1973), *Realkredit. Perspektiven und Probleme* (Frankfurt a.M.: Knapp).
- (1977), ‘Wettbewerbliche Probleme aus der Sicht der Hypothekenbanken’, Unveröffentlichter Vortrag, gehalten am June 30, 1977 at the Institut für Bankbetriebslehre der Universität Mannheim, in: W. Goedecke (ed) (1979): *Realkredit. Perspektiven und Probleme. Eine Fortsetzung* (Frankfurt a.M.: Fritz Knapp Verlag), pp. 166–184.
- (1979), ‘Hypothekenbanken im Wettbewerb’, *Die Bank, Zeitschrift für Bankpolitik und Bankpraxis*, No.12, December 1979, pp. 579ff, in: W. Goedecke (ed) (1982) *Realkredit. Perspektiven und Problem. Ein letztes Kapitel* (Frankfurt a.M.: Fritz Knapp Verlag), pp. 76–93.
- Goedecke, W. and Kerl, V. (1974), *Die Hypothekenbanken*, 2nd ed. (Frankfurt a.M.: Fritz Knapp Verlag).
- (1990), *Die Hypothekenbanken*, 3rd ed. (Frankfurt a.M.: Fritz Knapp Verlag).
- Goedecke, W., Kerl, V. and Scholz, H. (1997), *Die Hypothekenbanken*, 4th ed. (Frankfurt a.M.: Fritz Knapp Verlag).
- Goldstein, A. and Fligstein, N. (2017), ‘Financial Markets as Production Markets: The Industrial Roots of the Mortgage Meltdown’, *Socio-Economic Review*, 15 (3), pp. 483–510.
- Granovetter, M. (1985), ‘Economic Action and Social Structure: The Problem of Embeddedness’, *American Journal of Sociology*, 91 (3), pp. 481–510.
- Grippenutz, H. (2005), ‘Friend and Foes in Pfandbriefland’, *Euroweek*, April 29, pp. 74–75.
- Groth, J. (2010), ‘Comeback eines Langweilers’, *Die Zeit*, 38, September 8.
- Handelsblatt (2008), ‘Staat kommt Hypo Real Estate zu Hilfe’, in: *Handelsblatt online*, September 29.
- Hankel, W. (1971), ‘Das Deutsche Banken-, Investment- und Börsenwesen; zur Frage der Universalbank’, in: W. Hankel (ed) *Währungspolitik: Geldwertstabilisierung, Währungsintegration und Sparserschutz* (Stuttgart: Kohlhammer), pp. 274–299.
- (1974), *Wettbewerb und Sparschutz im Kreditgewerbe* (Stuttgart: Kohlhammer).
- (1976), ‘Wettbewerbsprobleme auf der Passivseite der Bankbilanz’, in: B. Röper (ed) *Wettbewerbsprobleme im Kreditgewerbe* (Berlin: Duncker & Humboldt), pp. 32–35.
- Hardie, I. and Howarth, D. J. (2009), ‘Die Krise but not La Crise? The Financial Crisis and the Transformation of German and French Banking Systems’, *Journal of Common Market Studies*, 47 (5), pp. 1017–1039.
- (2013), *Market-based Banking and the International Financial Crisis* (Oxford: Oxford University Press).
- Häuser, K. (1981), ‘Die Rolle des Staates auf dem Kapitalmarkt’, in: M. Bierich (ed) *30 Jahre Kapitalmarkt in der Bundesrepublik Deutschland* (Frankfurt am Main: Knapp).
- Hellmann, T. F., Murdock, K. C. and Stiglitz, J. E. (2000), ‘Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough?’, *The American Economic Review*, 90 (1), pp.147–165.
- Hellwig, M. (2011), ‘Banken sitzen auf dem Pulverfass Fristentransformation’. *Börsen-Zeitung*, 24, February 4, p. 8.

- Herrmann, A. (1986), 'Veränderte Stellung des Realkredits auf dem deutschen Geldmarkt', *Der Langfristige Kredit*, pp. 636–637.
- Hypothekenbank in Essen (1988-2004), *Geschäftsberichte* (Essen: Hypothekenbank in Essen).
- I&F (Immobilien & Finanzierung) (2008), 'Leitartikel: Das Ende der Spekulanten', *Immobilien & Finanzierung*, 20, p. 4.
- (2012), 'Leitartikel: Zum Tode der Eurohypo', *Immobilien & Finanzierung*, 8, p.2.
- (2018), 'Leitartikel: Home of the Pfandbrief', *Immobilien & Finanzierung*, 8, p. 2.
- Keeley, M. C. (1990), 'Deposit Insurance, Risk, and Market Power in Banking', *The American Economic Review*, 80 (5), pp. 1183–1200.
- Kerl, V. (2001), 'Über Verbände, Lobbyisten und Ämter', *Der langfristige Kredit*, 10, May 15, p. 328.
- Kolbeck, R.(1988), 'Die Eigenkapitalvorschriften der Hypothekenbanken als Risikobegrenzungsnormen unter veränderten Rahmenbedingungen', in: W. Gerke (ed) *Bankrisiken und Bankrecht* (Wiesbaden: Gabler), pp. 153–185.
- Kreditpraxis (1987), 'Bereits eine halbe Milliarde bei der Hypothekenbank in Essen'. *Kreditpraxis*, 3/87, pp. 17–18.
- Krippner, G. R. (2001), 'The Elusive Market: Embeddedness and the Paradigm of Economic Sociology', *Theory and Society*, 30 (6), pp. 775–810.
- (2011), *Capitalizing on Crisis: the Political Origins of the Rise of Finance* (Cambridge : Harvard University Press).
- Krippner, G. R. and Alvarez, A. S. (2007), 'Embeddedness and the Intellectual Projects of Economic Sociology', *Annual Review of Sociology*, 33, pp. 219–240.
- Leaven, L. and Valencia, F. (2010), *Resolution of banking Crises: The Good, the Bad, and the Ugly*. IMF Working Paper, 10/146.
- Letschert, G. (1977), 'Private Hypothekenbanken', in: F. Steffan (ed) *Handbuch des Real- und Kommunalkredits*, pp.497–621.
- Lounsbury, M. and Hirsch, P.M. (eds) (2010), *Markets on Trial: The Economic Sociology of the U.S. Financial Crisis* (Bingley: Emerald).
- Mayntz, R. (2017), *Handeln und Struktur, Akteur und System: Die kausale Rekonstruktion von sozialen Makrophänomenen am Beispiel der Finanzkrise*. MPIfG Discussion Paper, No. 17/5.
- Mülhaupt, L. (1969), 'Wettbewerb und Strukturwandel in der Kreditwirtschaft unter besonderer Berücksichtigung des langfristigen Kreditgeschäfts', *Der Langfristige Kredit*, 20 (23), pp. 651–659.
- Osman, Y. (2008), 'Pleite eines Bankensammlers - Wolfgang Schuppli', in: *Financial Times Deutschland*, April 23.
- Otto, P. (2018), 'Leitartikel: Home of the Pfandbrief'. In: *Immobilien & Finanzierung* 6/2018, p.2.
- Pardi, T. (2014), 'From Markets as Politics to the Politics of Markets: Unpacking the Relationship between State and Firms', *Economic Sociology: The European Newsletter*, 15 (2), pp. 7–16.
- Pfeil, C. and Fischer, K.-H.(2004), 'Regulation and Competition in German Banking: An Assessment', in: J. P. Krahen and R. H. Schmidt (eds) *The German Financial System* (Oxford: Oxford University Press), pp. 291–349.

- Preda, A. (2007), 'The Sociological Approach to Financial Markets'. *Journal of Economic Surveys*, 21 (3), pp. 506–533.
- Quinn, S. (2017), 'The Miracles of Bookkeeping: How Budget Politics Link Fiscal Policies and Financial Markets', *American Journal of Sociology*, 123 (1), pp. 48–85.
- Redenius, O. (2009), *Strukturwandel und Konzentrationsprozesse im deutschen Hypothekenbankenwesen* (Wiesbaden: Gabler).
- Reichstein, E. (1985), '35 Jahre langfristiger Kredit der Hypothekenbanken – Gedanken zur Entwicklung dieser Spezialinstitute von 1950-1985', *Der Langfristige Kredit*, pp. 644–657.
- Rheinische Hypothekenbank (1971-2002), *Geschäftsberichte* (Mannheim: Rheinhyp).
- Sanio, J. (2008), *Lehren aus der Krise*. Rede auf dem Jahresempfang des Verbandes deutscher Pfandbriefbanken in der DZ Bank, November 27.
- Schönmann, H.G. (1984), 'Zu viel Kommunalkredit der Hypothekenbanken?', *Zeitschrift für gesamte Kreditwesen*, 6, pp. 240–244.
- Schulte-Kemper, H. (1988), 'Erfolgreiche Neugründungen. Bereits eine halbe Milliarde bei der Hypothekenbank in Essen', *Kreditpraxis*, 43 (13), pp. 17–18.
- (1992), 'Ertragschancen im Kommunalkreditgeschäft'. *Der Langfristige Kredit*, 16/17, pp. 546–547.
- (1999), 'Entwicklungstendenzen im Staatskreditgeschäft der Hypothekenbanken', *Der Langfristige Kredit*, 16+17, pp. 29–35.
- (2004), 'Das Geschäftsmodell Hypothekenbank aus Essener Sicht', *Immobilien & Finanzierung*, 2, pp. 44–47.
- Schumann, H. (2009), 'Sorgfaltspflicht gröblich verletzt', in: *Tagesspiegel*, July 3.
- Schwarte, G. (1996), 'Renaissance der Pfandbriefe an den Finanzmärkten'. *Die Zeit*, 17, April 19.
- Seikel, D. (2013), *Der Kampf um öffentlich-rechtliche Banken: Wie die Europäische Kommission Liberalisierung durchsetzt* (Frankfurt a.M.: Campus-Verlag).
- (2017), 'Savings Banks and Landesbanken in the German Political Economy: The Long Struggle between Private and Public Banks', in: C. Scherrer (ed) *Public Banks in the Age of Financialization* (Cheltenham: Edward Elgar Publishing), pp. 155–175.
- S&P (Standard & Poors) (2003), *Bank Credit Report - Hypothekenbank in Essen AG*, August 1 (New York: Standard & Poors).
- (2005), *Bank Credit Report – Hypothekenbank in Essen AG*, Juli 12, (New York: Standard & Poors).
- Schröder, B. (1969), 'Mit dem Hypothekenbankgesetz in das 3.Jahrhundert des Pfandbriefs? ', *Der Langfristige Kredit*, 20 (18), pp. 551-553.
- Steffan, F. (1963a), 'Begriff und Funktion des Realkredits', in: F. Steffan (ed) *Das Handbuch des Realkredits. Geschichte, Funktion, Recht, Praxis und Träger des deutschen Boden- und Schiffskredits* (Frankfurt a.M.: Fritz Knapp Verlag), pp. 9–184.
- Steffan, F. (1963b), 'Bodenrecht und Bodenkredit in Vergangenheit und Gegenwart', in: F. Steffan (ed) *Das Handbuch des Realkredits. Geschichte, Funktion, Recht, Praxis und Träger des deutschen Boden- und Schiffskredits* (Frankfurt a.M.: Fritz Knapp Verlag), pp. 247–440.
- Streeck, W. (2013), *Gekaufte Zeit: Die vertagte Krise des demokratischen Kapitalismus* (Berlin: Suhrkamp).

- Streeck, W. (2014), 'The Politics of Public Debt: Neoliberalism, Capitalist Development and the Restructuring of the State', *German Economic Review*, 15 (1), pp. 143–165.
- Sünderhauf, R. (2006), *Bewertung des Ausfallrisikos deutscher Hypothekenbank-Pfandbriefe* (Berlin: BWV).
- The Economist (2009), 'Too little, and late', *The Economist*, April 18, p. 81.
- Thiemann, M. and Lepoutre, J. (2017), 'Stitched on the Edge: Rule Evasion, Embedded Regulators, and the Evolution of Markets', *American Journal of Sociology*, 122 (6), pp. 1775–1821.
- Trampusch, C. (2018), 'Liberal Financial Markets in the Interest of Staatskredite – A Process-Tracing Study of the Link between Sovereign Debt Policy and the 1908 Bourse Law Reform in the German Empire', *Economic History Yearbook*, 59 (1), pp. 105–134.
- Trampusch, C., Linden, B. and Schwan, M. (2014), 'Staatskapitalismus in NRW und Bayern: Der Aufstieg und Fall von WestLB und BayernLB', *Zeitschrift für Vergleichende Politikwissenschaft*, 8 (2), pp. 129–154.
- Tremer, G. (1978), 'Wesen und Aufgaben des Kommunalkredits', in: F. Steffan (ed) *Handbuch des Real- und Kommunalkredits*, pp. 115–136.
- Tremer, G. (1990), 'Stationen im Kommunalkredit', *Der Langfristige Kredit*, 22+23, pp. 26.
- Troost, A. (1984), *Staatsverschuldung und Kreditinstitute* (Frankfurt a.M.: Lang).
- Ullmann, H.-P. (2017), *Das Abgleiten in den Schuldenstaat* (Göttingen: Vandenhock & Ruprecht).
- VDH (Verband Deutscher Hypothekenbanken) (1970-2009), *Geschäftsberichte 1969* (Bonn: Verband deutscher Hypothekenbanken e.V.).
- (1978), *75 Jahre Verbandsgeschichte deutscher Hypothekenbanken* (Frankfurt a.M.: Fritz Knapp Verlag)
- (2002), *Zwischen Kapitalmarkt und Städtebau. Hundert Jahre Verbandsgeschichte deutscher Hypothekenbanken* (Frankfurt a.M.: Fritz Knapp Verlag).
- Vives, X. (2016), *Competition and Stability in Banking* (Princeton: Princeton University Press).
- Von Heusinger, R. (1998), 'Die deutschen Hypo-Hedge-Funds', *Börsen-Zeitung*, April 25, p.1.
- Von Heusinger, R. (2005), 'Fluch der Derivate', *Die Zeit*, December 15.
- Wesselkock, K. (1988), 'Der Markt für Finanzdienstleistungen im Zeitvergleich', *Versicherungswirtschaft*, 43 (3), p. 190.
- Wirtschaftswoche (WiWo) (1987), 'Hypo mit Stallgeruch', *Wirtschaftswoche*, 7, February 6, p. 8.
- Walker, Marcus (1999), 'Germany's Secret Gamblers', in: *Euromoney*, April 1999, pp. 22–28.
- Wandel, E. (1998), *Banken und Versicherungen im 19. und 20. Jahrhundert* (München: Oldenbourg).
- Wolfson, M. and Epstein, G. A. (2013), *The Handbook of the Political Economy of Financial Crises* (Oxford: Oxford University Press).
- Zukin, S. and DiMaggio, P. (1990), 'Introduction', in: S. Zukin and P. DiMaggio (eds) *Structures of Capital. The Social Organization of the Economy* (Cambridge: Cambridge University Press), pp. 1–37.

Appendix

Interviews

The semi-structured interviews were conducted between November 2015 and July, 2018. Each interview lasted between 60 and 90 minutes and was held in German. All statements are reported anonymously, so citations cannot be linked to the interviewee. Translations of German quotations are my own. Anonymous transcripts or notes containing longer passages of the quoted text are available on request.

Table 2: Interviews

Interviewee	Date	Place	Reference
Financial journalist	9 November 2015	Cologne	INT_1
Professor for finance and banking and expert for German mortgage banks	20 November 2015	Duisburg	INT_2
Former mortgage banker at Rheinsche Hypothekenbank and VDH representative	7 March 2016	Frankfurt	INT_3
VDH representative	11 March 2016	Bonn	INT_4
Finance expert from the German Bundestag	6 July 2018	Telephone	INT_5
Former mortgage banker at Hypothekenbank in Essen	12 July 2018	Telephone	INT_6

