



**UNIVERSITY OF  
CAMBRIDGE**

**The Role of Trust in the Divergent Development of  
Alternative Lending Channels in the UK and Germany**

**This thesis is submitted for the degree of Doctor of Philosophy**

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## **Abstract**

### **The Role of Trust in the Divergent Development of Alternative Lending Channels in the UK and Germany**

A large body of literature in the social sciences highlights the importance of trust as a necessary condition for economic exchange and the functioning of markets. By contrast, the relationship between trust and variation in financial market practices across national economies has received relatively little attention. This dissertation uses two alternative, non-bank lending channels in the period following the 2008 financial crisis as an empirical case study to analyse the influence of trust on the development of small business lending practices in the UK and Germany. A nested mixed methods design has been applied to the quantitative and qualitative analysis of unique, primary source loan transaction data, surveys of internet lending platforms, and surveys and semi-structured interviews with individual investors. Analysis of lending data finds different growth trajectories for each channel in each market, a pattern of development consistent with propositions of the Varieties of Capitalism (VoC) framework using its assumptions about the different institutional arrangements in liberal market economies (LMEs) and coordinated market economies (CMEs). Analysis of investor survey data and interviews provides a complimentary, trust-based explanation for these different development trajectories: there are unique social arrangements in the UK and Germany underlying their institutional arrangements and producing different forms of trust that investors rely on to assess the risk of lending in each channel. This dissertation argues that the VoC explanation for variation in the financing practices of firms across economies is incomplete because it fails to explain how societal arrangements and micro-foundations of trust influence the financing alternatives available to firms. This empirical study links comparative institutionalism and sociology of finance literatures by providing a more contextualised, holistic understanding of cross-national diversity of financial practices.

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## Chapter 1: Introduction

### 1.1 Context and Aim

It has been 10 years since the onset of the global financial crisis, the repercussions of which are still being felt across the financial system in many national economies. The insolvency of Lehman Brothers in September 2008 was a shock that rapidly disrupted the functioning of the banking system and capital markets in most of the world's economies, and required a massive amount of funding from national governments in order to stabilise it. The financial crisis that began in the US housing market plunged the US into the deepest economic downturn since 1945 and the longest since the Great Depression of the 1930s (Manibog & Foley, 2017).

In many respects, the financial crisis was also a crisis of trust. Trust began eroding in 2007, well before the Lehman Brothers' insolvency in September 2008, when financial firms like Bear Stearns and Northern Rock suddenly faced liquidity problems, a signal suggesting that confidence in the financial system was starting to evaporate as banks began questioning the value of the collateral proposed by counterparties in financial transactions. As the crisis started unfolding, financial institutions began to hoard funds in the face of uncertainty about the creditworthiness of other financial institutions. As Bagehot observed in the late nineteenth century:

The peculiar essence of our banking system is an unprecedented trust between man and man; and when that trust is much weakened by hidden causes, a small accident may greatly hurt it, and a great accident for a moment may almost destroy it.

(Bagehot, 1873:158)

The actions of the banks diminished the trust that virtually every actor in the developed economies had placed in these institutions. Many businesses concluded that they could no longer rely on banks to be consistent suppliers of financing, and uncertainty rapidly spread through the real economy and started a spiralling contraction in production and consumption. Individual investors also lost trust in financial institutions as they watched the value of their invested assets plummet. This was not just a phenomenon suffered by elites, as most workers in developed economies also watched the funds underlying their pension entitlements suddenly drop in value.

The severity of the crisis and the variation in the pattern of recovery between and within global regions has attracted the interest of scholars across many disciplines, raising fundamental questions about the functioning of financial markets. Some economies, most notably China, have grown continuously since the crisis, while others initially grew but then resumed shrinking, a pattern that has puzzled economists, particularly since the advanced economies of the US



and Europe had the slowest pace of recovery (Arias & Wen, 2015). The US and Germany had reached their pre-crisis level of GDP by 2011, followed a year later by the UK and Japan, while Portugal, Italy and Greece still haven't fully recovered (Manibog & Foley, 2017). How and why do finance practices vary across national economies, and how do these practices influence economic performance? The contagion effect of the crisis across economies in the developed world has drawn the attention of comparative institutionalism scholars interested in the role of institutions in governing economic activity (Morgan, Campbell, Crouch, Pedersen, & Whitley, 2010). The social and economic effects of the crisis have been a catalyst motivating sociologists to study finance topics and the contemporary financial system (Carruthers, 2011; Knorr Cetina & Preda, 2012).

Despite the voluminous literature analysing the crisis and its consequences, relatively little attention has been paid to examining the role of trust in financial crises or in finance more broadly (Swedberg, 2010, 2012). Analysing financial market phenomena is a core research interest of economists, and explanations involving trust do not fit easily with assumptions about financial decision-making in the context of rational expectations and equilibriums (Jovanovic, 2012; Zucker, 1986). Many traditional economists dismiss the need to incorporate the concept of trust because financial decisions are based on the rational expectation of future outcomes. One such economist is Oliver Williamson, who famously argued that the word 'trust' should be banned from the social sciences (Williamson, 1993). To the extent that trust plays a role in decision-making, it is characterised as a calculative, utility-maximising exercise that assumes that all parties in an exchange are similarly utility-maximising. The prevailing conviction among most economists is that a cognitive conceptualisation of trust belongs to the field of psychology rather than economics, although this has started to change with the recent emergence of the sub-field of behavioural economics (Swedberg, 2010). While there is a large body of sociology literature researching trust in a relational context, research into financial markets was largely left to economists until recently, with the result that there is little sociological literature investigating the role of trust in financial markets.

This dissertation studies trust in the period following the global financial crisis by analysing its role in the development of new lending channels for small firms that emerged following the disruption of the financial system. Capital market funding for banks was disrupted soon after the crisis began, forcing them to reduce lending to firms, a situation exacerbated by the impact of losses in the value of assets owned by financial institutions and the introduction of new regulations which reduced the amount of capital that banks could deploy. The impact on firms from the contraction in bank lending following the crisis varied depending on the size of a firm and its location. Large firms in developed economies quickly regained access to the funding they needed as changes to regulatory capital requirements caused banks to shift lending towards less risky (i.e. larger) borrowers, and lower interest rates expanded the financing

capacity of traditional capital markets and unregulated 'shadow banks'.<sup>1</sup> By contrast, many firms too small to access capital markets or shadow banking experienced persistent funding problems (Arias & Wen, 2015; Ryan, O'Toole, & McCann, 2014). Beginning in 2009, euro area banks perceived an increased lending risk to small and medium-sized enterprises (SMEs), which played an increased role in tightening business credit standards, with smaller SMEs most affected (Wehinger, 2014). This funding shortfall has hampered the economic recovery following the crisis, since small firms produce the majority of output in most developed economies, and these firms cannot produce goods ordered by customers if they cannot finance the purchase of raw materials and production costs (Shapiro, 1985). Consequently, SMEs began to search for alternative forms of finance.

This dissertation studies two forms of lending operating outside of the traditional financial system in the UK and Germany as an empirical case study to analyse the influence of trust on the development of small business lending in these two countries. It situates itself in the economic sociology literature, more specifically in the sub-field of sociology of finance (SoF). The UK and Germany have been selected for this comparative study because they represent the ideal type 'market-based' and 'bank-based' models, respectively, in the taxonomy commonly used in comparative capitalism literature when comparing the financial systems of national economies. The traditional financial system is composed of incumbent actors authorised to carry on regulated activities within the regulated banking and capital markets system.<sup>23</sup> By contrast, alternative finance describes finance activity that emerges from outside of the incumbent system. Alternative finance has historically referred to finance channels used by actors in *developing* economies with weak or unreliable financial institutions so they can function on a day-to-day basis (Chakrabarty & Bass, 2014). The disruption to bank lending produced by the financial crisis, however, has increased the demand for alternative finance in *developed* economies, as firms in developed economies are compelled, like their counterparts in developing economies, to utilise alternative financing sources outside of the traditional financial system. This dissertation examines two forms of alternative finance used by these firms in the UK and Germany, namely *Peer-to-Business (P2B) lending*<sup>4</sup> and *mini-bond lending*

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<sup>1</sup> Consists of either unregulated financing activity carried on by regulated financial institutions, or financing activity carried on by unregulated entities which are exempt from regulation because they are non-deposit-taking institutions. Shadow banking entities include hedge funds and private capital funds, insurance companies and pension funds. These entities benefited from lower interest rates as investors seeking higher yields were willing to accept more risk in providing funding to entities outside of the regulated financial system.

<sup>2</sup> There are references in the financial economics literature to 'informal finance', defined as 'credit provision that occurs beyond the scope of a country's formal financial and regulatory institutions' (Levine, Lin, & Xie, 2016:1). Informal finance differs from alternative finance because the focus of the former is only on financial *instruments* (such as trade credit) and the latter on *channels* of finance.

<sup>3</sup> This definition excludes private equity and hedge funds, as these investor types have developed over time to become closely connected with the capital markets.

<sup>4</sup> Loans of up to 5 million euros, but typically less than 1 million euros. Small institutional investors also participate in this activity, but it is dominated by individual investors.

(‘mini-bonds’)<sup>5</sup>. P2B lending consists of internet-based platforms acting as intermediaries to present the loans requests of small business borrowers to individual investors, who directly (or indirectly<sup>6</sup>) select loans they wish to finance. Mini-bond lending consists of business borrowers obtaining funding (in the form of a bond instrument) *directly* from individual investors and without the involvement of an intermediary in the placement of the bonds with investors.

SoF<sup>7</sup> is a relatively new sub-field within economic sociology that studies practices within and between organisations and institutions in the financial system. There are several gaps in this literature which this dissertation seeks to address. First, the development of alternative finance channels emerging within the digital economies of developed economies is understudied. Most SoF literature discusses finance practices *within* the traditional incumbent regulated banking and capital markets system, rather than practices occurring in the alternative finance space *outside* of the traditional system, in developed economies. Alternative channels in advanced economies warrant study because they are emerging contemporaneously with the process of digitalisation of social and economic engagement, while the finance practices are evolving differently from those in traditional finance channels. The digitisation of finance is changing the structure of the financial system, and attracting new entrants<sup>8</sup> using digital technologies to provide financial services in a more efficient way than incumbent financial institutions encumbered with high operating costs associated with legacy technology platforms. In the case of mini-bond funding, firms seeking to issue bonds can completely disintermediate the operational functions for bond issuance provided by financial intermediaries using applications on their own corporate website to disseminate information about the bonds, collect the investment funding, and communicate with investors during the life of the bond. In the P2B lending, internet platforms acting as intermediaries between lenders and borrowers are exploiting the advances of information-based technologies, such as machine learning and artificial intelligence, to incorporate both ‘soft’ and ‘hard’ information<sup>9</sup> in investment and credit analytics. This raises several important issues regarding the socio-economic repercussions of these developments.

Investigation of how and why finance practices vary *between* developed economies is also understudied by SoF scholars. The sociology of financial literature assumes that institutions in

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<sup>5</sup> Bonds smaller than 25 million euros in issuance size. Some small institutional investors also participate in this activity, but it is dominated by individual investors.

<sup>6</sup> The investor can elect to have the intermediating internet platform select the loan investments on behalf of the investor.

<sup>7</sup> Also referred to as the sociology of financial markets, and part of a broader multi-disciplinary area of research referred to as ‘social studies of finance’ in Europe, which includes a diverse range of social science disciplines studying finance-related topics.

<sup>8</sup> These firms are commonly referred to as ‘FinTech’ firms because their business models rely on using technology to provide financial services.

<sup>9</sup> Soft information includes unverified non-financial information, such as information regarding sentiment, behaviour, or relationships, while hard information includes verified financial information such as payment history, tax returns or audited financial statements.

the financial system are dominated by logics produced by a global process of financialisation, with developed economies gradually converging towards market-based systems of financing dominated by institutional investors (Deeg, 2014; Morgan, 2010). The research agenda has analysed macro-level phenomena and largely ignored investigating the practices of individual *retail* investors<sup>10</sup> as economic actors in financial markets. As a result, the influence of social variables in the development of new finance channels and their role as *institutional change agents* (Welter & Smallbone, 2015) in the incumbent system is not well understood. This dissertation conceptualises the market for individual investors collectively lending to firms as a set of institutional practices, arguing that these are sustained by trust-producing social arrangements in an economy. This conceptualisation is extended to explain the divergence in finance practices between economies, using the case of P2B and mini-bond alternative lending channels in Germany and the UK to identify the different *types* and *sources* of trust influencing the lending practices of each country.

This research is relevant to both academia and public policy. It provides a more socialised perspective to the study of financial markets, linking comparative institutionalism and sociology of financial markets literatures by providing a more contextualised, holistic understanding of cross-national diversity of financial practices. Analysing the development of both intermediated (P2B) and non-intermediated (mini-bond) channels provides the opportunity to compare the role of trust and how it is produced in economies with different financial systems and historical firm-bank finance relationships. In the public policy area, governments in both developed and developing economies recognise that SMEs<sup>11</sup> are an important source of growth and innovation, yet credit-deserving borrowers are not able to access the finance that they require within the incumbent system. Hopefully, these research findings will provide policymakers with insight to enable them to strike the right balance between providing firms with increased access to alternative sources of financing, while providing adequate regulatory protection for the individual investors funding the investments in those channels.

This research project breaks new methodological ground in the economic sociology and SoF literature. There does not appear to be a cross-national study of finance practices in these literatures that has collected and analysed primary data at a comparable scale to this research project. The dissertation analyses unique, primary source, quantitative and qualitative data collected from both Germany and the UK. The collected data sets consist of more than 9 million mini-bond and P2B loan investments, more than 1,000 survey questionnaires completed by

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<sup>10</sup> Sociology of finance scholars have studied the practices of individual professional investors employed by financial organisations.

<sup>11</sup> The quantitative criteria used by the European Commission in its definition of an SME: a firm with less than €50 million of annual turnover or less than €43 million of balance sheet assets and fewer than 500 employees (BMW, 2013). The SME segment can be further divided into size sub-segments based on annual turnover: micro SMEs (turnover <€1 million), small SMEs (turnover <€1 million to €5 million), medium SMEs (turnover €5 million to €25 million), large SMEs (turnover €5 million to €25 million).

internet P2B lending platforms and mini-bond and P2B investors, and 70 semi-structured interviews with individual mini-bond and P2B investors. The methodological approach to the data collection and analysis is integrated, utilising a nested mixed method design to gain analytic insight from data sets representing different levels of data collection and analysis.

## 1.2 Research Questions and Hypotheses

This dissertation conceptualises the adoption of new lending practices by market participants as a matter of *trust*, where the level of trust between economic actors and actors in institutions influences the adoption of these practices by both lenders and borrowers. The analysis addresses both demand and supply side factors in the development of the P2B and mini-bond lending channels in each country. However, the analysis of trust as an explanatory variable focuses on the supply side to explain the willingness (or not) of individual investors to provide the funding sought by borrowers using these channels.

There are many definitions of trust, as well as a lack of conceptual convergence across academic disciplines (Gargiulo & Gokhan, 2006; Zucker, 1986). Many definitions incorporate two notions that are fundamental to this research: (i) the willingness of a trustor to be vulnerable to a trustee, and (ii) positive expectation regarding the future behaviour of the trustee towards the trustor. Therefore, the underlying assumption is that the development of a new channel of finance is highly dependent on the willingness of investors to fund the lending opportunities offered through the channel, which is influenced by the investors' expectations regarding the future behaviour of the borrower regarding the repayment of the loan. At the macro level, the institutional arrangements of Germany and the UK are compared using the conceptual framework provided by Varieties of Capitalism (VoC) literature (Hall & Soskice, 2001) within comparative capitalism studies. For this analysis, *institutional arrangements* are assumed to consist of the 'forms, outcomes, and dynamics of economic organisation (firms, networks and markets) influenced by other social institutions' (Morgan, Campbell, Crouch, Pedersen, & Whitley, 2010:2).

This dissertation addresses three research questions regarding the development of these alternative lending channels in the two economies. The first question investigates the predictive power of the VoC model regarding the development of the alternative lending channels in the two economies:

Research Question 1: *How have the mini-bond and P2B lending channels developed in each country since the crisis, and do their development trajectories fit with the propositions of the Varieties of Capitalism framework?*

The analysis draws on VoC literature to contextualise the development of P2B and mini-bond lending in these two countries for several reasons. First, the VoC framework sees firms as the central actors in the economy, rather than other actors like governments, trade unions or

individuals, and it is the demand for alternative finance by firms that is the necessary (but not sufficient) condition for alternative channels to emerge. VoC literature claims that institutional arrangements influence the behaviour of firms as they solve coordination problems in a manner that produces the optimal economic outcome for firms. The VoC thesis identifies five institutional spheres relevant to comparative advantage, with the literature highlighting the distinctive difference between the financing practices of 'liberal market economy' (LME) and 'coordinated market economy' (CME) based firms within the corporate governance sphere, and which are highly relevant to the subject of this dissertation. It conceptualises markets as 'institutions that support relationships of particular types' (Hall & Soskice, 2001:9), which suggests that this support should be manifested in variation of finance practices if institutional arrangement vary between the two countries. In contrast to the VoC emphasis on large firms and banks versus capital markets as financing channels, this dissertation will focus mainly on SMEs and individual investors as a source of funding.

The UK and Germany have been selected as the economies for cross-national comparison because they embody the ideal type LME and CME economies used in the VoC literature (Hall & Soskice, 2001) to illustrate how different institutional arrangements impact the actions of firms in an economy. To what extent are the different institutional arrangements and conditions in each country reflected in the channel development and institutional change in each economy? The VoC model posits that the relationship-lending model in CMEs like Germany, characterised by strong trust relations and exchanges of private information between firms and their primary bank lender, provides borrowers with a supply of low-cost 'patient capital' (Hall & Gingerich, 2009; Hall & Soskice, 2001). In contrast, the VoC model assumes that firms located in LMEs like the UK use market-based sources of funding, which are not considered 'patient' (Deeg, Hardie, & Maxfield, 2016). The framework also highlights the importance of reputation for CME firms, who must engage in more inter-firm cooperation than LME firms to coordinate their activities (Hall & Soskice, 2001).

These differences in institutional conditions claimed by the VoC literature, particularly the relationships between banks and firms within the corporate governance sphere, facilitate the formulation of propositions for the divergent development of non-bank finance channels in the UK (a LME) and Germany (a CME). This provides an opportunity to empirically compare the fit of VoC propositions with the development pattern of mini-bond and P2B lending in the two countries. In relative terms, P2B lending is more transactional than mini-bond financing, and, given the similar characteristics to 'market-based' financing prevalent in LMEs, the VoC literature would predict more P2B lending activity in the UK market than the German market. By contrast, mini-bond financing is obtained by firms via direct response on the part of investors to firms' solicitation for funding, which suggests a social connection between the firm and its mini-bond funders. Such a connection is predicated on knowledge about the reputation of the

borrower amongst various stakeholder groups, and therefore is likely to be a determinant in an investor's decision to invest in the bond. Greater mini-bond financing activity in Germany than the UK, therefore, would be congruent with the propositions in the VoC literature. These propositions form the basis for the first hypothesis:

Hypothesis 1: *The development trajectories of the channels differ between countries, and these trajectories are congruent with the propositions of the VoC model.*

The analysis of development trajectories includes assessing the response of the incumbent institutions in the banking systems of each country to these new lending channels. The sociological interpretation of 'institutions' recognises that there are both formal rules and informal unwritten rules of the game that shape human interaction. In that context, institutional change in the banking system refers to change in the formal or informal practices of incumbent banks in how they go about lending to firms. Hall and Soskice contended in their elucidation of the VoC framework that firms will seek to retain the institutional arrangements in which they have invested (Hall & Soskice, 2001). Some scholars argue that there is an unwarranted bias towards institutional continuity over change in the VoC framework, particularly for institutions located in CMEs, because this behaviour by firms produces a force which preserves traditional structures (Streeck & Thelen, 2005:5). Other scholars have been critical about the VoC approach for its underestimation of institutional change and argue that VoC fails to incorporate change from outside the macroeconomic system with social or political dimensions (Hall & Thelen, 2009:8). This implies that change is unlikely to occur without an exogenous shock occurring that is strong enough to offset the forces of path dependency.

The failure to admit gradual institutional change leads to a second problem with the VoC framework: no specification of the types of institutional change processes. Therefore, this dissertation draws on the extended explanations of institutional change provided by Streeck and Thelen (2005) and Hall and Thelen (2009), which include a taxonomy for describing the institutional change process. The types of change identified in the taxonomy reflect institutional transformations that result from gradual endogenous processes rather than a single exogenous shock. While the financial crisis itself can be legitimately considered an exogenous shock to the financial and banking systems of most national economies,<sup>12</sup> any change to the banking system attributable to new lending channels is assumed to come about through a more gradual process. The analysis also draws on studies of *institutional entrepreneurship* in the institutional theory literature to gain understanding of, or gain insight into, the agency of the actors engaged in the institutional change process.

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<sup>12</sup> It could be argued that the financial crisis was endogenous to the financial system; however, it can also be argued that this was only the case in the US financial system. The effects of illiquidity in the US sub-prime mortgage market (and structured credit and derivatives markets for securities related to sub-prime mortgages) subsequently spread to the financial systems of other national economies.

The second research question addresses the role of trust in the development of these alternative channels:

Research Question 2: *What has been the role of trust in the development paths of P2B and mini-bond lending in the two countries?*

On the supply side of lending, trust potentially influences the legitimacy of new lending practices and the perceived trustworthiness of borrowers, thus influencing the financing alternatives available to firms. The role of trust is mentioned in the context of 'reputation' in the VoC literature as a necessary condition for the functioning of the non-market relationships that firms in CMEs rely on for coordinating their activities. However, it is only obliquely mentioned in reference to the market relationships of firms located in LMEs (Hall & Soskice, 2001:8). While the VoC thesis hints at *why* trust is needed by firms to coordinate their activities within the institutional arrangements in a CME, it does not discuss the form of trust produced by these firms. This gap in understanding provides the basis for the second hypothesis:

Hypothesis 2: *Investors rely on different forms of trust for different types of lending, and the presence and strength of these forms varies across the two economies.*

The analysis of trust forms adopts Lynne Zucker's (1986) framework for sources of trust that she identified in her study of the development of the US economy between 1840 and 1920. The challenges associated with attempting to directly measure trust are avoided by, instead, measuring indicators of trust presence represented by proxy variables in the collected data. The analysis also identifies the relationship between the indicators of trust and each type of lending to determine the dominant forms of trust relied on by investors in each lending channel, and whether this varies between economies.

The third research question investigates the societal arrangements in the two countries that produce the forms of trust identified in the prior research question:

Research Question 3: *How do the social and institutional arrangements in the UK and Germany produce the forms of trust influencing the development of alternative lending channels?*

Neither the propositions of the VoC model, nor the analysis of trust forms relied on by investors, reveals the *origin* of these trust forms, which is investigated by testing the 3<sup>rd</sup> hypothesis:

Hypothesis 3: *Different social and institutional arrangements in each country provide the foundations for different forms of trust relied on by alternative finance investors.*

The analysis seeks to identify the micro-foundations of the trust forms in a country by examining the variations in social practices occurring within two institutional spheres, namely the vocational education and training system and trade associations, which SMEs in both countries engage with to carry out their business activities. The analysis uses Barney &



Hansen's (1994) proposition for trust as a comparative advantage to assess the extent to which these micro-foundations, and the trust forms they produce, confer comparative advantage to firms' access to finance.

### **1.3 Structure of the Dissertation**

This dissertation consists of seven chapters, including this introduction. Chapter 2 provides the context for the empirical analysis presented in this dissertation, drawing attention to the structural differences between the German and UK economies, particularly their different financial systems. It compares the operating environment of firms and reviews differences in the nature of ownership and governance of SMEs. Governance is discussed in the context of family vs non-family ownership and the unique characteristics of Mittelstand firms. In the UK, categories describing the size of firms, such as 'SME', and the form of ownership, such as 'family owned', are not necessarily related. In Germany, these are intrinsically related, with the term 'Mittelstand' used to describe a small firm which, by implication, is family owned, with governance values reflecting a long-term, multi-stakeholder orientation of the decision-making of the owners and managers. The essential defining characteristic is the governance values of the firm, and therefore 'Mittelstand' also describes larger firms in Germany with similar values. The chapter also reviews the impact of the 2008 financial crisis on business lending in each country, and how it created conditions that accelerated the development of the mini-bond and P2B lending channels in the post-crisis period.

Chapter 3 reviews the academic literature informing the theoretical approach used in this dissertation, with three sections separately discussing the economic sociology and SoF, comparative institutionalism, and trust literatures. The first section discusses the theoretical contribution of embeddedness to the economic sociology literature and highlights gaps in the SoF literature related to the study of finance practices and financial markets. The comparative institutionalism section discusses the theoretical approaches for comparatively analysing financial systems, critically reviews the propositions of the VoC framework, and highlights the theoretical insights sourced from other literatures to address its limitations regarding agency and institutional change. The review of the trust literature makes evident the complexity of conceptualising trust given the different definitions of trust and interchangeable use of terminology across disciplines. It summarises the relevant empirical research investigating the influence of trust in investment and lending decision-making, including the contribution of theoretical and empirical insight drawn from the trust literature, and outlines Zucker's framework for the production of different forms of trust used in the analysis.

Chapter 4 describes the primary data collected for the analysis, then discusses the research questions, hypotheses, and the nested mixed methods approach in the analysis. The primary data was collected between 2013 and 2017, and includes individual transaction level data and aggregated transaction level data collected from mini-bond issuers and P2B lending platforms,

survey questionnaire data collected from P2B and mini-bond investors, and data collected in interviews with mini-bond and P2B investors. It also reviews the secondary data sources reporting cross-country surveys of organisational and institutional trust used in the analysis. The second part of the chapter outlines the methodology for testing the hypotheses for each of the three research questions, and outlines the approach used to address the methodological challenges associated with measuring trust.

Chapter 5 presents the data analysis and findings testing the first hypothesis regarding the fit of the trajectories of mini-bond and P2B channel development with the propositions of the VoC framework. It begins by summarising the growth patterns in each country based on the analysis of the collected transaction data and the policies enacted in each country during the post-crisis period. The analysis moves to building a set of propositions for the development of the channels through the lens of the Coordinated Market Economy (CME) and Liberal Market Economy (LMEs) dichotomy in the VoC framework, and compares the observed development patterns of the lending channels with the VoC propositions to test the first hypothesis. The chapter compares the forms of change process in the financial system in between the two countries brought about by the emergence of P2B and mini-bond lending, and discusses the role of institutional entrepreneurs in bringing about this change.

Chapter 6 addresses the second and third research questions explaining the divergent development trajectories for mini-bond and P2B lending, as discussed in the prior chapter. The analysis identifies the forms of trust relied on by investors in each lending channel and variation in the dominance of these forms between Germany and the UK. The second part of the chapter reviews the foundations of the forms of trust specific to each country, and links these social and institutional arrangements to the financing practices of individual mini-bond and institutional investors.

Chapter 7 is the concluding chapter. It outlines the contribution to the SoF literature research by linking macro level comparative institutionalism with micro level analysis of investor trust. The chapter suggests some of the limitations of the research project and considers whether the Mittelstand, as a classification of firm type, has a comparative advantage versus other types of firms in accessing finance.



## **Chapter 2: The Economies of the UK and Germany and the Impact of the Crisis**

This chapter provides a context for the analysis of the peer-to-business (P2B) and mini-bond lending channels that small and medium-sized enterprises (SMEs) in Germany and the UK turned to following the 2008 financial crisis. The chapter is divided into four sections. The first section compares the financial systems of the two countries, including their banking and capital market systems, the credit bureaus and rating agencies supplying information to banks and debt investors, and the regulatory environment for financial services in each country. The second section compares the nature of the participation of SMEs in the two economies, and highlights the particular role that the family-governed 'Mittelstand' firms and related institutions play in the German economy. The third section discusses the factors that led to the emergence of mini-bonds and P2B lending as alternatives to bank financing prior to the onset of the financial crisis. The concluding section investigates how the financial crisis unfolded in the two countries, and how this set the stage for the divergent development of the two channels in the post-crisis period.

### **2.1 Comparison of UK and German Financial Systems**

This section highlights the differences in the banking and capital market system of the two countries, including an overview of the regulatory regime and the ecosystem of rating agencies and other entities supplying information about the creditworthiness of firms.

#### **2.1.1 Banking Systems**

National financial systems are often compared using the framework for categorising the structures of capitalist financial systems proposed by Zysman in his seminal work *Governments, Markets, and Growth: Financial Systems and the Politics of Industrial Change* (1983). In this context, the German system is generally categorised as a *bank credit*-based system, in which banks play a central role in the economy by intermediating between household savers and firms needing debt finance. In contrast, the UK financial system is categorised as a *capital markets*-based system, in which the supply of finance is determined by the response of financial investors responding to market or price signals. In simple terms, a firm's access to financing in a bank-based system is relationship oriented, whereas a firm's access to financing in a capital markets-based system is more transaction oriented. Bank loans are the dominant form of financing for non-financial firms in Germany, both in absolute terms and relative to GDP, while institutions for financing equity and debt financing for firms are much more prevalent in the UK than in Germany (Klagge & Martin, 2005).

The reality is much messier than what these dichotomous categorisations imply given the evolution of capital markets development in the (almost) 50 years since the publication of Zysman's work. In their cross-national analysis of the financing structures of banks, Hardie and Howarth point out that most banks in developed economies now use a mix of deposit funding

and market-based sources of funding to finance their lending activities, thereby blurring the distinction between bank credit-based and capital markets-based financial systems (Hardie, Howarth, Maxfield, & Verdun, 2013). Another issue is the variation in the relevance of the model to firms of different sizes, because access to capital markets is directly related to the size of a firm and its financing needs. Zysman's framework is much more relevant to large firms than small firms; this is because the former are large enough to tap either banks or capital markets for their financing requirements, and typically use a mix of bank and market financing, regardless of where they are located.

In theory, firms have several options with which to finance their activities. Firm owners, regardless of the size of their firm, generally prefer to finance with retained earnings or debt rather than with equity<sup>13</sup>, because the former is lower cost and enable owners to retain control over governance. The financing needs of SMEs, however, are too small to interest intermediaries or investors in capital markets and are, therefore, highly reliant on bank credit financing, regardless of which national economy they are based in. Firms too small to access capital markets depend almost entirely on banks for their external financing needs, because only banks possess the expertise and scale needed to overcome information asymmetry and reduce the adverse selection risk inherent in lending to small borrowers (Behr & Güttler, 2007). Mid-sized firms fall somewhere in between, with most being too small to directly access capital market funding, but large enough to participate in structures that provide indirect access. For example, despite Germany being considered a bank credit-based economy, approximately 700 German mid-sized firms borrowed €4.5 billion via mezzanine loans that were funded by pooling, securitising, and selling securities to institutional investors in Germany between 2004 and 2007.<sup>14</sup>

Notwithstanding these limitations, there are distinct differences between the German and UK financial banking systems that do reflect some of the characterisations of bank-based (Germany) versus capital markets-based (UK) financial systems as described by Zysman. The German banking system is commonly described as a *three-pillar* system, composed of three groups of banks with different forms of ownership, governance, and organisational purpose. Figure 2.1 illustrates the relative size of each pillar with respect to the number of banks, branches and employees for 2014 and 2015.

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<sup>13</sup> The 'pecking order' theory of financing preferences of firms is discussed in more detail in Chapter 5.

<sup>14</sup> All of the large German banks operated programmes for originating these loans, but the banks were not responsible for funding any of the loans.

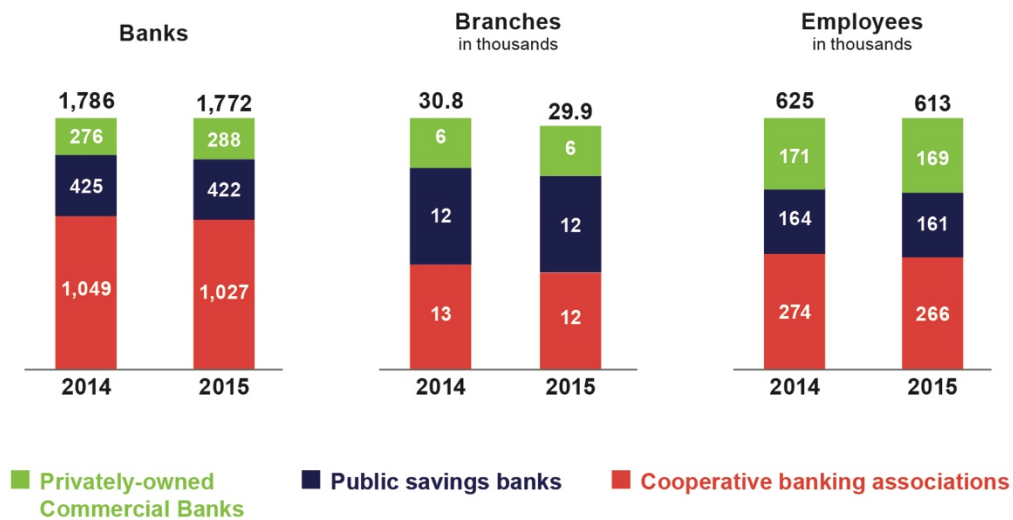


Figure 2.1: Three-pillar German Banking System (Handelsblatt, 2017)

The first pillar is a group of 280 privately owned commercial banks, a heterogeneous collection of profit-oriented organisations ranging from large international commercial banks to small local banks. The second pillar is the group of government-owned banks providing financing to support economic development at three geographic levels. The KfW development bank, owned 80% by the German government and 20% by the 16 federal states, supports economic development at the national level by providing financing to firms both directly and indirectly (via other banks). The government-owned savings banks operate at the regional and local level. There are six large *Landesbanken*,<sup>15</sup> owned by the federal states, which support economic development within their respective regions. The 420 relatively small *Sparkassen* banks are owned by cities and towns within an administrative region and support economic activity within their respective areas. They are territorially restricted to operating within their local areas, and must solely rely on deposits to fund their financing activities since they are barred from using capital market funding sources. The group of 1,000+ cooperatively owned (*Volksbanken*) banks also operate only within their respective local municipal areas, and rely only on the deposits of their members to finance their lending activities. They try to support economic activity within their area of membership, while, at the same time, provide a financial return to those same members. The relatively large number of Sparkassen and Volksbanken reflects the strong growth of these banks relative to commercial banks following World War II, as the

<sup>15</sup> There are 13 federal states in Germany, excluding the three city states (Hamburg, Bremen, and Berlin), all of which had a Landesbank at one point. The number of Landesbanken has been reduced to six over time as a result of consolidation.

former were less implicated in the Nazi regime than the latter banks (Behr & Schmidt, 2015). While the cooperative banks constitute the largest pillar measured by the number of institutions and branches, the largest share of assets is controlled by the commercial banks, as illustrated in Figure 2.2.

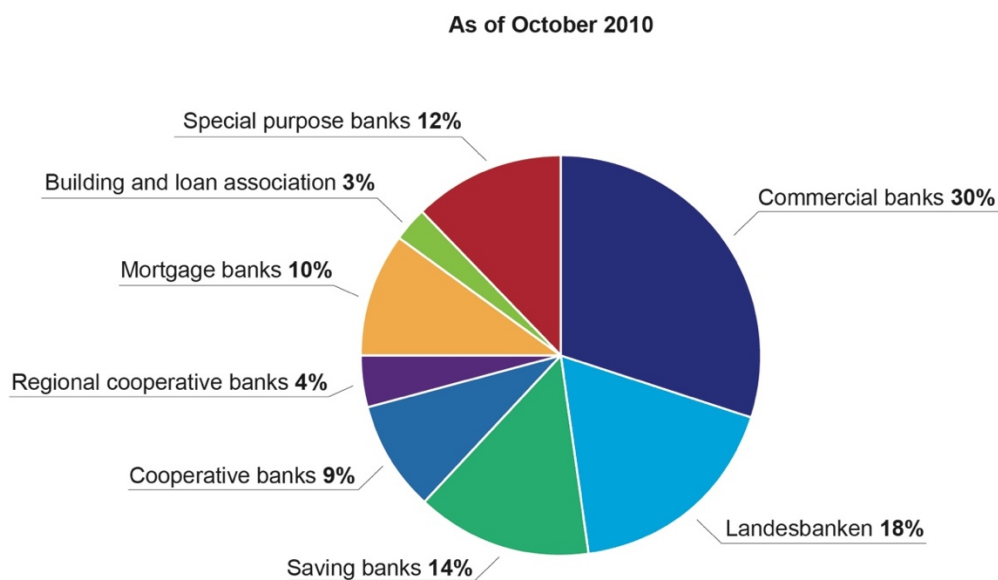


Figure 2.2: German Banking System Share of Banking Assets (International Monetary Fund, 2011)

A low level of market concentration, a relatively small market share for profit-oriented banks, and the important role played by small local banks with a focus on supporting economic development are distinguishing characteristics of the German financial system. The share<sup>16</sup> of the domestic market for the commercial banking segment of the German banking system is approximately 30% and is dominated by two<sup>17</sup> large banks, Deutsche Bank and Commerzbank (Deutsche Bank, 2013). However, the commercial banks' aggregated share of banking system assets is smaller than the share of assets controlled by the state-owned and cooperative banks, with the result that the majority of assets in the German banking system are controlled by banks that are not seeking to maximise profits. This is particularly relevant at the local level, since the Sparkassen and the Volksbanken control about 35% of German banking system assets and are the primary lenders to small firms operating within their local regions.

UK firms are also highly reliant on bank loans to finance their activities (CBI, 2012). However, there is no UK equivalent to the Sparkassen and Volksbanken that provides small firms with an alternative to borrowing from commercial banks as the UK banking system is much more

<sup>16</sup> Measured as a share of total banking industry balance sheet assets.

<sup>17</sup> HVB merged with Italy-based Unicredito in 2005. Postbank was effectively controlled by the German state until 30% was sold to Deutsche Bank in September 2008 – just as the financial crisis began.

concentrated than the German banking system. In the UK, the five largest banks control 43% of domestic market assets versus less than 1/3 of domestic market assets controlled by the five largest German banks (Deutsche Bank, 2013). The political factors influencing the development of the German banking system have contributed to creating one of the most overbanked economies in the world. Germany has approximately 45 bank branches per 100,000 adults, almost double the 25 bank branches per 100,000 adults in the UK market (World Bank, 2018). In contrast, the level of digital banking penetration is lower in Germany than the UK, with 56% of 16 to 74-year-olds in Germany accessing online banking services versus 68% of 16 to 74-year-olds in the UK in 2017 (Statistica, 2017).

Critics of the dominant market position of non-profit focused banks competing for loans in the German market have forced banks to under-price the lending margins needed to sufficiently compensate lenders for any risk of non-repayment. These critics point to the poor financial performance of German banks relative to banks in other European countries as evidence. Figure 2.3 compares the 5-year average<sup>18</sup> 'return on assets' and 'return on equity' for the banks in eight European countries. The financial return of the German banks is lowest with both measures, although it should be noted that the finance performance of the UK banks is also lower than several of the other European countries.

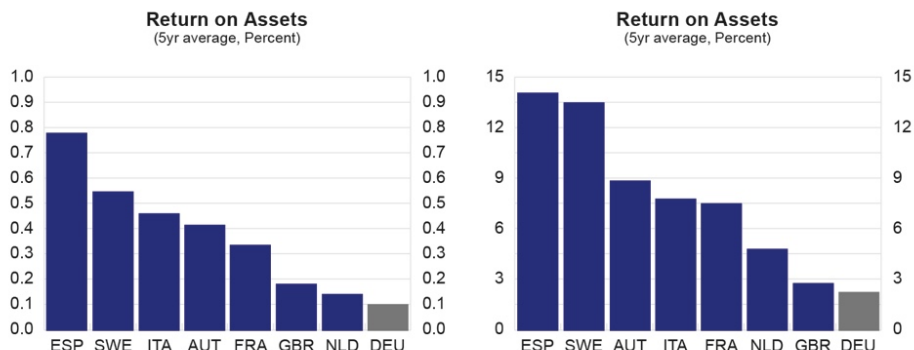


Figure 2.3: Financial Performance of Banks in European Countries (IMF, 2011)

Defenders of the German three-pillar model argue that the low-interest margin charged on lending benefits the German economy. They argue that the higher lending margin forgone by the German Sparkassen banks is effectively subsidising the cost of credit for German firms, and producing externalities benefiting the German economy. This subsidisation enables the

<sup>18</sup> For the five years ending 2010.



supply of low-cost *patient capital* to German firms investing in projects generating incremental innovation with long investment return horizons. An International Monetary Fund (IMF) analysis of lending by local Sparkassen and Volksbanken confirmed that the loan pricing of the Sparkassen is structurally lower than the pricing of the Volksbanken, despite both bank types lending to very similar clientele and, in many cases, lending to the same clients (International Monetary Fund, 2011). The Sparkassen are also significant sponsors of local social activities within their communities, which puts pressure on their profit margins. Table 2.1 summarises an IMF estimate of the annual share of GDP attributable to credit subsidisation and social spending by Sparkassen, which was estimated to exceed 0.5% annually. The cost-effectiveness of using the Sparkassen as a state-funded channel to produce these social benefits in comparison to other channels is an open question.

Table 2.1: Summary of Sparkassen Social Spending and Implicit Subsidies (IMF, 2011)

Social spending of Sparkassen 2/				
	Share of profit after taxes (Percent)	Share of Sparkassen assets (Per mil)	Share of Lander tax (Per mil)	Share of GDP (Per mil)
2007	21.236	0.444	2.181	0.191
2008	34.847	0.373	1.841	0.161
2009	19.245	0.442	2.329	0.198
Implicit subsidies 1/ 2/				
	Share of profit after taxes (Percent)	Share of Sparkassen assets (Per mil)	Share of Lander tax (Per mil)	Share of GDP (Per mil)
2007	43.023	0.900	4.419	0.386
2008	56.108	0.600	2.964	0.259
2009	43.577	1.000	5.274	0.448

Source: DSGV, Deutsche Bundesbank, and IMF Staff Calculations

1/ Including community spending and annual spending of the foundations of Sparkassen

2/ Estimated implicit subsidies through lower financing rates. Further subsidies might also be embedded in the structurally low commission income.

Another factor negatively impacting the profitability of German banks is the frugality of individual German households. German households have the fourth highest savings rate in the EU, at approximately 10% of both GDP and household disposable income, which follows the Dutch, the Danes and the Swedes (OECD, 2018). Since deposits are the sole source of funding for the local German banks, an elevated level of deposits creates an incentive for the banks to make loans, even at lending margins below the risk-adjusted market rate, to avoid idle cash positions on which they must pay interest to depositors. As a result, the interest margin earned by German banks, calculated by dividing interest income by total assets, has been declining over the past 30 years (Lawton & Stevens, 2014).

In contrast to German households, households in the UK have saved on average about 2.5% of disposable income over the same period, fluctuating between -1% and +5% in any given

year (OECD, 2018). Banks in the UK, however, are not solely reliant on deposits to finance their lending activities. Hardie and Horwath compared the deposit funding gap for banks across national economies and found that the loans made by German banks were close to being funded by customer deposits, while banks in the UK funded a significant share of loans by borrowing in capital markets (Hardie & Howarth, 2013a).

### 2.1.2 Capital Markets

Capital markets are markets for the buying and selling of equity and debt instruments issued by governments and corporations to sophisticated institutional investors. Using Zysman's categorisations, the UK system is considered a *capital markets-based* financial system because a larger share of the financing of firms is provided by capital markets investors, primarily through the intermediation of financial exchanges. Figure 2.4 illustrates the market capitalisation of firms listed on the main domestic stock exchanges of four countries. The market capitalisation of the London Stock Exchange (LSE), measured as a percentage of GDP, is approximately four times greater than that of the Deutsche Boerse exchange in Germany. In the case of the LSE, the market capitalisation is larger than UK GDP because of the equity value of non-UK firms electing to list their shares on the LSE as a result of the deep financing capacity of the UK capital markets. Over 50% of the value of listed shares of companies on the LSE are owned by non-UK investors, with almost half of that amount owned by North American investors (Williams-Grut, 2015).

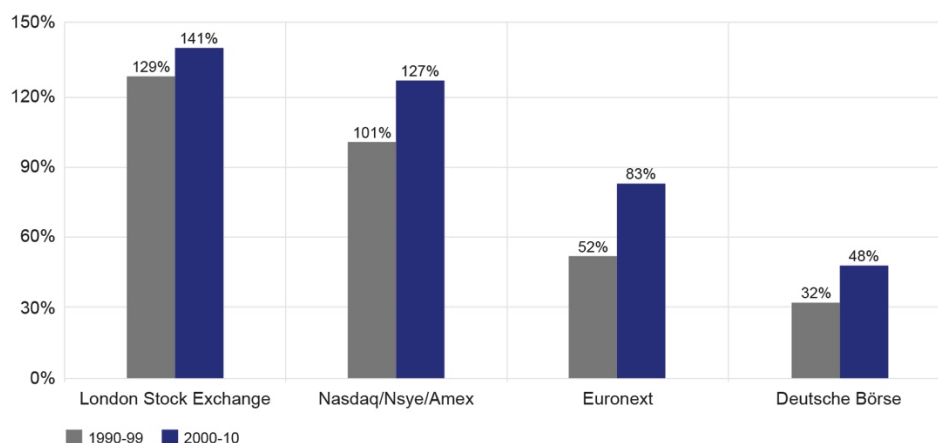


Figure 2.4: Market capitalisation of Domestic Listed Companies as % of GDP (Kaserer, Fey, & Kuhn, 2011)

The concentration of the UK banking system and the regionalism of the German banking system is reflected in the organisation of capital markets in the two countries. While the UK has only one financial exchange trading stocks and bonds, namely the LSE, there are five

regional German exchanges, in addition to Frankfurt, on which investors can trade stocks and bonds: Stuttgart, Munich, Hamburg/Hannover, Dusseldorf, and Berlin/Bremen. All of these exchanges, with the exception of Frankfurt, have an explicit mission to support regional economic development, but are able to compete with each other for companies and investors. Consolidation has been occurring very slowly despite relatively low levels of trading volume, in part because of operating cost subsidies provided by the regional and local governments where the exchanges are based. The regional exchanges act as 'crystallisation points' supporting financial actors in the regions through their association with public and quasi-public institutions, most importantly the banks within their regions (Klagge & Martin, 2005). Despite their mission to support the regional economics in which they are based, the regional exchanges have had very limited impact on improving access to equity financing for SMEs within their regions, with the exception of the Munich exchange (Klagge & Martin, 2005). This is partly due to the regional exchanges embarking on strategies aimed at appealing to *investors* in niche market segments aimed at increasing trading revenues. Only the Munich exchange actively manages a strategy focused on attracting local firms to list on the exchange.

The differences in the role of capital markets in Germany and the UK are also reflected in the investing behaviour of individual ('retail') investors in the two economies, as reflected in their respective domestic stock market participation rates. The participation rate of individuals in Germany has ranged from 8% to 15% of the population over the past 15 years, while the UK participation rate is more than double the German rate (Giannetti, 2010). Scholars cite two factors for the low participation rate in Germany. German households don't need to invest in the stock market because of the relatively generous state-backed pensions plans; plus, their risk aversion to capital markets increased following losses they suffered buying listed equities during the dotcom bubble on the ill-fated Neuer Markt exchange for early stage tech companies (Lawton & Stevens, 2014).

Capital markets transactions can also be bilateral private placement debt financings involving one or more institutional investors, which can also include banks and insurance companies. One form of private debt financing, known as a *Schuldschein* instrument, has long been used in Germany to finance relatively low-risk corporate borrowers. Unlike corporate bond offerings distributed via capital markets, *Schuldschein* loans do not require borrowers to have credit ratings, have more limited disclosure requirements, and are executed using much less documentation. Private placement debt financing also occurs in the UK market, but with much greater disclosure and loan documentation, including a requirement for a credit rating.

### **2.1.3 Providers of Credit Information**

Bank lenders and investors in debt instruments use credit ratings to determine the repayment risk associated with a loan or bond. The rating reflects the probability that the borrower will default on repaying the loan and the loss likely to be incurred by the lender in the event of

default, based on a quantitative analysis of past and current financial and qualitative forward-looking analysis of the borrower's business (Scope Ratings, 2018). Ratings consist of a numerical or letter-based designation that reflect the financial and operational strength of the borrowers, and range from 'investment grade' (the lowest likelihood of non-repayment), through 'sub-investment grade' to 'speculative' (the highest likelihood on non-repayment).

Bank lenders have credit analysts that review information about the borrower to produce an *internal* rating, usually not available to parties outside the bank, which is used to determine whether the bank is willing to make the loan and, if so, the terms of the loan. The information used to calculate the rating is primarily quantitative rather than qualitative, and is obtained from both internal and external sources. Bond investors rely on publicly accessible ratings produced by rating agencies. The 'big three' rating agencies (Standard & Poors, Moody's, and Fitch) have their own credit analyst teams that produce corporate ratings using proprietary credit rating models for large firms undertaking bond issues to be placed with institutional investors via capital markets intermediaries.<sup>19</sup> The big three credit rating agencies do not produce ratings for the SME segment<sup>20</sup> of the market because these firms are too small to issue debt instruments to investors.

The accessibility of credit-relevant information for SMEs is different for Germany and the UK. In Germany, there are three local credit agencies (Creditreform, Euler Hermes, and Scope) that collect data about German SMEs and mid-sized companies; this data is used to calculate various forms of credit scores and ratings of mid-sized companies not covered by the big three rating agencies. These ratings are used by SMEs to determine the creditworthiness of their suppliers and customers, as well as by providers of credit insurance to determine the risk of insuring an SME. One of these agencies hosts a reciprocal German debtors' register that contains information about the historical payment performance of SMEs, with contributions by organisations like banks, with large debtor portfolios. Access to the register is restricted to the organisations contributing to the register. With the exception of reciprocal access to pooled credit information, the three German credit bureaus do not make their data sets used to calculate their scores and ratings available to third parties. The banks and the credit bureaus use extensive networks of local offices across Germany to collect credit-relevant information about SMEs. For example, the oldest of the three bureaus, Scope, has 129 local offices (Scope Ratings, 2018).

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<sup>19</sup> These ratings are paid for by the bond issuer, leading to potential conflicts of interest between the rating agency and investors relying on the ratings for investment decisions. This misalignment of interests can lead to inflated ratings produced by 'ratings shopping', and is often cited as a factor contributing to the 2008 financial crisis (see Skreta & Veldkamp, 2009).

<sup>20</sup> In 2004, one of the big three agencies, Moody's, launched a credit rating model for SMEs called KMV RisCalc for use by banks and other credit investors in SME loans. It has not been widely adopted.

The supply of credit information about SMEs is significantly greater in the UK market. In one respect, the UK market is more concentrated since there is one large dominant supplier (Experian). Like its credit bureau counterparts in Germany, Experian provides a probability of default score for SMEs, and also participates in hosting a debtors' register with a similar reciprocal access arrangement to the German debtor register model. Despite the greater supplier concentration in the UK, access to credit-relevant *data* is more open, because Experian's small business subsidiary also sells its financial information dataset for SMEs, called PH Megafire, to any entity willing to pay for it. As a result, both banks and non-bank credit providers can use this data in their own internal credit rating models. While there are fewer firms supplying SME credit information in the UK market, non-bank entities have access to more credit-relevant SME data than non-bank entities in the German market. While the German model benefits firms by providing them with greater privacy regarding their financial performance, the increased access to UK credit information should reduce barriers to entry for non-bank lenders and increase firms' access to finance.

#### **2.1.4 Regulatory Environment**

The approach to financial services regulation in Germany and the UK, as it relates to corporate lending, is consistent with the bank-based and market-based orientation of the former and the latter, respectively. Regulatory oversight of lending in the UK is provided by the Financial Conduct Authority (FCA).<sup>21</sup> In essence, any investor investing its own capital qualifies for an exemption from the authorisation required to conduct a lending activity. In Germany, financial services are regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht, or BaFin. Regulation of lending in Germany differs from the UK regulation in two important respects: (i) the definition of loan instruments, specifically what constitutes a loan versus other types of debt securities; and (ii) the nature of how a lender initially engaged the borrower (the 'origination') prior to making the loan. A loan is a debt instrument that cannot be traded to a third party without the permission of the borrower (unless the loan is in default), and only a credit institution holding a bank licence<sup>22</sup> can solicit a borrower for the purpose of making a loan. Debt securities, such as bonds, are tradeable by definition and any investor can purchase them without the need to be regulated.

Securities and other investment products may not be offered for sale to investors in Germany without a prospectus, and the publication of any such prospectus requires the prior permission of BaFin. BaFin checks whether the prospectus contains the minimum information required by law and whether it has been written in a way that is readily understandable. BaFin also ensures that the prospectus contains no contradictory statements. However, BaFin does not verify the

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<sup>21</sup> The FCA succeeded the Financial Services Authority in 2012. This transition is discussed in more detail in Chapter 5.

<sup>22</sup> The relevance of this point is discussed at length in Chapter 5.

respectability of the issuer, nor does it examine the product itself. Issuers of investment products must make an explicit reference to that fact in their sales prospectuses. Issuers of securities are expressly prohibited from making advertising statements that may give a misleading impression about the scope of BaFin's examination. There is a similar prospectus requirement in the UK, although it is not approved by the regulator.

In summary, the financial systems of Germany and the UK appear to fit the characterisation of bank credit versus capital markets financial systems, respectively, and the structure of credit information and the regulatory environment appears to reinforce this. The following sections of this chapter describe how these systems correspond to financing needs of SMEs, and how the financial crisis has led to the accelerated development of channels that emerged from outside of the banking and capital markets system in each country.

## 2.2 Small and Medium-Sized Firms

This section of the chapter discusses small and medium-sized firms (SMEs) as they are the borrowers using the alternative lending channels discussed in this dissertation. It also discusses the governance characteristics that distinguish family owned firms, particularly the German *Mittelstand* firms. This section also discusses the institutions in the economy of each country that influence SMEs' access to financing.

### 2.2.1 Contribution of SMEs

The most frequently referenced definition for SMEs is the one provided by the European Commission, as illustrated in Table 2.2. The categories used to segment SMEs on the basis of size suggest significant variation in their financing. A medium-sized firm with €50 million in annual turnover has very different needs, and will access different financing channels, as compared with a micro-enterprise employing less than 10 people.

Table 2.2: SME Classification by Size Category

Company Category	# of Employees	Turnover	or	Balance Sheet Total
Medium-sized	< 250	≤ € 50 m		≤ € 43 m
Small	< 50	≤ € 10 m		≤ € 10 m
Micro	< 10	≤ €2 m		≤ € 2 m

Source: European Commission (2016)

SMEs are an important, yet often underestimated, contributor to economic output, given they typically account for more than 99% of firms, employ a majority of workers, and produce a majority of the goods and services in most economies. Table 2.3 summarises the percentage share of enterprises, employment and the value of goods and services (GVA) in Germany and the UK. While SMEs represent a similar proportion of firms in both economies, the German

SMEs employ a larger share of the German workforce and contribute a higher share of output to their economy than UK SMEs.

Table 2.3: SME Contribution to German and UK Economies in 2012

Country	Enterprises		Employees		Gross Value Added	
	Total	SME Share	Total	SME Share	Total (€ bln)	SME Share
Germany	2,189,737	99.50%	26,401,395	62.50%	1,385,501	53.30%
United Kingdom	1,703,562	99.70%	17,784,620	53.00%	1,037,293	50.90%

Source: Eurostat (2018)

In both countries, a firm is considered to be a family firm if members of the owning family control a majority of its voting shares and also directly participate in its management. Firms in the UK are considered family firms if *any number* of family members collectively have voting control, and *any number* of family members are involved in *either* the management or administration of the firm (Oxford Economics, 2014). The German criteria are more stringent, and reflect a stronger linkage between ownership, managerial control and individual accountability: voting control must be held by *no more than two* family members and these *same individuals* must be directly involved in the management of the firm.

Despite family ownership of almost all SMEs in the both the UK and Germany, describing a firm as an ‘SME’ or ‘family owned’ has different connotations in the two countries. In the UK, the two labels reflect separate attributes, with the former referring to firm size and the latter referring to the ownership and control structure of a firm. In Germany, the term *Mittelstand* is used to describe a small firm and a family owned firm as they are considered to be one and the same. ‘Mittelstand’ in German refers literally to an ‘entrepreneurial self-employed middle class’. However, the term Mittelstand also describes firms that are much larger than SMEs, because 95% of German firms, regardless of size, qualify as being family owned. Hence, Germans do not have a concise and uniform definition for what constitutes a Mittelstand firm (Simon, 1996). For many Germans, the more important defining characteristics are qualitative, with firms considered as being Mittelstand having governance structures that reflect a long-term, stakeholder-values orientation in the decision-making of the owners and managers.

## 2.2.2 Institutional Environment

SMEs in both the UK and Germany rely on a number of institutions to carry on their day-to-day activities. Differences in two institutional spheres, the *vocational education & training systems* and *industry associations*, between the two countries are particularly relevant to the analysis of the alternative lending channel development. Chapter 6 discusses how these institutional practices contribute to the production of trust relied on by mini-bond and P2B lenders in each economy.

### **2.2.2.1 Vocational Education and Training**

The vocational education and training (VET) system in both countries has historically made firms rather than the state school system primarily responsible for training workers. However, VET schemes in the UK are largely populated by school leavers, whereas most German participants are enrolled in VET programmes while they continue to attend school. In Germany, a large proportion of teenage students, over 50% in some German regions (Frietsch, 2003), are streamed into occupational training paths and subsequently spend two to three years working as apprentices in local Mittelstand firms while continuing their secondary education in vocational schools. In comparison to Germany, a very small proportion of young people<sup>23</sup> in the UK participate in apprenticeship programmes. Over the past 15 years, approximately 3% of 15 to 19-year-olds on average started an apprenticeship in any given year (Powell, 2018). The average length of UK apprenticeships, at less than two years, is significantly shorter than most apprenticeships in Germany.

A characteristic differentiating the UK and German systems historically has been the periodic interventions by the UK government in introducing new policy-driven VET initiatives. Many of these initiatives have targeted skill development for the unemployed in an effort to increase employment, with the result that skill development in the UK has focused on the low end of the skills spectrum (Crouch, Finegold, & Sako, 1999). In contrast, skill development in the German apprenticeship system has consistently focused on the higher end of the skills spectrum. Highly skilled German workers have historically had little incentive to change employers to advance their careers and increase earnings, because employers place a high value on tenure and experience directly relevant to the activities of the firm. As a result, fewer Germans than Britons move to take another job (Dustmann & Pereira, 2008). The combination of deep, local roots and a strong apprenticeship system means that, in Germany, only 7.8% of those aged 25 or under are unemployed in 2013, a rate far lower than non-German-speaking countries on the European continent<sup>24</sup>. Mittelstand firms also inspire loyalty: on average, only 2.7% of their workers leave each year, versus 30% of workers at some large American companies (The Economist, 2014).

### **2.2.2.2 Industry Associations**

Industry associations are structured quite differently in the UK when compared to Germany, with different levels of influence on the behaviour of firms and, in particular, in the area of inter-firm relations. Industry associations in the UK have evolved over the course of time in an 'incremental and piecemeal manner', resulting in a heterogeneous collection of associations

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<sup>23</sup> Defined as under 19 years of age at the start of the apprenticeship.

<sup>24</sup> This unemployment rate includes the former East Germany region, and had dropped to 6.3% in 2017. In 2013 the 'under 25' unemployment rate in Sweden was 22.1%.



with weak representation at the national level (Lane & Bachmann, 1997: 234). The UK has more than 3,000 associations claiming more than 4 million members, with the typical SME employing 10 to 99 employees belonging to more than five different organisations (Bennett & Ramsden, 2007). Instability and insufficient operating scale and professionalism in operations appear to be the defining characteristics of UK business associations. The annual churn rates exceed 10% of members in some associations (Bennett & Ramsden, 2007), and approximately 70% of associations employ less than 5 staff, with about half of that number employing no staff (Lane & Bachmann, 1997:237).

In contrast, the organisation of industry associations in Germany is highly centralised, as well as being a model of stability, with a hierarchical structure of large-scale, professionalised associations having an influential voice with national policy-makers. At the macro level, the Federation of German Industries (BDI) acts as an umbrella organisation for 35 industry associations representing more than 100,000 firms employing more than 8 million workers (Federation of German Industries, 2018). One of the member associations of the BDI is the largest trade association in Europe, the VDMA, which represents more than half of all companies in the German mechanical and systems engineering industry, most of which are SMEs. The VDMA alone has more than 500 employees working in eight global offices, with more than 50 trade associations and departments representing different industry sectors (VDMA, 2018).

The contrasting characteristics of industry associations in Germany when compared to the UK have resulted in the associations providing different functions in each economy. Lane and Bachmann outline a framework of goods provided by trade associations, ranging from: (i) social interaction between members; to (ii) political representation of members and indirectly non-members; to (iii) services exclusively available to members as an alternative to open market procurement; to (iv) self-regulation and decisions on behalf of members (Lane & Bachmann, 1997:238). The authors argue that the German trade associations can attract and retain a large base of members because they are able to provide all four functions, whereas the relatively weaker UK associations can only offer the much more limited benefits derived from (i) and (iii) (Lane & Bachmann, 1997). The relevance of the German associations' ability to provide self-regulation and bind its members to the production of trust is discussed in Chapter 6.

### **2.3 Alternative Lending Channels**

Borrowers turn to alternative channels when they are unable to obtain financing from traditional banking or capital market sources because of factors that are either exogenous or endogenous to the borrower. Exogenous factors can be structural, such as a dysfunctional financial system in a developing economy that cannot be relied on by firms to meet their financing needs. Exogenous events, like regulation changes, can occur that negatively impact a bank's capacity to lend and reduce lending to potential borrowers, including to those firms with creditworthiness

unaffected by the events. Insufficient creditworthiness is an obvious endogenous factor limiting the ability of a firm to obtain a bank loan; however, there are other characteristics of otherwise creditworthy borrowers which limit access to bank lending because they do not conform to the lending criteria of a regulated lender. In both Germany and the UK, for example, firms which have not been operating for at least two years are generally unable to obtain a bank loan, and firms which cannot provide tangible assets available as loan collateral have more difficulty borrowing from banks.

### 2.3.1 Description of Mini-Bond and P2B Lending

This dissertation applies a deliberately broad definition of *channel* to mini-bond and P2B lending, which encompasses both the form of the *financial instrument* and the *method of distribution* for each channel. A financial instrument is defined as ‘a contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity’ (ACCA, 2018). A mini-bond or P2B loan instrument creates an asset for the lender and a liability for the borrower, and the contractual rights and obligations contained in each instrument are important determinants of its regulatory and legal status. As a loan instrument, most P2B loans are structurally equivalent to a bank loan,<sup>25</sup> which is typically a senior-ranking loan *secured* by the assets of the borrower. A mini-bond is typically a loan which is *not secured* by the assets of the borrower and therefore subordinated to any secured loan obligations of the borrower. If a mini-bond borrower is unable to repay its loan obligations, then its senior-ranking secured lender has a claim for repayment that will rank ahead of the unsecured mini-bond lender. As instruments, P2B loans are *substitutes* for bank loans, while mini-bonds are *complements* to bank loans. Given its subordinated ranking and lack of loan collateral, a mini-bond is considered by knowledgeable investors as a higher risk loan instrument than a senior-ranking secured loan for a given borrower.

The mini-bond channel is a *direct* method of distribution, with the bond issuers placing their bonds directly with investors and, in some cases, arranging to have the bond issue listed on a financial exchange following the placement. The P2B lending channel is an *indirect* method of distribution with online platforms acting as intermediaries between borrowers and investors. The platforms make loan requests of borrowers available to investors who would otherwise be unaware of a borrower’s desire for a loan. The platforms also screen loan applicants to assess their creditworthiness, allowing only borrowers meeting the platforms’ credit standards to seek a loan on the platform. The P2B platform employ risk analysts formerly employed by bank lenders and advertise this to support claims that their credit assessment process is at least as rigorous as the incumbent bank lenders. The *intensity* of the intermediation also varies by

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<sup>25</sup> The structural equivalence of loan instruments does not imply that P2B lenders and banks make loans to borrowers with similar risk profiles.

platform. The intermediating role of some platforms is limited to acting as a bulletin board matching investors and borrowers. Some platforms go further by providing investors with analytic tools and ratings of loan risk to inform investment decisions, while other platforms use algorithms to select the portfolios of loans for investors based on these investors' expressed risk/return preferences. Platforms are responsible for the administration of loan payments as well as monitoring the repayment performance of their borrowers. Most P2B platforms are compensated by investors rather than the borrowers, in a deliberate effort to align their interests with the former rather than the latter. The typical annual fee charged to each investor is 1% of their outstanding loan investments on the platform. In the event of default, the individual investor in the defaulting loan bears the loss.

### **2.3.2 Mini-bond Lending Before the Financial Crisis**

The origin of mini-bond lending is a German story, as there were no mini-bonds issued in the UK market before the onset of the financial crisis. Mini-bonds emerged in Germany in the 1980s as a means for funding the small-scale infrastructure projects of member-governed community organisations, such as utilities or sports clubs, which needed to invest in the refurbishment of distribution infrastructure or a new football pitch. Traditional forms of financing were difficult for these organisations to obtain. Member-governed structures were unable to raise funding by selling shares, and these entities did not easily fit the lending criteria of bank lenders, given that their stated purpose is to maximise community benefit rather than to maximise profits. The regulatory requirements for issuing mini-bonds was relatively light, so compliance obligations were manageable for small and financially unsophisticated organisations. While a prospectus had to be submitted to the BaFin for approval, the disclosures contained in the prospectus were much less extensive than those of a traditional corporate bond offering,<sup>26</sup> and the BaFin provided assistance to small applicants in completing the required prospectus documentation.

In many respects, a mini-bond issued by a community organisation and purchased by individuals in the community was an early form of social impact investing, which provided the investors with an opportunity to support their local community while generating a financial return. Bonds were sold locally via direct private placement by the organisations issuing the bonds, which advertised their sale in local newspapers and at local community events. One of the earliest confirmed cases of a mini-bond issued by a commercial company occurred during the 1998 emerging markets financial crisis, when firms doing business in emerging markets at that time were experiencing a contraction in their access to funding. One such firm was PCCSE, a company based in Duisburg and which generated almost 100% of its revenues from

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<sup>26</sup> The general manager of one German mini-bond issuer, that issued a 10 million euro mini-bond and provided transaction data for this research project, stated that he and his administrative assistant completed the prospectus in less than six weeks without the assistance of a lawyer.

petrochemical commodity trading and distribution in Poland. After its bank lenders suddenly withdrew their credit lines to the company in late 1998, the founder placed an advertisement in the local newspaper offering to pay 2% more interest than the local Sparkassen savings bank for savers placing their funds with PCCSE, and received almost 5 million Deutschmarks in funding as a result. In 2002 and 2003, the banks began to tighten their lending criteria as the German economy slowed, and this motivated other small firms to issue mini-bonds. One issuer from that period was Zimbo, a second generation-owned and managed meat and sausage processor based in the Ruhr Valley. The company estimated that it saved between two and five per cent on the cost of a bank loan by issuing a 5-year 15 million euro mini-bond to finance the expansion of its sausage-making operations in the Polish market (Brors, 2003).

The pre-2008 period also saw alternative energy firms adopt mini-bonds as a form of financing as local German communities began implementing the German government's decision in 2000 to phase out nuclear power and increase the use of renewable sources of energy.<sup>27</sup> Firms seeking funding for wind and solar power projects, taking advantage of generous feed-in tariffs offered by the German government for renewable-sourced electricity, found it difficult to borrow the full amount needed to fund projects from banks because they were typically relatively young firms that had a limited amount of equity available to invest. Alternatively, some of the energy firms had cooperative ownership structures that made it structurally difficult to raise equity for new projects. For example, three-quarters of the households of Jühnde, a rural village of 750 people, formed a cooperative to build a bioenergy plant to produce heat with local biomass produced by the local farmers, partly financed with mini-bonds purchased by the cooperative members (Adam, 2013). The awareness of mini-bonds grew as small-scale energy producers began to aggressively advertise mini-bonds offerings to individual investors; this attracted the interest of the mainstream financial press, which began publishing articles about the higher risks associated with this new form of 'private placement' bond in comparison to the relative security of depositing money in a bank account<sup>28</sup>.

The growing use of mini-bonds for financing SMEs stalled in 2004 following the introduction of a new loan instrument, which proved to be very popular with firms, banks, and investors alike. That year, the Basel Committee on Banking Regulation, the multi-lateral group responsible for coordinating global banking regulation, published its Basel II guidelines changing the risk-weightings for regulatory capital reserves held by banks. One stipulated change was an increase in the amount of regulatory capital that banks needed to reserve for small business loans, so the banks devised a loan instrument that would reduce their small business lending

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<sup>27</sup> This was an outcome of Germany's commitment to implement Article 21, a non-binding action plan produced during the 1992 Earth Summit in Rio de Janeiro for the UN, other multi-lateral bodies and national government to engage in sustainable development at the local and regional level. Germany began implementing this at the local level in earnest in the early 2000s.

<sup>28</sup> For example see Frankfurter Allgemeine, 2004.

while retaining relationships with these borrowers. The banks created securitised pools of relatively small<sup>29</sup> 'mezzanine' loans funded by third party investors, with the proceeds of these loans used by borrowers to repay part of their outstanding indebtedness to their primary relationship bank (hausbank) lender. Unlike traditional loan SME loan securitisations, the loans were not placed with the borrowers until *after* the funding was provided by investors<sup>30</sup> so that these loans never appeared on the balance sheets of the banks. In addition to reducing their lending exposure, the banks benefited by earning an origination fee of 3% to 4% of the value for each mezzanine loan it placed with a borrower. These mezzanine loans were popular with borrowers, since the higher interest rates were only slightly higher than those on their bank loans, but with long maturities of seven years, as opposed to three to five years for a bank loan, and with no principal repayments during the term of the loan. The German banks placed almost 900 loans with a total volume of 5 billion euros with 743 firms between 2004 and 2007 (Brinkmann & Herbertz, 2010). The demand for funding to repay these mezzanine loans when they began maturing in 2011 as a factor influencing the development of the German mini-bond channel is discussed in Chapter 5.

### 2.3.3 P2B Lending Before the Financial Crisis

The earliest applications of online crowdfunding financed arts and music projects, which offered non-financial rewards to the individuals making financial contributions to projects. Arguably, the first instance of online crowdfunding occurred in 1997 when the British rock group Marillion raised £40,000 in donations from its fans to fund a US tour (Betti & Gherardini, 2013). The first online crowdfunding platform dedicated to soliciting funding for the projects of multiple artists, called ArtistShare, was launched in the US in 2003 (Belleflamme, Lambert, & Schwienbacher, 2012).

In contrast to mini-bond lending, P2B lending prior to the financial crisis is a UK story. Online crowdfunding platforms that provided a *financial* return to investors, as opposed to a non-financial reward, did not exist until March 2005, when Zopa was launched in the UK market. Zopa, the world's first 'peer-2-peer' (P2P) lender, launched its platform to provide loans to individuals funded by individual investors, and many of these borrowers obtained loans to finance their business activities. The Zopa platform lent approximately £25 million from its inception until the financial crisis in September 2008 (Andrews, 2014). The loans made via the Zopa platform performed relatively well during the financial crisis, with net returns (gross interest less defaults) earned by investors falling from 7% in 2007 to 4.7% in 2008 before recovering to 7.5% in 2009. Lending via online platforms began in Germany about two and a half years later, in 2007, with the launch of the Auxmoney P2P consumer lending platform.

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<sup>29</sup> The loans ranged from €3 million to €10 million each.

<sup>30</sup> Normally, SME loan securitisations refinance loans that have already been made by a bank lender.

Auxmoney had a slower start than Zopa, having lent only one million euros by September 2008.

In summary, mini-bond lending was a more prevalent form of financing in Germany than the UK prior to the crisis, while the reverse was true for P2B lending in the UK market, 'Pure' P2B lending, i.e. lending to firms rather than to individuals for business purposes, had not begun in either country prior to the onset of the crisis. However, the lending volumes generated by both of the channels in the pre-crisis period were relatively insignificant compared with traditional bank lending and other forms of non-traditional debt financing, such as the securitised mezzanine loans that emerged during the same period.

### **2.3 The 2008 Financial Crisis in Germany and the UK**

This section provides an overview of the financial crisis and its role as a catalyst for the development of alternative finance channels in Germany and the UK after the crisis subsided. It discusses the impact of the crisis on the banking system of the two countries and changes in the availability of bank financing to firms that occurred as a consequence of the crisis.

The financial crisis that began in September 2008 following the failure of Lehman Brothers was an exogenous shock to all economies in the developed world. Soon after the onset of the crisis, financial institutions began hoarding funds in the face of uncertainty about the creditworthiness of other financial institutions. This uncertainty rapidly spread through the real economy and started a spiralling contraction in production and consumption, which ultimately led to a contraction in the supply of financing by banks. The financial crisis eroded the level of trust that virtually every actor in developed economies had placed in these institutions. Corporate lending in the euro zone was 43% lower in 2012 than in 2011, and 68% lower than it was in 2008 despite European Central Bank monetary policies aimed at injecting liquidity into the banking system (Ball, 2012). The contraction in corporate lending was similar across European economies in the initial stage of the crisis, but subsequently diverged as the interest rates charged by the banking system in countries that implemented fiscal restrictions as part of austerity programmes. This had two effects on businesses' access to funding. First, borrowers located in those countries with austerity programmes were harder hit than those in other countries (Smaghi, 2013). Second, small businesses were hurt more than large businesses because the latter were able to access the liquidity that flooded into global capital markets as a result of quantitative easing and other monetary and fiscal policies.

In the UK, banks faced higher regulatory capital requirements, with the result that borrowing conditions for all but the largest and most creditworthy companies became more onerous following the crisis (Billington, 2013). An analysis of the impact of the financial crisis on bank lending to UK SMEs commissioned by the UK government shortly after the crisis found higher rejection rates, higher loan margins and more onerous collateral requirements for UK SMEs

seeking loans in 2008/9 when compared to similar firms seeking loans prior to 2008 (Fraser, 2012). Figure 2.5 illustrates the sharp increase in term loan margins originated in 2009, more than double the loan margins for loans originated in 2005. The pattern of loan margin increase between 2008 and 2009 suggests that there were two distinct phases of the financial crisis in the 2007-9 period: a liquidity crisis in 2007-8 followed by an insolvency crisis in 2008-9, with the latter causing a more severe tightening of lending to SMEs (Fraser, 2012:66).

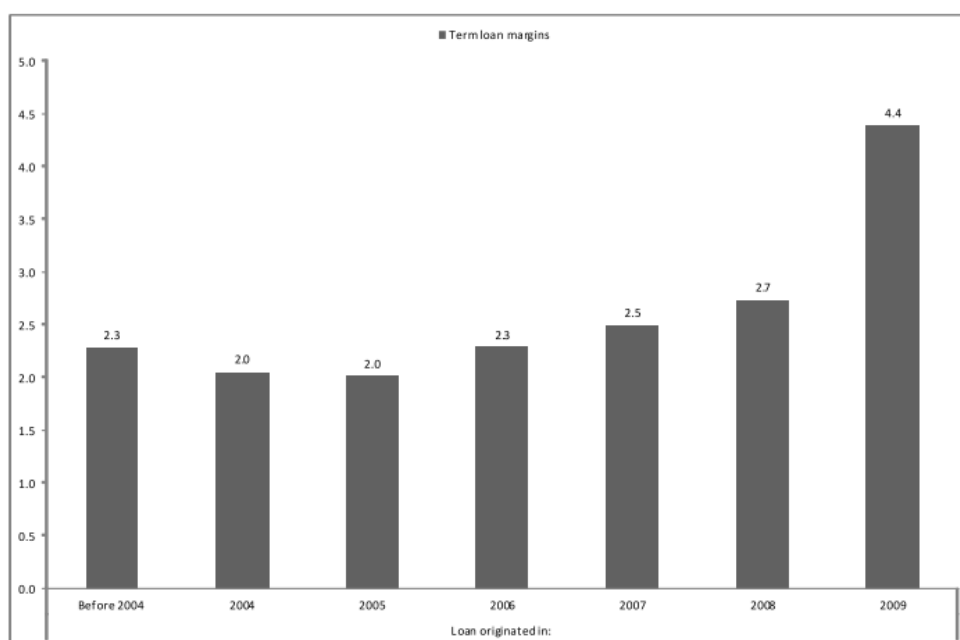


Figure 2.5: Term Loan Margins (% over UK Base Rate) by Year of Loan Origination

The German economy consistently outperformed the UK economy from the onset of the crisis from 2008 through to 2013, and there was significantly more financing available to German firms during this period. Figure 2.6 shows the cumulative change in both annual GDP and corporate lending volume for the UK and Germany between 2007 and 2013. Over this period, German corporate lending volume increased 30% and GDP increased 6%, while UK corporate lending and GDP declined by 15% and 2%, respectively.

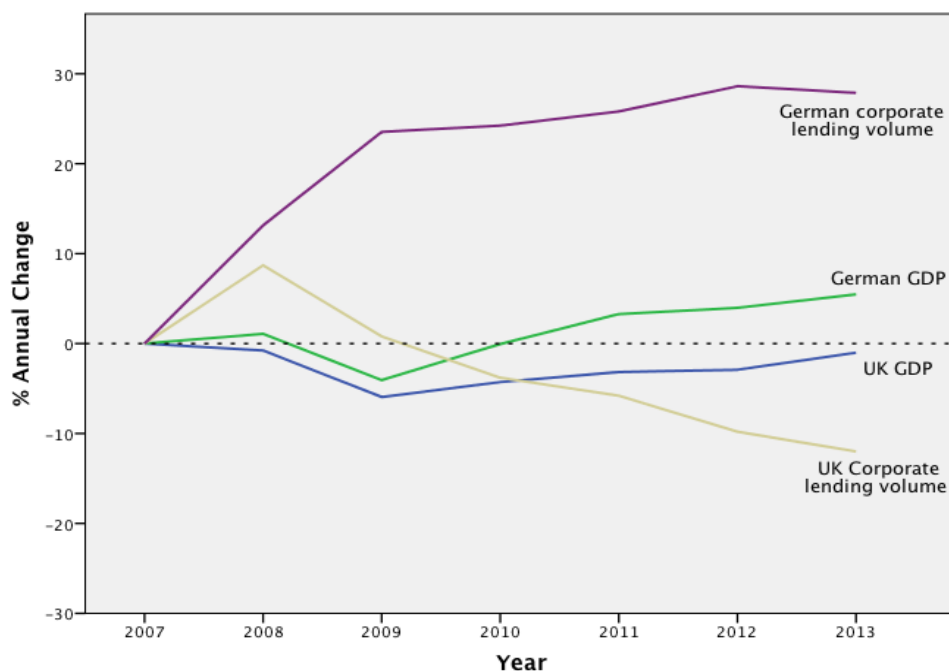


Figure 2.6: Annual Change in GDP and Corporate Lending From 2007 to 2013 (Bank of England, German Bundesbank)

In comparative terms, German firms retained relatively better access to bank financing compared to UK firms, but this relative advantage was concentrated in the small firm segment of the market. The local banks, both the state-owned Sparkassen and cooperatively owned Volksbanken, sailed relatively unscathed through the crisis because they were restricted to funding their lending activities with deposits and so were not exposed to the liquidity problems associated with market-based forms of financing. German clients moved their deposits from commercial banks to the local banks during the crisis as they became concerned about the solvency of the large commercial banks. Figure 2.7 illustrates the ‘flight to safety’ of bank depositors during the crisis in Germany, as individuals and companies moved funds out of the commercial banks and into the local banks. From 2004 to 2008, the commercial banks aggressively competed for deposits and increased their relative share of bank deposits significantly. This trend reversed in 2010, when depositors began moving funds from the commercial banks to the local Sparkassen savings banks and cooperative banks in response to the Eurozone crisis. This reduction in deposits exacerbated the balance sheet problems faced by the commercial banks.



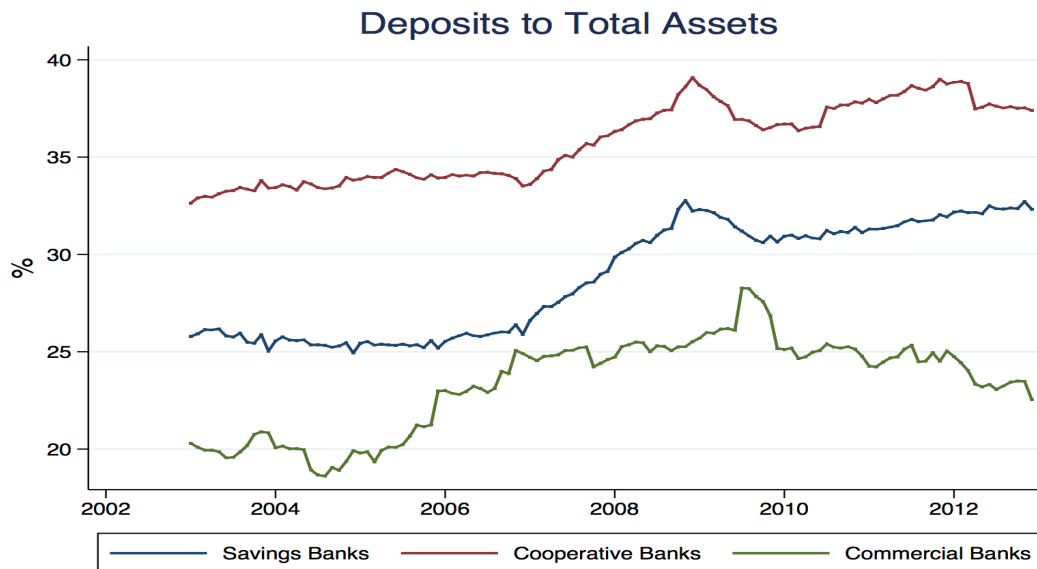


Figure 2.7: Deposits to Total Assets of German Banks from 2003 to 2013 (Grossl & Arnold, 2013)

This increase in deposits helped the local banks to actually *increase* their lending volume during the crisis (Wilson, Atkins, & Bryant, 2012). Figure 2.8 illustrates the amount of outstanding loans to assets for the three pillars of the German banking system over time. Despite increasing their share of bank deposits, the local Sparkassen and cooperative banks also increased their loan to asset ratios, indicating that their lending volumes increased by a significant amount over the period. This loan growth happened for several reasons. First, in the retail business, where Sparkassen and cooperative banks traditionally have a strong position, they benefited from higher demand for mortgage loans in the low-interest rate environment (Koch et al., 2016). In the corporate market, the Sparkassen and cooperative banks benefited from the more restrictive lending practices of the other banks, while continuing to get steady loan demand from their core base Mittelstand clients. Hence, German SMEs generally enjoyed better access to financing than firms located in other European countries. In 2013, only 3% of German borrowers were rejected in their loan application and 86% of the applicants got the full amount that they requested. By contrast, 18% of loan applications made by UK SMEs were declined, and only 66% got the full amount they requested (European Commission, 2013).

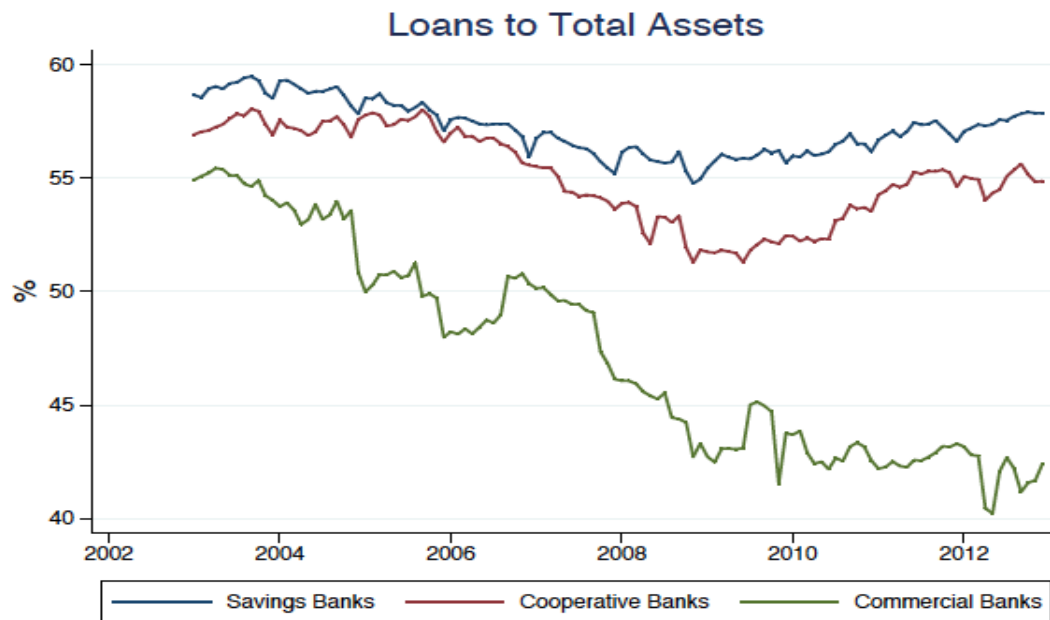


Figure 2.8: Loans to Total Assets of German Banks from 2003 to 2013 (Grossl & Arnold, 2013)

Large German firms faced reduced bank lending and, like large UK firms, could turn to capital markets if they had a funding requirement large enough to satisfy institutional investors, which is generally considered to be a bond issue of at least €200 million. Small firms with borrowing needs that could be fully satisfied by the relatively healthy local savings and cooperative banks were able to continue borrowing on terms that were similar to the pre-crisis period (Deutsche Bundesbank, 2009). However, the small local banks have limited funding capacity and typically do not lend more than €3 million to any single borrower (Holliday, 2012). Assuming local banks have lending capacity of €6 million to a single borrower, lend on a ratio of 2.5 times EBITDA,<sup>31</sup> and EBITDA margins are 12% of revenues for a small German firm, then firms with below €20 to €25 million in annual revenue had little need to source alternative funding.

Not all German firms avoided adverse funding challenges during the crisis, despite enjoying better lending conditions than their UK counterparts. Many mid-sized German firms that were reliant on the five main commercial banks<sup>32</sup> and the regional state-owned Landesbanken faced a contraction in loan financing. This segment of borrowers had financing needs that were too large for the small local banks to satisfy, yet they were not large enough to have direct access to capital markets-based sources of funding. One negative consequence of the crisis for these borrowers was the consolidation of the large German commercial banks In September 2008. One of the commercial banks, Dresdner Bank, was acquired by Commerzbank and 30% of another, Postbank, was acquired by Deutsche Bank.<sup>33</sup> A third, HVB, completed and agreed a

<sup>31</sup> Earnings before interest, taxes, depreciation, and amortisation. It is a proxy for the cash flow of a borrower and a common metric used to determine the loan amount that can be serviced by a borrower.

<sup>32</sup> The five main banks were Deutsche Bank, Dresdner Bank, Commerzbank, Postbank and HypoVereinsbank.

<sup>33</sup> Deutsche Bank acquired the remaining 70% from Deutsche Post in 2012.

merger with Unicredito, an Italian bank. The two remaining players were forced to tighten lending standards because of increased capital requirements for corporate loans in response to regulatory changes introduced by the Basel Committee. The Landesbanken experienced even greater financial stress than the commercial banks. Their balance sheets were much weaker after the crisis, having suffered severe credit downgrades, and they required €166 billion in state aid to avoid insolvency (Stevens, 2011).

In summary, firms in both countries faced reduced access to bank financing as the peak of the crisis had passed. In the UK, the affected firms included SMEs of all sizes. In Germany, it was the larger SMEs<sup>34</sup> with needs that could not be met by either the local banks or capital markets that were most negatively affected. These differences in access to bank finance by type of firm and by country influenced the demand for alternative finance channels in each country in the aftermath of the crisis.

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<sup>34</sup> The use of the term 'large SMEs' in this dissertation includes some firms with annual revenue exceeding the upper limit of €50 million revenue for the SME category as defined by the EU.

## Chapter 3: Sociology of Finance, Comparative Institutionalism and Trust

This dissertation investigates the role that trust has played in the development of alternative (non-bank) sources of lending to firms in the aftermath of the global financial crisis. It examines finance practices through a sociological lens and draws on theoretical insights from multidisciplinary research regarding trust. This chapter is divided into three sections. The first section discusses the economic sociology literature, particularly the sociology of finance<sup>35</sup> (SoF) literature, which is relevant to the practices of finance within the financial systems of national economies. While the growing influence of finance within society produced by financialisation has been attracting more attention from sociologists, the SoF literature remains relatively sparse and, therefore, the first section focuses on highlighting the gaps in the prevailing literature which are addressed in this dissertation. The second and third sections of this chapter discuss the theoretical insights from the trust and comparative institutionalism literatures incorporated into the dissertation's methodological approach in order to link institutional analysis at the macro level, with investor behaviour analysis at the micro level. To summarise, the chapter highlights the opportunity offered by a more broadly-based sociological approach to comparing cross-national finance practices than the approaches historically used in either the SoF or the comparative institutionalism literatures.

### 3.1 Sociology of Finance

#### 3.1.1 Defining the Field of Study

The object of study in this dissertation is the financing practices of actors in the financial systems of the UK and Germany, which place this research within the field of economic sociology and, more specifically, the 'new' economic sociology that has emerged as a sub-field within sociology over the course of the 1980s and 1990s.<sup>36</sup> What is now referred to as 'old' economic sociology reflected the work of Durkheim and Weber and largely complemented the work of neoclassical economics, whereas the 'new' version directly challenges the ideological orientation and explanatory power of homo economicus in explaining economic phenomena like market and price formation (Granovetter & Swedberg, 2011:5). Dodd et al contend the two fundamental theoretical propositions informing new economic sociology are 'that economic *action* is embedded in *social structure* and/or other variants, such as *political processes* and *cultural practices*; and, second, that the economic *system* is embedded in *society*' (Dodd, Aspers, & Anderberg, 2015:1).

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<sup>35</sup> Also referred to as 'sociology of financial markets'. This dissertation uses 'sociology of finance' rather than sociology of financial markets because the object of the study is the finance practices of individual investors as opposed to the actions of organisations in financial markets.

<sup>36</sup> Economic sociology was formally recognised as a section of the American Sociological Association in 2001 and had more than 800 members at the end of 2018.

While economic sociologists focus on understanding production, consumption and exchange in a broad social and economic context, scholars in the sub-field of SoF are primarily concerned with examining the roles of individuals, organisations and institutions in the *financial system* and the consequences of the financial system for the welfare of society (Epstein, 2005; Knorr Cetina & Preda, 2012). SoF has been gradually coalescing as a distinct area of research over the course of the past 10 to 15 years, following the publication of compendiums like *The Sociology of Financial Markets* (Knorr Cetina & Preda, 2005) that assembled sociological research investigating financial markets phenomena. Interest in studying the financial system through a sociological lens increased following the financial crisis, as neoclassical economics approaches that used to analyse market efficiency began to experience a loss of credibility.

An eclectic collection of scholarship was assembled in 2012 for *The Oxford Handbook of The Sociology of Finance* (Knorr Cetina & Preda, 2012) which, in addition to sociology, included contributions from anthropologists, geographers, political economists, ethicists, and accountants. Many of the contributors to the Oxford Handbook publication are based in Europe, where 'social studies of finance' (SSF) is used to describe the sub-field focused on understanding the dynamics of financial markets through a social science lens. Regardless of whether the field is described as SoF or SSF, the clusters of research being undertaken by the two groups of scholars are broadly similar, so the term SoF will be used throughout this dissertation. This dissertation makes a contribution to the SoF literature by examining financial practices using theoretical concepts of sociological inquiry to analyse the actions and motivations of actors in the financial system.

### **3.1.2 Embeddedness in Economic Sociology**

The concept of embeddedness is possibly the most important theoretical concept to have developed within economic sociology, and in many respects has been the impetus for the emergence of economic sociology as a sub-discipline. Embeddedness was initially conceptualised by Polanyi (Polanyi, 1945; Polanyi, Arensberg, & Pearson, 1957) as a macro-level phenomenon integrating economic activities within the broader social system with the latter constraining economic activities. Granovetter's conceptualisation of embeddedness came later, placing economic action in social contexts at the micro and meso levels and abandoning the constraining nature of embeddedness conceptualised by Polanyi (Granovetter, 1985). During the 1980s and 1990s, sociologists began pursuing a research agenda linking the influence of social embeddedness and social network structures to the internal functioning of firms and the performance outcomes of inter-firm relations (e.g. Portes & Sensenbrenner, 1993; Davis & Greve, 1997; Burt, 1992). In the Granovetterian perspective, markets are perceived as networks and groups, with trust relationships underpinned by social networks and, thereby, enabling the processing of uncertainties (Preda, 2007). Actors within

these networks send and receive signals that influence the decisions of those in the network about the quality and price of goods (Uzzi & Lancaster, 2004).

While some of these models are difficult to empirically test, some scholars have done so quite effectively using primary and secondary data sets. One of the early studies of social embeddedness and financial practice is Brian Uzzi's analysis of firms' access to bank loan financing, examining 'the degree to which commercial transactions take place through social relations and networks of relations that use exchange protocols associated with social, non-commercial attachments to cover business dealings' (Uzzi, 1999). Uzzi found that transactions between firms and banks that are embedded in relationships increase firms' access to financing and lower borrowing costs; and that, the more commercial transactions between a firm and the bank it borrows from are embedded in social attachments, the more expectations of trust and reciprocity shape the transacting, thereby promoting governance benefits and transfers of private resources that are inaccessible merely through market ties (ibid: 500). Ezra Zuckerman's studies investigating the influence of categorisation of the price of financial securities is another example (e.g. Zuckerman, 1999),<sup>37</sup> and is discussed in more detail in the trust section of this chapter.

The theoretical concept of embeddedness is attractive because it presents an intuitively appealing challenge to the assumptions underlying neoclassical economics. However, it has also been criticised for being theoretically vague, and thereby failing to be an organising framework for economic sociology (Portes & Sensenbrenner, 1993). One reason embeddedness is problematic is because it has multiple meanings that are either derived from the individual level enabling conceptualisation of Granovetter, or the societal level constraining influence of embeddedness envisioned by Polanyi (Krippner & Alvarez, 2007). For example, Zukin and DiMaggio identify four types of embeddedness – cognitive, cultural, structural and political – which refer to both micro and macro levels of analysis (Zukin & DiMaggio, 1990). Unlike the field of economics, which managed to provide a theoretical system unifying microeconomics and macroeconomics, the two conceptualisations of embeddedness have not been linked in economic sociology.

The theoretical concept of embeddedness informs the hypotheses for the research questions posed in this dissertation. The methodology attempts to reconcile the macro-micro dualism of embeddedness by addressing the comparative analysis of finance practices at both the Polanyian, or institutional level, and the Granovettarian individual level. At the macro level, scholars have drawn parallels between Polanyi's concept of embeddedness/disembeddedness and the coordinated market economy versus liberal market dichotomy in the Varieties of Capitalism model, as discussed in section 3 of this chapter

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<sup>37</sup> Zuckerman's work is discussed in more detail in section 3.3.6 of this chapter.

(Krippner & Alvarez, 2007). Several sociologists have called for more investigation into the influence of trust at the micro level to direct attention towards the role of agency in institutional developments (e.g. Fligstein, 2001). Jens Beckert observed that the focus on embeddedness has 'led economic sociologists to pass over the question of the foundation in action theory from which to understand action in economic contexts' (Beckert, 2003:782). He argues that a sociological understanding of systematic links between macro structures and micro-level action is necessary for the concept of embeddedness to move from merely offering a critique of the rational actor model to offering a theoretical alternative (Beckert, 2003:770).

### **3.1.3 Review of the Sociology of Finance Literature**

The SoF literature covers a broad spectrum of research topics and methodologies, yet the body of literature is understandably limited given it has only evolved as a distinct field of inquiry over the past 15 to 20 years. In 2011, Bruce Carruthers published an article titled 'Sociology of Finance' in the *Annual Review of Sociology* which summarised the relevant strands of research and identified the gaps and the direction for future research (Carruthers, 2011). The nascent state of the field at the time was evident to Carruthers, who described the research undertaken to date as 'more an assemblage of scholarly activity than a sustained, coherent, and unitary enterprise'. All but 11 of the 142 references in the article had been published since 2000, and the referenced literature reflected a wide range of disciplines and research methods cutting across law, history, economics, finance, geography, and development.

The term 'financial markets' is broadly defined to include finance-related activities both inside and outside of the formal financial system, with financial markets being the 'fourth pillar' of economic activity alongside production, consumption and exchange (Knorr Cetina, 2012). The SoF literature investigating finance practices, like the embeddedness literature in economic sociology, can be usefully categorised based on the level of analysis and methodological approach. Many SoF scholars assume financial markets tend to be global markets and the financial system to be a global system constituted by micro-level practices. Knorr Cetina argues that a 'financial market's institutional foundation is microsociological in nature... converging with interaction-level structures' (Knorr Cetina, 2012:124). As an example, she cites the 'over-the-counter' (OTC) market, a global market in which transactions for the buying and selling of securities occur outside of formal exchanges directly between traders on trading floors of banks located around the world. In the OTC market, the traders themselves maintain market practices through the 'structural use of interaction' as they engage in sanctioning, warning and reprimanding. These micro-level practices complement the regulatory framework at the macro level in shaping the global OTC market (Knorr Cetina, 2012:124).

A relatively small body of SoF literature has investigated the global financial crisis in comparison to the volume of economics-related or business studies disciplines. An exception has been the work of Neil Fligstein, who, along with co-authors, has studied the social structure

of the mortgage market in an effort to better understand the origins of crisis. In one study, Fligstein and Goldstein analysed the organisational structures of firms operating in the mortgage securitisation market as a factor contributing to the severity of the crisis (Goldstein & Fligstein, 2017). The 'meso-structure' approach used in both of these studies complements the macro level approaches used by scholars in adjacent disciplines, such as political economy, to explain the crisis in the context of broader institutional shifts (Schwartz, 2009). However, there remains a gap in micro-structure analysis using an empirical approach to understand how the actions and motivations of the *individuals* within these financial organisations influence their structures. Fligstein and Roehrkasse also draw attention to this research gap, calling for more detailed attention to social interaction and organisational structure (Fligstein & Roehrkasse, 2016:636).

A macro-level approach has been adopted by Richard Swedberg in his study of the loss and subsequent restoration of confidence in the 2008 and 2009 period of the crisis (Swedberg, 2012). Swedberg uses the VIX Index, a measure of investors' expectations about the volatility in the price of the S&P 500 Index in the coming 30 days, as a proxy for investors' confidence in the financial markets. Swedberg makes an important sociological contribution to our understanding of the interaction between society and the actors in the finance system during the crisis, and his work is discussed in more detail in the last section of this chapter that reviews the trust literature. However, his article only proposes a theoretical framework for understanding trust, leaving the validity of the proposition as an open question. To date, no empirical work has been pursued by other SoF researchers to test his hypothesis. There has been little work published by SoF scholars investigating the impact of the crisis on the practices of finance.

There is also little SoF literature examining 'alternative finance'. Moreover, the existing literature considers alternative practices of finance in a context which is quite different from the definition of alternative finance used in this dissertation. In the first context, 'alternative' is generally interpreted as 'different from Western', thus framing alternative finance as a set of practices not engaged in by actors in developed economies unless they are in groups marginalised within these economies, such as criminal gangs. For example, Bill Maurer has studied a range of alternative finance practices at the macro level, such as socially embedded forms of community finance in developing economies (Maurer, 2012). Maurer argues that the essential characteristic of 'alternative finance' is its proximity to people's lives, reflecting the concept of embeddedness that is closer to Polanyi than Granovetter (Maurer, 2012:426). Other scholars have contributed to the understanding of how alternative finance is practised. Aaron Pitluck has produced several studies of Islamic forms of finance, exploring how moral and ethical norms have influenced investor behaviour in this alternative form of finance (Pitluck, 2008) and Leung-Sea Sui has studied the influence of state structure and political power in the



behaviour of actors in the financial markets in China (Sui, 2012). While these studies provide valuable insight into the variation in finance practices within non-Western cultures and political systems, a number of analytic gaps remain. First, these studies focus on either the macro or the micro level, without linking the two by examining micro-structures as a complement to macro-level analysis. Second, the approach tends to be theoretical, and, to the extent it is empirical, the methodology is ethnographic. Both of these factors limit the opportunity to comparatively analyse finance practices across countries or regions.

There additionally exists a sociological literature examining the role of institutions both inside and outside of the financial system in shaping the financial system, the functionality of its components, and the actors engaged in it. These research projects conceptualised global finance as a collection of institutional spaces constituting an 'operational field' (Sassen, 2012). There is some SoF literature comparatively analysing national finance systems from an institutional perspective, but much of it draws on the theoretical frameworks developed in adjacent disciplines like political economy (Davis, 2012:40). The theoretical insights from comparative institutionalism literature used in this dissertation are discussed in more detail in the third section of this chapter.

An institutional approach is also used in Guseva and Rona-Tas' comparative study of a finance *channe*<sup>38</sup> examining the credit card lending practices by Russian and American banks in the late 1990s (Guseva, A. and Rona-Tas, 2001). While American banks could rely on well-developed institutional sources of consumer credit information for a rational calculation of cardholder risk, the Russian banks had no such institutional infrastructure and needed to rely on trust produced by strategies exploiting the cardholders' social networks. The authors conclude that institutional arrangements enable rational calculation of risk and argue that this is a necessary condition for the development of large-scale financial markets that transcend local geographies. While the study makes a valuable contribution to the SoF literature, there are some weaknesses. First, although the research methodology is empirical, the data collection used in the analysis is limited to only 17 interviews with Moscow-based banks and an unspecified number of other actors in the Russian credit card market. No data was collected from the individual cardholders, either in the form of transaction data, survey data, or interview data. Without credit card default data, for example, testing the claim regarding the relationship between rational calculation and trust-based approaches to assessing uncertainty is not possible. Secondly, the study is 'comparative' but uses different data for each country, relying only on publicly available secondary data rather than conducting interviews with banks in the US market. As a result, the comparative analysis is not 'apples-to-apples'. The authors justify the lack of US interview data by framing the US credit card market as an 'active ideal type'

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<sup>38</sup> Credit card issuance is not within the definition of alternative finance as used in this dissertation because it is an activity undertaken within the incumbent regulated banking system.

(Guseva, A. and Rona-Tas, 2001). However, this is debatable because it does not exclude the possibility that US credit card issuers also use trust-producing social network mechanisms similar to those used by the Russian banks, particularly for so-called 'thin file' credit borrowers in the US market with little credit history, such as recently graduated university students or immigrants.

Another group of SoF scholars examines the social and material construction of financial markets, focusing on the influence of information and communication technologies on finance practices. These scholars seek to understand the micro-structures that, in aggregate, form financial markets and influence the behaviour of market participants producing price formation and valuation outcomes for financial instruments. Two theoretical propositions from this body of literature are relevant to this dissertation. The first is the concept of a *market device*, which refer to the 'material and discursive assemblages that intervene in the construction of markets' (Muniesa, Millo, & Callon, 2007:2). The intermediating role played by P2B lending platforms, including the algorithms used to allocate loans to P2B investor portfolios are powerful devices influencing the performance of the P2B lending market. Developments in alternative finance offer a rich source of research opportunities for exploring how market devices shape these new markets that are less encumbered by incumbent practices. A growing number of algorithmic-based tools using artificial intelligence and machine learning are deployed on P2B lending platforms targeting individual investors, while the financial system infrastructure is evolving to a more distributed model as a result of distributed database and cryptography technologies.

### **Limitations of the Sociology of Finance Literature**

The theoretical and methodological insight offered by the SoF literature to the comparative analysis of alternative finance channels is limited. This is partly attributable to heterogeneity in the perspectives applied to research, described as 'economic sociology'. Neil Fligstein attributes this to the motivations of the scholars that came together in the late 1990s to define the economic sociology as a field of study (Neil Fligstein, 2015). Fligstein recalls that the formation of the main organisational bodies in the field of economic sociology, namely the Society for the Advancement of Socio-Economics in 1989, and the Economic Sociology Section of the American Sociology Association in 2001, drew scholars from a wide range of disciplines united by a common desire to challenge the orthodoxy of the neoclassical economics model, rather than to share a common disciplinary perspective.

SoF as a sub-field within the discipline of sociology is at an even earlier stage of development than economic sociology, which has consequences for this research project. First, there is a relatively small body of existing literature and, therefore, several gaps have been identified which are addressed in this dissertation. These are most predominantly: (i) finance practices in national economies have not been comparatively analysed; (ii) there has been little empirical

research using primary data undertaken to date beyond small-scale ethnographic studies – few studies have used large-scale data sets to test hypotheses, as is common in other disciplines; (iii) research conceptualising what constitutes ‘alternative finance’ presumes it is a developing economy phenomenon and ignores the examination of finance practices within developed economies; (iv) the level of analysis tends to be at macro or meso rather than at the micro level, including studies that analyse micro-structures as a complement to macro-level analysis; (v) to the extent that finance practices have been studied, the objects of study are finance professionals employed by organisations operating in financial markets rather than individuals engaging in finance in a non-professional capacity; and (vi) while SoF scholars have investigated factors that are causing and exacerbating the global crisis, there is a lack of literature exploring changes in the practices of finance as a result of the financial crisis. These are the gaps this dissertation seeks to fill.

The following two sections discuss the trust and comparative institutionalism literatures that make a theoretical and methodological contribution to this dissertation.

## **3.2 Comparative Institutionalism**

### **3.2.1 Introduction**

This dissertation is concerned with comparative institutionalism (CI) scholarship as it compares the institutional arrangements of national financial systems, with the aim of explaining how different institutional environments influence socio-economic outcomes across national economies. Morgan et al. define the CI field ‘in terms of how forms, outcomes, and dynamics of economic organisation (firms, networks and markets) are influenced and shaped by other social institutions’ (e.g. training systems, legal systems, political systems, and educational systems, etc.) and the consequences for economic growth, innovation, employment and equality (Morgan, Campbell, Crouch, Pedersen, & Whitley, 2010:2).

CI research has grown over the past 20 years as economic crises, particularly the Asian financial crisis during the late 1990s and the more recent global financial crisis, drew attention to the importance of institutions in governing economic activity (Morgan et al., 2010:6). The field has emerged from the ‘new’ institutionalism movement that began in the 1970s, when scholars began questioning the viability of institutional analysis founded on assumptions of rational coordinated and controlled technocratic behaviours, and developed new theoretical models that introduced social influences to the study of institutional development. Meyer & Rowan (Meyer & Rowan, 1977) proposed a theoretical approach that was less functionalistic, and which incorporates a norm-based explanation of institutional behaviours that influence collective action. In this context, institutional legitimacy was not a given, but a result of efforts of actors to conform to the societal norms of the broader society. To protect business borrowers in Italy, for example, if the interest charged by a lender, including the traditional bank lenders,

exceeds an interest rate cap set by the Bank of Italy then the loan agreement is void and the borrower has no obligation to make interest payments (Morgese, 2015).

While there is general agreement among CI scholars that institutions are 'rules of the game' (North, 1997), the breadth of theoretical orientations has resulted from varying conceptions of what those rules encompass. This dissertation adopts a relatively broad definition of *institutions* in its analysis of Germany and the UK as 'formal and informal rules, regulations, norms and understandings that constrain and enable behaviour' (Campbell, 2004). This definition recognises that, while lending is an activity governed by regulation and other formal rules, it also involves normative processes in alternative lenders' acceptance of imperfect information in making lending decision.

The CI field is a broad church, and includes contributions from scholars in economics, sociology, organisation studies, and political economy. Despite this academic heterogeneity, these disciplines bring complementary perspectives to a shared view of institutions that links CI scholarship. The review of CI literature by Hotho & Saka-Helmhout (2016) identifies three common features that characterise CI scholarship. First, CI scholars focus on studying institutional arrangements at the societal level, the impact of which transcends the organisational level. These arrangements are broad, and include the political, financial, and education systems within economies. CI is well suited to the study of lending practices because it compares institutional arrangements at the national level, rather than the regional or local level, as it assumes institutional arrangements are influenced by regulatory processes instituted by the nation state. Small business lending is an activity which is conceptualised differently across nation states, and these conceptual differences have produced different regulatory requirements across national economies without in-country variation. In some countries, business lending is seen as an exploitive activity putting borrowers at risk and, hence, only entities with a full bank licence are permitted to engage in the solicitation of borrowers for the purpose of lending. In contrast, business lending in other countries is perceived as an activity putting the lender at risk, and so any entity can engage in soliciting and lending to business borrowers without regulatory restriction. Regulation of lending activities can be seen as a set of formal rules applicable at the national level, with social norms influencing the perception of business lending as being a predatory activity (or not).

Second, CI scholars recognise that there are inter-relationships between societal institutions which can produce complementarities between these institutions. The forms of complementarity can vary, ranging from mutual support and reinforcement to compensation for deficiencies (Crouch, 2010), with both implying that institutions do not evolve in isolation. The concept of institutional complementarity is a prominent theme in CI literature, and has underpinned the development of typologies describing national economic systems differentiated by the complementarities resulting from different institutional arrangements. One

criticism of CI literature relevant to this dissertation is its under-appreciation of the conflict between social movements and the 'corporate world', as each seeks to exert a dominating influence on economic, cultural and social life (de Bakker, den Hond, King, & Weber, 2013). Diverging interests among these groups have certainly been played out in the period following the 2008 financial crisis and influenced the institutional context for alternative lending.

Third, CI scholars are attuned to the linkage between societal institutions and firm and societal outcomes. For example, two firms operating in different sets of institutional arrangements will have different operating strategies to optimise firm performance and result in each firm developing different competencies over time. These competencies, when aggregated, could provide firms in an economy with comparative institutional advantage and help explain differences in economic performance across national economies. DiMaggio & Powell (1983) emphasise the role of social norms, arguing that organisational legitimacy is a necessary condition of organisational survival, which in turn rests on social arrangements (DiMaggio & Powell, 1983). As actors engage to acquire legitimacy, they argue, they tend to adopt templates used by legitimate organisations, resulting in a tendency towards isomorphism. Isomorphism appealed to scholars seeking to identify a coherence in reconciling how widely-shared norms and values influence institutional legitimacy, and potentially explains the longevity of common institutional forms within national economies. However, the isomorphism theory also implies an inertia that under-estimates the role of agency, suggesting outcomes that are overly-deterministic and failing to adequately account for the processes of institutional change. Agency and institutional change are discussed in more detail in sections 3.4.2.1 and 3.4.2.2 of this chapter.

### **3.2.2 Comparing Financial Systems**

Comparing the arrangements of the financial institutions in different countries is a focus of CI scholarship, given the central position of the financial system in a capitalist economy and its resulting inter-connectedness with all other institutions. More of this research has been undertaken in the domain of comparative political economy than sociology, given the focus within sociology on studying financial institutions in a given economy rather than comparing financial systems (Hardie & Howarth, 2013b). A commonly used model compares financial systems along three dimensions (Deeg, 2010). First, the structure of financial markets and their regulation can be compared, where the conceptualisation of financial services activities can be quite different from market to market (recall the example of how lending to small firms in some economies can be perceived as predatory). Second, the types and forms of corporate governance that define how authority is distributed amongst the owners, managers and employees of firms is a focus of comparison. Third, the types and forms of financing provided to households, governments, and firms can vary between markets. John Zysman's (Zysman, 1983) seminal framework described three forms of financing within national capitalist systems,

and characterised national economies based on the dominant type of financing present within that economy: government-led credit-based, bank credit-based, or capital market based. Each type of finance shaped the institutional environment in which households, firms and governments operated and produced different constraints and opportunities for the economic actors in these markets. The relevance of government-led credit-based systems has been reduced in highly developed economies over the course of time as centrally controlled economies have diminished<sup>39</sup>. The two remaining types, bank credit-based and capital market-based, continue to be the dominant paradigm used to classify economic systems in developed economies.

Scholars have begun to question the usefulness of the bank-based versus capital markets-based dichotomy in a globally integrated economy, which operates with a financial system that is much more complex than what existed more than 30 years ago when Zysman published his book. Hardie and Howarth point out that blindly assuming the institutional arrangements associated with a bank-based credit system, such as a supply of more patient capital that enables longer-term investments on the part of firms, rests on an assumption that the source of funding to banks is patient, stable customer deposits – which is no longer the case for most banks (Hardie & Howarth, 2013b). They point out that a growing share of funding for the loans made by banks is sourced from capital markets rather than customer deposits, including many banks in Germany which have been traditionally viewed as the archetype providers of patient capital. Since funding from the capital market is considered a less patient form of funding than bank customer deposits, Hardie and Howarth contend that an impatient form of finance has come to undermine what continues to be perceived as patient forms of finance, changing the relationships between capital market-funded banks and their borrowers. Richard Deeg's argues that this effect is segmented by type of firm, with the relationship for large German firms becoming more transactional while the supply of patient capital to smaller firms has remained relatively intact over time (Deeg, 2005).

This structural change in bank funding suggests that, over time, the financing practices of economies with funding dominated by bank-based systems are likely to become more like economies dominated by capital market-based systems of finance. The long-term outcome will be the homogenisation of the global financial system dominated by financing from capital markets (Deeg, 2010), with the latter system becoming the dominant model. However, scholars are sharply divided in their view of the likelihood of this convergence occurring. Goyer's comparative analysis of equity investment in France and Germany suggests that investors with short-term versus long-term investment horizons allocate investment to markets

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<sup>39</sup> This should not be interpreted as the state has no role in making credit available to firms in highly developed economies. In countries like Germany the state continues to play a role, albeit a smaller role as a result of EU competition rules and other factors.

with institutional arrangements that reflect their preferences, and thereby reinforces the legacy institutional arrangements (Goyer, 2012) that vary between economies. Different levels of firm ownership concentration between economies is another factor sustaining variation in institutional arrangements, with more highly concentrated ownership levels in bank-based economies perpetuating the supply of patient capital to firms in those markets. Adherents of one framework used in CI analysis, Varieties of Capitalism, are resistant to the convergence hypothesis, arguing that the operating practices of firms, the key actors in an economy, are deeply intertwined with the key institutions in bank credit-based economies to an extent that makes it difficult to change.

### **3.2.3 The Varieties of Capitalism Framework**

The Varieties of Capitalism (VoC) thesis advanced by Peter Hall and David Soskice (2001) has emerged as the most widely adopted framework for categorising national economies by the institutional forms that influence how firms solve 'coordination problems' – the challenges that firms face in dealing with other economic actors in seeking to develop and exploit their capabilities. Part of the appeal of the VoC framework has been the central role that firms play as the key economic actors and 'agents of adjustment' in an economy (Hall & Soskice, 2001:6). The particular institutional arrangements in an economy produce comparative advantage for firms as they develop specialisation to optimise coordination efficiencies for a given set of institutional arrangements.

In the VoC model, markets emerge within institutional arrangements. Following the Zysman model characterisation of capital market-based and bank-based financial systems, the VoC thesis argues that institutional arrangements can be clustered into 'liberal market economy' (LME) and 'coordinated market economy' (CME) types, with the former relying on competitive market arrangements and the latter relying more on non-market arrangements to solve their coordination problems. Hall and Soskice outline five 'spheres of coordination' that define the institutional forms in an economy: industrial relations, vocational training and education, corporate governance, inter-firm relations, and a firm's employees. These institutional arrangements are 'sticky' according to the VoC thesis, and this limits the degree to which LME and CME types converge in a globalising economy. Each type of institutional arrangement provides firms in its economy with a set of comparative advantages and helps explain why LME firms in the US (or UK) and CME firms in Germany tend to dominate certain sectors of the global economy. For example, the global competitiveness of the manufacturing sector in Germany, a CME, is often linked to the willingness of German banks to supply patient capital to firms via their *Hausbank* relationship (e.g. Lane & Quack, 2001; Geppert & Martens, 2008).

The VoC thesis holds that firms in CMEs like Germany engage in high levels of cooperative behaviour to solve their coordination problems. Inter-firm cooperation is high relative to LME firms, because CME firms tend to be specialists with high reliance on sub-contracting and,

therefore, need to participate in collaborative technical development. Trade associations provide firms with technical assistance and set standards within an industry that all firms must adhere to. Individual firms delegate the bargaining with the labour force in an industry to national employer associations. CME firms support a system of education and vocational training without poaching apprentices in order to ensure that the training system can support the future needs of all firms within an industry sector. Within the firm, decision-making is more consensual because of stakeholder representation in works councils and, in the largest firms, on company boards.

In the sphere of corporate governance, relations of trust provide for exchanges of private information, allowing firms to develop reputations that enable some firms access to capital on terms that depend more heavily on reputation than share value (Hall & Gingerich, 2009:453). It is on this basis that the *Hausbanken* in Germany have historically provided 'patient capital' to firms that enables investment in projects generating returns only in the long run (Hall and Soskice, 2001). As stated previously, there is growing criticism of the assumption that bank-based credit systems in CMEs have a greater capacity to provide patient capital than market-based financing systems, when the former are increasingly reliant on capital market funding. While this criticism is justified in the case of the commercial and regional state-owned *Landesbanken* banks in Germany, the local state-owned *Sparkassen* and cooperatively owned *Volksbanken* have continued to rely on customer deposits and demonstrated the capacity to provide patient capital financing over time.

The LME and CME characterisations are ideal types, with the US and UK economies held out as archetypes of LMEs and Germany held out as the archetype CME. There has been a chorus of criticism about the dichotomous nature of the framework since Hall and Soskice proposed it in 2001, with many scholars arguing that there are many more 'varieties' of capitalism than the LME and CME types. For example, another widely cited model for comparative institutional analysis for understanding global financial systems is Whitley's Business Systems framework, which identifies six varieties (Whitley, 1999). For the purpose of this dissertation, however, the parsimony introduced by two types in the VoC framework is very useful for comparing alternative financing practices in the UK and German economies, because these economies are diametrically opposed on the VoC spectrum. Also, the VoC assumption that firms are the key agents in an economy provides a basis to examine alternative finance practices, as it specifically relates to the financing of firms.

However, this dissertation also departs from the VoC framework in three respects. First, it examines the financing practices of smaller firms, which typically have different governance characteristics than larger firms. VoC authors tend to generalise the actions of 'firms' as the actions of large firms, and privilege *formalised* norms and sanctions of *institutional* embeddedness over the informal *social* embeddedness (Streeck & Thelen, 2005) that is



relevant to the decision-making of SMEs. These firms merit separate study, because they are important actors in the economy (CBI, 2011) and because they diverge from large firms in how they engage with the institutions in an economy (Bluhm & Schmidt, 2008; Deeg, 2012; Lane & Wood, 2012). Second, the unit of analysis is the relationship between groups of *individual investors* and firms seeking finance in alternative finance channels. The VoC framework assumes the relationships relevant to institutional change are inter-firm and firm-government relations and excludes other relationships surrounding the firm that can also influence the behaviour of the firm.

The economic changes brought about by the digitalisation of the economy are creating more horizontally distributed and less centralised channels of social and economic engagement for all economic actors. The influence of this change is becoming more important as internet-based technologies increase individuals' access to information about firms, and is vitally important for gaining a complete picture of the opportunity sets that firms face in making their decisions. Finally, this dissertation also considers institutional change in the context of both structure and agency. Since it is the set of institutional arrangements that defines the behaviour of firms, the VoC model is criticised for being a deterministic model which under-weights the role of other influences, such as social movements, on the agency of firms. The following section discusses institutional change literature in both the CI and institutional theory fields relevant to agency in alternative lending practices, and the impact of these alternative lending practices on indigenous institutions.

### **3.2.4 Institutional Change**

The failure of the VoC model to explicitly address institutional change raises a number of questions related to alternative lending channels. First, which institutional practices are vulnerable to change as a result of alternative finance channels? The lending practices of banks to firms is an obvious candidate, but there may be other, less obvious, institutional change underway. Second, what form of change process is unfolding, and is there more than one form of change underway? Third, what is the time frame needed for observing institutional change? Alternative lending channels have emerged only a few years ago, and it may be premature to assess either the processes or the outcomes of change to the incumbent institutional practices. Fourth, what actor, or actors, are instigating the change process?

Institutional change is a topic that is hard to avoid in a discussion about comparative institutionalism. While this dissertation seeks to comparatively analyse the variation in alternative lending practices between the UK and Germany since the global financial crisis, the research questions do not explicitly address change to incumbent institutional practices as a result of the alternative channels. Therefore, no primary data was collected from actors within the incumbent system. While an assessment of institutional change is particularly challenging given the very recent emergence of mini-bond and P2B lending channels, the analysis does

draw on theoretical insights in the institutional change literature to speculate about the forms and trajectories of change (or not) involving incumbent institutions in the two economies.

The topic of institutional change embodies a number of theoretical challenges that stem from a general problem in comparative institutional analysis: a bias towards emphasising structural constraints and continuity (Streeck & Thelen, 2005). This bias implies an inherent stability of institutions, leading to the assumption that change, when it does arrive, must be the result of an exogenous shock which forces an otherwise stable institution to adapt. Hence, many early accounts of institutional change portray a path-dependent institutional environment with long continuities periodically ruptured by radical shifts (Pempel, 1998). The more recent literature reflects more strongly the view that most institutional change is a gradual process precipitated by internal actors (Streeck & Thelen, 2005).

#### **3.2.4.1 Institutional Change in the VoC Framework**

The VoC approach has been criticised for failing to provide a coherent explanation about how institutions change over time. One of the strengths of the VoC model is its conceptualisation of institutional complementarity: the inter-relationship between institutions that produces synergy value in the overall functioning of institutions in an economy. The cost associated with complementarity is a resistance to change, as change to any one institution will have a knock-on effect on other institutions and, therefore, requires substantial effort to overcome institutional inertia. The force preventing CMEs from converging towards the LME model is the reluctance of CME firms to abandon their investment in strategies designed to optimise their coordination efforts in their institutional environment, resulting in a tendency for institutional arrangements to remain in equilibrium. While the VoC thesis recognises that institutions in an economy will change as firms respond to changes in the operating environment, it implies that firms in an economy have a collective bias towards path dependency and maintenance of the status quo. Explaining when institutions change, or the factors that drive change, or the process by which institutional change occurs, was not clearly spelt out by Hall and Soskice in the introduction of the framework in 2001. Many critics over the intervening years have argued that the framework has become outmoded as a result of the continuing liberalisation of the world economies (Streeck, 2009), and that it is overly functionalistic in explaining change by its macroeconomic effects (Crouch, 2005). The real world, it is argued, is much more chaotic than the VoC thesis suggests.

Authors following the Hall and Soskice paradigm have tried to articulate a thesis for institutional change in response to their critics. Subsequent to their 2001 article, Hall and Soskice wrote that institutions are not 'a rigid grid of sanctions and incentives' but, instead, are malleable and subject to renegotiation and challenge, which may result in the introduction of some elements of liberalisation that do not result in a convergence to an LME (Hall & Soskice, 2003: 246). Kathleen Thelen, separately with both Hall and Wolfgang Streeck, has also made an effort to

articulate a theory of institutional change that is aligned with the propositions of the VoC model. The definition of institutions excludes the role of social norms and conceptualises institutions as a more constraining than enabling force impacting on actors, consisting of 'sets of regularized practices with a rule-like quality in the sense that the actors expect the practices to be observed; and which, in some but not all, cases are supported by formal sanctions' (Hall & Thelen, 2009:9). This narrower definition of institutions facilitates a model of change that assumes actors facing constraints imposed by formal rules make decisions based on rational choice. This allows for the notion that actors interpret rules and consciously act to break and redefine them, if it is in their interest to do so. Streeck and Thelen's theory of institutional change tries to address the deterministic characterisation of VoC by conceptualising change as a gradual process rather than a process instigated by an exogenous shock. Institutional change can, therefore, emanate from gaps that emerge over time between formal institutions and their actual implementation and enforcement (Streeck & Thelen, 2005:19).

Streeck and Thelen (2005) also distinguish between the process and the result of change, with an abrupt process resulting in either the survival of an incumbent institution or its replacement, and an incremental process resulting in either the adaptation of the institution or its gradual transformation (Streeck & Thelen, 2005:9). They identify five types of gradual institutional change : (i) displacement; (ii) layering; (iii) drift; (iv) conversion; and (v) exhaustion. Institutions can drift when they cease to retain their relevance, as their economic or political environment changes around them. *Conversion* describes institutions changing as a result of being redirected to new goals, functions or purposes in response to changes in their environment. Finally, exhaustion describes a process of gradual institutional breakdown that results in institutions becoming both irrelevant (as with drift) and illegitimate as their practices feed into undermining their own legitimacy over the course of time. The forms described by *drift*, *conversion* and *exhaustion* are more the result of endogenous than exogenous institutional change processes and are, thus, less relevant to the changes in incumbent practice introduced by alternative channels of finance.

The two remaining forms, *displacement* and *layering*, are processes involving alternative institutions co-existing with dominant incumbent institutions, which is the case with alternative channels of finance. Displacement can occur when new models emerge and challenge previously accepted organisational forms and practices (DiMaggio & Powell, 1991). Displacement is the result of defection when a growing number of actors migrate to a new institutional form, either through 'invasion' of an existing dominant form by foreign practices or through the 'rediscovery or reactivation' of an institutional form (Streeck & Thelen, 2005:21). Layering involves the introduction of additions or amendments to an existing set of institutions, with the new element eventually crowding out the incumbent practices if it has a higher rate of growth than the incumbent.

These process forms can occur simultaneously during periods of institutional change. Deeg describes a 'hybrid' process of change that took place in the German financial system in the 1990s, bifurcating into two subsystems as banks responded to shifts in the financing preferences that differed between large and small firms. He describes how some institutionalised banking relationships were being repurposed (*conversion*) at the same time as new institutions were introduced (*layering*) (Deeg, 2005). This hybrid view of the change process is a useful lens by which to consider multiple forms of change that may be emerging during the early stage of the change process when actors are jockeying for advantageous outcomes. Graf builds on the theoretical base of change processes of institutional change by incorporating 'process tracing' over a longer historical period, to show how forms of change in the German training and education system have progressed from layering to conversion to drift over time (Graf, 2018). The role of the actors as *institutional entrepreneurs* in the change process is discussed in the following section.

#### **3.2.4.2 Institutional Entrepreneurship**

The alternative finance channels analysed in this dissertation have emerged since the global financial crisis to provide financing to firms, hence literature providing insight into the role of investors and firms as agents of institutional change is relevant. Hall and Soskice describe firms as 'agents of adjustment'; however, it does not follow that firms are also 'agents of institutional change' in the VoC framework (Hall & Soskice, 2001:6). Streeck and Thelen's approach has also been criticised for simply shifting structural determinism from institutions to the underlying social structures in which the institutions are embedded (Herrigel & Zeitlin, 2010).

Overall, the discussion of institutional change within the CI literature tends to be theoretical, and perhaps incorporating more empirical research into CI scholarship could contribute to a more convincing explanation of agency and institutional change. Some of the literature uses the term *institutional change agents* rather than institutional entrepreneur to capture a broader concept of agency form, for example social movements (Welter & Smallbone, 2015). Actors do not operate in a vacuum, and the realisation of institutional change is contingent on other actors embedded in the broader economic and social environment, including existing institutions (Merrey & Cook, 2012; Qureshi, Kistruck, & Bhatt, 2016).

While institutional theory has been criticised for a lack of attention paid to human agency (Dacin, Goodstein, & Scott, 2002), a more empirical examination of agency and institutional change is contained in the literature addressing institutional entrepreneurship which has appeared over the past 15 years (Qureshi et al., 2016). Institutional entrepreneurs are defined as 'change agents who, whether or not they initially intended to change their institutional environment, initiate, and actively participate in the implementation of changes that diverge from existing institutions' (Battilana, Leca, & Boxenbaum, 2009:70). For example, rather than

seeking profits based on arbitrage derived from patents or other sources of competitive differentiation, institutional entrepreneurs seek to 'exploit institutions to one's economic advantage' (Douhan & Henrekson, 2010:641). Institutional entrepreneurs triggering institutional change can be individuals, for example gourmet chefs (Rao, Monin, & Durand, 2005) or environmentalists (Kisfalvi & Maguire, 2011), organisations, for example individual banks which change industries (Lawrence, Pazzaglia, Sonpar, Lawrence, & Sonpar, 2011), or fields such as accountancy or management consultancy (Greenwood & Suddaby, 2006).

Chapter 2 discusses a number of supply and demand side factors in the economic and social environment that contributed to the emergence of alternative lending following the crisis, which recognises the complexity of unpacking how these channels were created. Tracey et al. contribute insight into the creation of new organisation forms with their empirical study of a social enterprise in the United Kingdom (Tracey, Phillips, & Jarvis, 2011). Their paper has relevance to the creation of alternative lending channels, in that it combines different established institutional logics, *individuals deposit in banks* and *firms borrow from banks*, to create a new, hybrid logic of *firms borrow from individuals*. The authors draw attention to the multi-level nature of the institutional process at the individual, organisational and societal levels, which also informs the analysis of alternative lending channels.

The comparative institutionalism and VoC literature contributes to the macro-level analysis of alternative lending channels, despite the limitations and weaknesses described in this section. It remains an influential analytic framework, and has been cited by economic sociologists as an identifiably coherent body of research reflecting the Polanyian strand of embeddedness (Krippner & Alvarez, 2007:232). Some of the VoC limitations, particularly in the areas of institutional change and agency, are addressed by incorporating theoretical insights from the institutional theory literature. However, neither of these literatures provide insight into the behaviour of the investors supplying the funding in these channels, without which there would be no alternative lending. The next section discusses the theoretical insights in the trust literature relevant to analysing the micro-foundations of trust and its influence on the practices of these investors and firms they are lending to.

### **3.3 Trust**

Alternative lending channels in the form of mini-bond and P2B lending would not have developed in either the UK or Germany if individuals in those countries were unwilling to lend to the firms using these channels to obtain funding. Lending exposes the investors to the possibility that their loans will not be repaid, and so trust is a necessary condition for the investors accepting uncertainty regarding the future behaviour of the borrowers. Any analysis seeking to understand the development of mini-bond and P2B lending, and their different paths of development in Germany versus the UK, would be incomplete without also analysing the types and sources of trust that influence the lending decisions of mini-bond and P2B lenders.

The review of the relevant trust literature in this section begins by distinguishing the sociological conceptualisation of trust adopted in this dissertation from concepts of trust used in economics and psychology. This leads to a discussion of the sources and forms of trust, and then defines the theoretical concepts used in the analysis, including trust versus confidence, signalling of trustworthiness, and categorisation. The section concludes with a review of the 'trust as a comparative advantage' theoretical proposition and discusses empirical research findings that inform the determinants of trust in alternative lending practices.

#### **3.3.1 Conceptualising Trust in Lending Relationships**

Scholars generally agree that trust has an important role in economic life. An extensive body of recent literature in the social sciences has confirmed the positive effect of trust on transaction costs (Bromiley & Cummings, 1995), the functioning of markets and the economic system (Arrow, 1972; Zak & Knack, 2001); economic growth (Knack & Keefer, 1997; Fukuyama, 1995), stock market participation (Guiso, Sapienza, & Zingales, 2007), efficiency of local government (Putnam, Leonardi, & Nanetti, 1993), and judicial efficiency (LaPorta, Lopez-de-Silanes, Shleifer, & Vishny, 1997). However, there are diverging perspectives across academic disciplines regarding the conceptualisation of trust. In economics, most scholars view trust as rational and calculative, with an actor weighing costs versus benefits in deciding whether to trust and, in some cases, even questioning the relevance of trust in economic relations (Williamson, 1993). Psychologists frame trust as internal cognitions based on the attributes of trustors and trustees (e.g. Tyler & Blader, 2000), while sociologists view it in the context of socially embedded norms that govern relationships (Granovetter, 2005; Zucker, 1986). This heterogeneity reflects not only disciplinary differences, but also the intrinsic complexity and multi-faceted nature of trust as a concept. A recent review of organisational trust literature by de Jong et al. (2017) concluded that the field suffers from fragmentation and overlapping research as a result of differences in disciplinary backgrounds, research traditions and levels of analysis that create silos of disconnected trust scholars (de Jong, Kroon, & Schilke, 2017). As a result, trust scholars disagree on and debate a number of fundamental issues regarding the study of trust.

Notwithstanding differences in disciplinary approaches and research traditions, de Jong et al. found that most definitions of trust used by scholars in recent trust research are built on definitions provided by either Mayer et al (1995) or Rousseau et al. (1998:395). The latter group of scholars provide a multidisciplinary definition of trust that encompasses the theoretical traditions of economics, psychology and sociology. Both definitions include the preparedness of a party to be *vulnerable* under conditions of *risk* and *interdependence* with another party. Interdependence reflects the reliance that each party in a relationship has on the actions of the other party to achieve their individual objectives. Risk has been defined as ‘the probability of loss as interpreted by a decision-maker’ (Chiles & McMackin, 1996). This definition of trust describes the situation faced by a P2B or mini-bond lender: vulnerability to suffering a loss of the loaned funds in the event that the borrower elects to not honour its loan repayment obligation when due.

In deciding whether to extend a loan, the lender faces an information asymmetry problem similar to the one described by George Akerlof in his characterisation of the used car market: the seller (in this case, the issuer) knows much more about the quality of what is being offered than the buyer, and so there is a good chance that many ‘lemons’ will be offered to investors (G. Akerlof, 1970). The investor needs to acquire information about the issuer in order to reduce the risk of adverse selection. Credit analysis as undertaken by banks and rating agencies reduces the risk of adverse selection by analysing quantitative ‘hard’ information to assess the *capability* of the borrower to repay the loan when due (the ‘probability of default’), as well as the monetary loss to the lender in the event of default (‘loss given default’). Banks engaged in relationship lending supplement such an analysis with ‘soft’ qualitative information about the borrower, such as the personal reputation of the firm’s owner within the local community. If the bank determines that the likelihood of repayment is high and also determines that the potential loss resulting from a failure to repay is low, then it is willing to accept the vulnerability of not being repaid because the expected income from the loan exceeds the cost associated with the residual risk. Individuals engaged in lending lack the capacity to access the output of ‘hard’ credit analysis and are, therefore, more reliant on using ‘soft’ information to assess the capability as well as the *intent* of the borrower to repay the loan when due. When information asymmetry is high, trust-relevant information is sought and scrutinised (Hardin, 2002).

While this dissertation draws on empirical research that examines the influence of trust in bilateral lending relationship between banks and small business, it breaks new ground by examining the role of individuals rather than banks as lender to firms: P2B and mini-bond lending involves relationships between individuals and firms, with many individuals (who may or may not know each other) entering into lending relationships with borrowers directly or, in the case of P2B lending, via an intermediary platform. How do individuals investing in mini-

bonds overcome information asymmetry and reduce adverse selection risk, given that they do not have the analytic and monitoring resources of banks and credit rating agencies? This dissertation investigates the role that trust plays in the willingness of investors to take a 'leap of faith' regarding a borrower's commitment to honour its repayment obligation. The sources and forms of trust relied on by investors investing in mini-bond and P2B lending are discussed in the next section.

### 3.3.2 Sources and Forms of Trust

There is a large literature exploring the relationship between trust and national economic performance focusing on the role of *generalised trust* – the level of trust that individuals have towards other individuals *collectively* in society, including strangers. Most of this literature uses data from a trust question contained in the World Values Survey<sup>40</sup> (WVS) for the measurement and cross-country comparison of generalised trust, and seeks to establish a positive correlation between the level of a country's generalised trust and the performance of its economy (Knack & Keefer, 1997). This body of literature views trust as a collective phenomenon rather than as a property of an individual (Newton, 2001), and hence individuals are trustors without the capacity as individuals to modify the level of generalised trust in an economy (Georgarakos & Pasini, 2011). Hardin describes generalised trust as 'nothing more than an optimistic assessment of trustworthiness and willingness therefore to take small risks on dealing with others whom one does not yet know' (Hardin, 2002:62).

Despite its prominent position in the trust literature, the WVS as a source of data and generalised trust as a theoretical concept are not used in this dissertation. The reasons are two-fold. First, there is conflicting empirical evidence about what the WVC questions actually measure, and hence its validity as an accurate measure of trust is questioned (Sapienza, Toldra, & Zingales, 2010:2). Second, the influence of generalised trust is likely to be relatively small in comparison to forms of trust relied on by an individual lender assessing the trustworthiness of a specific borrower. For the purpose of this dissertation, generalised trust is considered as a necessary, but not sufficient, condition for an individual to engage in alternative lending.

Lynne Zucker argues that trust has two components: (i) *background expectations*, being a general framework for behaviour encompassing the 'taken for granted understandings' shared by members of communities having the same 'interpretive frame'; and (ii) *constitutive expectations* defined by a specific context of an exchange, where parties to the transaction share intersubjective meaning of the rules of the exchange (Zucker, 1986:58). Both components exist in any exchange; however, as one component increases in importance, the

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<sup>40</sup> The WVS question is: 'Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?' Some researchers have also used the trust question in the European Values Survey and the question contains identical wording in both the WVS and the EVS.



other tends to become less important. In Zucker's construct, generalised trust is dominated by background expectations, while lending transactions are dominated by constitutive expectations. The analysis of alternative lending focuses on the constitutive expectations produced by the social and institutional arrangements in an economy.

An analysis of trust risks conflating objects, types and levels of trust. This dissertation incorporates the parsimonious categorisation of trust types and levels contained in Lynn Zucker's seminal study of sources of trust during the development of the United States economy between 1840 and 1920. Her empirical research broke theoretical ground by adopting a sociological view conceptualising social variables 'as causes rather than consequences of economic change' (Zucker, 1986:54), offering an alternative approach for explaining economic organisation from that proposed by transaction cost economics. Zucker describes three forms of trust, each associated with levels of trust defined by geographic and social distance. Two of these forms are produced at the local level reflecting close proximity of the trustors and trustees, either as individuals or firms, involved in economic exchange.

### **3.3.2.1 Process-Based Trust**

The first intra-local trust form is *process-based trust* produced by the experience of prior exchange, with information about a 'record of prior exchange' obtained by a trustee through either *direct* experience or through the *second-hand* experience of others (Zucker, 1986:60). The trustor engages in information-based choice, where the trustor's rational expectation of a trustee's future behaviour is based on knowledge acquired via direct experience or by the *reputation* of the trustee as referenced by a third party known to the trustor. This rational approach to trust is variously referred to as strategic trust (Uslaner, 2008), contractual trust (Sako, 1998), calculative trust (Lane, 1998), and calculus-based trust (Rousseau et al., 1998). Possibly the most under-socialised example of knowledge-based trust that has developed within sociology is Coleman's Rational Choice model, which assumes that a rational actor seeks to maximise utility under risk. If the risk-adjusted gain (probability of outcome x payoff) resulting from the placement of trust exceeds the risk-adjusted loss (probability of loss x loss) resulting from a breach of trust, then the trustee will proceed to place trust (Coleman, 1990:99).

### **3.3.2.2 Characteristic-Based Trust**

The second intra-local form of trust production conceptualised by Zucker is *characteristic-based trust* and the mechanism for its production is societal (Zucker, 1986:63), reflecting close social distance of trustees and trustors connected by shared values within the same community (Zucker, 1986:60).

While Coleman assumes that only rational knowledge-based determinants influence trust in commercial relations, other sociological accounts of trust posit forms of trust can be produced by cognitions shared by trustors and trustees. Socially embedded norms can infuse

relationships with ethical or moral connotations (Banerjee, Norman, & Carla, 2006) and therefore norm-based trust can be either rational or emotion based depending on the role of information in the decision-making process (Lane, 1998). Extensive knowledge about the values of the trustee may be a good predictor of future behaviour and, therefore, be a rational basis for the placement of trust. Alternatively, a decision to trust is emotion based if the trustor's confidence in how the trustee should act in the future is based on an assumption that the trustor and trustee share the same framework of norms, perhaps to the extent that other potentially relevant information is excluded from the decision-making process. Beckert argues that, when acting morally, an actor must be willing to engage in irrational behaviour which, by definition, deviates from individual utility maximisation (Beckert, 2005:7). If motivated by altruism, for example, an actor will engage in this behaviour deliberately and without regret despite inflicting a cost on oneself to the benefit of others. While knowledge informs the altruistic trustor's decision to trust, the decision can incorporate emotion-based components, such as a 'fairness' principle or assuming people we don't know are trustworthy (Uslaner, 2008).

Mayer et al. (1995) identify three dimensions of trustworthiness<sup>41</sup> and this approach has become the dominant model used by many organisational trust researchers in reference to characteristic-based trust individuals, collective actors, or firms (McEvily & Tortoriello, 2011): (i) *ability* refers to the trustee's perceived capabilities to perform a specific task; (ii) *benevolence* refers to the trustor's perception that the trustee has the trustor's best interests at heart; and (iii) *integrity* refers to the trustor's perception that the trustee's actions are guided by a set of principles that are aligned with the trustor's principles. In the context of Zucker's conceptualisation of characteristic-based trust, these are 'value-laden' characteristics, reflecting the belief of the trustor in the intentions of the trustee (McKnight & Chervany, 2001:39:49).

There is evidence in trust research that different trust determinants act as mutually reinforcing complements in the production of trust (Lane & Bachmann, 1996; Paul & McDaniel, 2004). Schilke & Cook compared calculative and relational orientations in 171 strategic alliances and concluded that neither approach is superior per se, and that the strength of their explanatory role depends on the circumstances characterising the exchange relationship at stake (Schilke & Cook, 2015). The methodological approach used in this dissertation incorporates both rational and emotional perspectives in the analysis of the forms of trust relied on by mini-bond and P2B investors.

### **3.3.2.3 Institutional-Based Trust**

Zucker argues that the combination of demographic changes increasing cultural heterogeneity and technological changes, such as railroads, thus increasing the physical distance between

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<sup>41</sup> Sometimes referred to as the ABI-framework (Pirson & Malhotra, 2011).

transacting parties, disrupted local trust forms and increased the need for forms of trust that were not contingent on trustors and trustees having prior exchange experience or shared characteristics (Zucker, 1986:63). Sources of institutional-based trust emerged which embodied the 'constitutive expectations' of the intra-localised forms of trust, without being contingent on close geographic or social distance, and made repeatable by common understanding (Zucker, 1986:63). Institutional-based trust can be either firm-specific or associated with intermediary mechanisms. In the case of the former, it is produced by formal mechanisms such as 'credentialisation'<sup>42</sup>, that provide information about the trustworthiness of parties in exchange, such as membership in industry associations or standards accreditation.<sup>43</sup> The strength of these credentials is derived from their perceived legitimacy in the context of the social system in which they are embedded. Trust in intermediary mechanisms is produced by guarantee mechanisms that mitigate the risk of non-completion for the parties in an exchange (Zucker, 1986:64), such as the role played by insurance and regulation.

Zucker's conceptualisation of institutional-based trust has been extended and refined by other scholars in their research of trust. Neu effectively sub-divides the intermediary mechanism form of trust described by Zucker to create three categories of institutional-based trust (Neu, 1991b, 1991a), which are more explicit than the 'intermediary mechanisms' described by Zucker. His first type of institutional-based trust is quite similar to Zucker's concept of credentialisation, with individuals or firms adopting institutional forms such as educational degrees, or 'best practice' tools, to signal legitimacy. The second type is a type of intermediary entity, rather than a mechanism, that provides a warranty or guarantee for the functioning of the relationship, even when the exchanging parties have had no prior exposure to each other. Neu cites auditors as an example of these intermediaries through the verification services they provide, which are relied on by third parties transacting directly or indirectly with the audited firm (Neu, 1991a). Neu singles out regulatory bodies as a distinct source of institutional-based trust, arguing that the monitoring and control of rule following leads to more predictable behaviour of market participants (Neu, 1991b).

Zucker argues that process-based, characteristic-based, and institutional-based trust forms are not evolutionary and can be produced simultaneously; however, she does imply that process-based trust is likely to be replaced by institutional-based trust over time (Zucker, 1986:101). Lane & Bachmann built on Zucker's empirical work and found all three forms of trust building in their empirical study of supplier relations among firms in Germany and the UK

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<sup>42</sup> This includes certification by third parties. A credential is issued by a third party with authoritative power, and is proof of qualification or competence. Certification are earned by professional or industry organisations and verify an achieved a baseline level of competence following training or education.

<sup>43</sup> An example is the International Standards Organisation, which publishes ISO standards for quality management of products, management systems and industrial processes. It then certifies companies that meet these standards. Many companies will not commercially engage with organisations that are not 'ISO certified'.

(Lane & Bachmann, 1996). Their findings suggest that context is important for the creation and adoption of trust mechanisms, with evidence of greater trust production in the German operating environment as a result of a more stable environment, a finding consistent with Neu's proposition regarding regulation and the predictability of firm behaviour. Zucker's more recent research, analysing how types of trust vary across institutional and organisational contexts, recognises the agency of organisations and their ability to choose modes of trust production (Schilke, Wiedenfels, Brettel, & Zucker, 2016).

### **3.3.3 Empirical Research Informing Intra-Local Forms of Trust Production**

The dissertation also draws on three areas of empirical research from the broader finance, sociology and psychology literatures to inform the two intra-local forms of trust production conceptualised by Zucker: (i) the work of financial economists studying *local bias* in investing decision, or the predisposition of investors to invest in companies located near the investor; (ii) the work of sociologists studying how the social relationships between firms and banks affect the availability and terms of loan financing; and (iii) the work of psychologists studying the influence of affective impression and decision heuristics on the purchase and investment decisions made by individuals. Each of these areas of research is discussed in the context of process-based and characteristic-based forms of trust production as follows.

#### **3.3.3.1 Local Bias**

Several studies in the finance literature use distance between investor and investee as a proxy for the degree of information asymmetry, making the assumption that investors' information about the investee is negatively correlated with distance. Finance scholars have been researching what has come to be known as the local bias phenomenon<sup>44</sup> in behavioural finance for the past 20 years. For example, Ivković & Weisbenner found that the average share of local investments (located within 50 miles of the investor) by individual investors in the US was approximately 30% of their portfolios, which is 20% higher than the average percentage of all firms within the local area of investors, while the local investment returns were 3.2% higher than non-local returns (Ivković & Weisbenner, 2007). They attribute this effect to the ability of local investors to exploit local information not accessible to non-local investors. Similar results regarding the behaviour of individual investors have been found in Finland (Grinblatt & Keloharju, 2001) and among institutional investors in the US (Coval & Moskowitz, 2001).

Finance scholars generally agree on the existence of a local investment bias, but do not agree on what causes it. While some research studies conclude that local investors have access to value-relevant 'soft information' about local firms that produces higher local returns, this proposition has been challenged by other research finding local bias effect, but without a

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<sup>44</sup> Also known as 'home bias'.

corresponding outperformance of local investment returns (Seasholes & Zhu, 2010). For example, Ivković & Weisbenner found that the average share of local investments by individual investors in the US was significantly higher than the average percentage of all firms within the local area of investors, and the local investment returns were higher than non-local returns (Ivković & Weisbenner, 2007). They attribute this effect to the ability of local investors to exploit local information not accessible to non-local investors which, in Zucker's framework, could be considered a product of process-based trust. The findings of other studies suggest that a positive correlation between superior investment returns and soft information can be attributed to cultural affinity. Grinblatt and Keloharju found that investors in Finland were predisposed towards investing in firms where either the nationality of the CEO or the official language of the firm was shared by the investor (Grinblatt & Keloharju, 2000), which is more consistent with Zucker's conceptualisation of characteristic-based trust. Other scholars have viewed the affinity thesis more critically, arguing that the local bias associated with cognitive 'familiarity' can cloud investment judgement and thereby produce lower returns for locally-biased investment portfolios (Grinblatt & Keloharju, 2001; Huberman, 2001).

The analysis in this dissertation also investigates the influence of information on the lending decisions of mini-bond and P2B investors by assuming that investors and investees are more likely to share similar norms and values if they live in close proximity to each other and thus facilitating characteristic-based trust. However, while the analysis is concerned with identifying local bias in the investing behaviour of mini-bond and P2B investors to indicate the presence of intra-local trust production, it is not concerned with the relative performance of the portfolios of locally biased mini-bond and loan investments.

### **3.3.3.2 Social Relationships**

The influence of social relations between banks and SME lenders is more an indicator of process-based trust than characteristic-based trust given the relatively high level of importance placed on relationship experience by local bank lenders in making credit decisions. Brian Uzzi's study of the influence of personal relationships between the managers and owners of small firms and their bankers in terms of lending was discussed earlier in this chapter in the context of embeddedness. A small number of economics and finance scholars in Europe have explicitly examined the influence of trust on lending terms in small firm banking relationships. In their study of SMEs in Northern Italy, Horworth and Morrow found a direct relationship between a lending bank manager's perceived trustworthiness of an SME owner and the interest rate charge on a loan to the SME (Howorth & Moro, 2012). They found that much of the information used to determine an SME owner's reputation for trustworthiness was captured through networks of relations within the local community of the firm and the banker, and the credit rating of the firm had little influence on the cost of credit (ibid: 174).

Harhoff and Korting's study of SME and bank relationships in Germany found a highly significant relationship between the level of trust between lenders and borrowers and the interest rate of loans made to the borrowers (Harhoff & Körting, 1998). They found small firms tended to have long-duration relationships with a single bank which contributed to higher levels of perceived mutual lender-borrower trust and more favourable lending terms for the borrower. The authors also found evidence of regional variation in the interest rate paid by SMEs in different regions, with SMEs in Eastern Germany paying almost 1% more interest for a line of credit than comparable firms (based on credit statistics) in Western Germany<sup>45</sup>. These findings are consistent with the findings of scholars studying the impact of relationship duration on levels of trust in business relations between firms (Sako, 1998:92).

### **3.3.3.3 Affective Impression Heuristics**

An investor's prior experience with a mini-bond issuer or P2B borrower may be as a consumer of the firm's products or services rather than as an investor, however the consumer experience can still be a source of process-based trust. Luhmann's thesis regarding the complexity-reducing role of trust through shared meaning (Luhmann, 1979) has been echoed over the past 30 years by consumer behaviour researchers studying the purchasing behaviour of consumers. Psychological studies of consumer decision-making have found that consumers draw on a readily available 'affective impression' as a mental decision-making shortcut, or heuristic, in judgement and decision-making in order to avoid estimating all the pros and cons of various alternatives, especially when the required judgement or decision is complex and/or one's mental resources are limited (see Zajonc, 1980). These affective impressions are based on positive and negative feelings with the product or supplier (Damasio, 2006; Slovic, Finucane, Peters, & MacGregor, 2002; Zajonc, 1980), while the large body of psychology literature analysing consumers' pre-purchase considerations informs the widespread development of 'brand image'.

Researchers have also examined the influence of affective impression heuristics on the investment preferences of individual investors (Statman, 2004). Researchers have found evidence that familiarity with, and recognition of, a company's products and brands has a positive effect on an individual's preference to invest in the company's stock (Frieder & Subrahmanyam, 2005). Understanding the factors determining stock prices and the pieces of related information is complex for most individual investors, which makes it difficult to accurately estimate the financial returns/risks (Aspara & Tikkanen, 2010; Statman, Fisher, & Anginer, 2008). If individuals lack information about the future and are unable to form expectations of the financial returns with great accuracy, individuals are able to make only

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<sup>45</sup> Some of this difference is likely explained by the shorter duration of lending relationships of firms based in the former East Germany given they would not have entered into banking relationships until the 1990's.

rough approximations of the return-risk profiles of stocks. Consequently, they may simply decide to invest in the stock of companies that they feel positively about, in preference to investing in stocks of companies for which they have less positive feelings, despite the source of positive feelings being unrelated to the financial performance of the companies. This proposition is supported by Aspara's (2013) analysis of psychometric data collected from consumers. He found that a greater relevance of a given company's products to an investor reduced the influence of alternative investment targets, and the affective evaluation of that company's brand increased the investor's optimism about the financial return from investing in the company's stock (Aspara, 2013).

### **3.3.4 Trust versus Confidence**

Trust and confidence are overlapping concepts, and most studies of trust do not distinguish between them (Swedberg, 2012:3). As a topic of research in the social sciences, trust is mentioned almost three times more frequently than confidence.<sup>46</sup> By contrast, non-academic discussion of the economy and financial markets typically refers to confidence rather than trust. For example, the Bank of England and departments of the UK government refer to confidence as a factor explaining the changes in the supply and demand of consumer and business finance (The Department for Business Innovation & Skills, 2013; Bank of England, 2014), and surveys of business and consumer confidence are widely watched by financial markets (Yale SoM, 2017).

One of the earliest economists who discussed the role of confidence in finance was Keynes, who viewed confidence<sup>47</sup> as a matter for business *psychology* (Walters, 1992:424) and defined it as 'how highly we rate the likelihood of our best forecast being wrong' (Keynes, 1936:138). George Akerlof and Robert Shiller, both Nobel laureates in economics, also highlight the irrational dimension of confidence, which diverges from the neoclassical micro-economic view of confidence as a state of mind derived from a rational, cognitive process for dealing with uncertainty, producing predictions of future outcomes based on binary conditions of either 'confidence' or 'no confidence' (Akerlof & Shiller, 2009).

Nikolas Luhmann's analysis of system trust offers an approach for understanding the relationship between trust and confidence. Luhmann suggests that they are neither perfect complements nor perfect substitutes, because complex social systems 'require more confidence as a prerequisite for participation and more trust as a condition of the best utilisation of chance and opportunities' (Luhmann, 1988:99). In Luhmann's terms, confidence is related to an actor's perception of the larger system and leads to the production of system trust. In this

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<sup>46</sup> 8,560 mentions of trust versus 3,260 mentions of confidence between 2012 and 2016 according to a Web of Science topic search.

<sup>47</sup> Keynes used the terms confidence and trust interchangeably.

context, an actor's feeling of confidence influences the decision to trust, with the interaction between trust and confidence highlighting the need to understand both psychological (emotional) and social (relational) determinants influencing the decision to trust.

This dissertation analyses the role of trust rather than confidence as a factor in the development of mini-bond and P2B lending because confidence, like generalised trust, is a necessary, but not sufficient, condition for lenders' willingness to invest. There are a number of reasons why a borrower may not pay a loan in the future, some of them knowable and some unknowable. In principle, the financial condition of the borrower and his intention to repay the loan when due are knowable risk factors, while a geopolitical event that potentially disrupts the capacity of all borrowers to repay represents an uncertainty. If confidence is related to assessing uncertainty, then having confidence is a necessary but not sufficient condition to enter into a trust-based relationship, because the prospective trustor must have sufficient confidence *and* trust to accept being vulnerable in the relationship.

### **3.3.5 Signalling Trustworthiness**

The decision by an actor to trust an 'object of trust' is based on the actor's perception of that object's trustworthiness (Stolowy, Messner, Jeanjean, & Richard Baker, 2014). A trustworthy party is one which will not exploit the vulnerability of a trustor (Banerjee et al., 2006). Understanding how trustworthiness is produced is, therefore, essential to understanding the role of trust in the alternative lending practices of individuals. While the consequences of trustworthiness are viewed in a broadly consistent manner in trust literature, there is less agreement on how trustworthiness develops.

Signalling of trustworthiness is a necessary condition for trust, since actual trustworthy qualities and intentions are insufficient to produce trust if unobserved by a trustor. An important theoretical implication for the analysis of trust in this dissertation is the *perceptions* of trustworthiness, rather than the actual trustworthiness of a trustee that influence the trustor. Bacharach and Gambetta (2001) link the concept of trust with the theory of signalling (Spence, 1973), arguing that it is not possible for a trustor to know whether a trustee has qualities of trustworthiness, so a trustor can only perceive signs about the behaviour of the trustee and draw inferences about his actual trustworthiness (Bacharach & Gambetta, 2001). The possible sources of these signs are wide ranging, from biological indications, to verbal communications to commercial brands.

Swedberg distinguishes between signalling, an intentional act, and a *proxy sign* representing something one can rely on to make a decision to act when dealing with incomplete knowledge (Swedberg, 2012:6). At the outset of a relationship, these signals can take a significant amount of time to emerge, and hence an intermediary known and trusted by each party can play a crucial role in accelerating the establishment of a trusted-based relationship. This has



relevance to the P2B lending channel with internet platforms acting as intermediaries between firms seeking borrowers and investors seeking to lend. Signals can be misleading and potentially lead to the unwarranted erosion of trust between parties. Noteboom highlights the important role that trusted intermediaries can also play in maintaining trust in situations when parties have misinterpreted the signals of transaction counterparties (Nooteboom, 2011).

Trustworthiness can also be associated with negative outcomes when trustors extend excessive or unwarranted trust. Excessive trust in a relationship can be produced by the behaviour of either the trustee or the trustor. A reputation for being trustworthy based on past behaviour is not a guarantee that a trustee will not engage in opportunistic behaviour in the future (Barney & Hansen, 1994:187). From the perspective of the trustor, excessive trust can result in insufficient monitoring of trustee behaviour as a result of blind faith, tolerance of sub-optimal performance by trustors because of complacency, and over-commitment of resources to the relationship because of over-embeddedness (Gargiulo & Gokhan, 2006:180). From the perspective of the trustee, the benefits that a reputation for trustworthiness can reap are an incentive for the trustee to invest resources in the production of stronger signals of trustworthiness than are warranted by its actual trustworthiness. This is an observation that informs the analysis of the listed mini-bond market that emerged in Germany.

### **3.3.6 Categorisation**

The relevance of categorisation to this dissertation, including the empirical work of Ezra Zuckerman in the context of institutional analysis, was discussed earlier in this chapter. Other empirical research more explicitly investigates categorisation as an antecedent to the production of trust. During his trip to the United States in 1904, Max Weber observed the tendency of people in the United States to trust individuals who were members of certain religious sects (Weber, 1963). Weber encountered a person who wanted to become a banker and who, therefore, became a Baptist because he believed that by becoming a Baptist people would trust him with their money (Weber, 1963:304). This is representative of Zucker's conceptualisation of characteristic-based trust, in which a trustor perceives similar characteristics in another party which can be relied on to predict that party's behaviour. In effect, the anecdote provided by Weber and the process described by Zucker are both examples of social categorisation, a cognitive process of identifying similarity in others (McKnight & Chervany, 2006:42).

While Zucker and others attribute social categorisation to personal relationships between individuals, other scholars have extended the relevance of categorisation to trust formation from individual to organisational relationships. For example, firms can be categorised by prospective customers on the basis of their size, with large suppliers signalling competence-based trustworthiness because they are more likely to have the resources and support systems needed to meet their obligations to the customer (Jarvenpaa & Majchrzak, 2008:48). Several

academic studies have also found that family firms have better reputations compared with non-family firms, particularly in developed economies (Sageder et al., 2016). Trust scholars offer an explanation: through categorisation processes, individuals can apply the characteristics of a general category to an organisation identified as being part of the category (McKnight, Cummings, & Chervany, 1998). The family business literature also provides evidence of a categorisation process in trust development between individual stakeholders and organisations. Hauswald and Hack concluded that family control/influence in an organisation positively influences individual stakeholders' perception of benevolence, separate and distinct from perceptions of competence, and this perception is derived from a categorisation process based on group membership of the organisation (Hauswald & Hack, 2013).

The role of categorisation in the production of trust between firms and individuals is highly relevant to understanding the behaviour of individual investors engaged in alternative lending. The study investigates the extent to which firms using the alternative lending channels are seen by investors as members of a category, and whether attributes of the category are attributed to individual borrowers and influence the level of perceived trustworthiness of the borrower.

### **3.3.7 Trust and Comparative Advantage**

Several academic studies have found that family firms have a long-term orientation which motivates family owners to acquire a good reputation for both financial and non-financial reasons, such as social status and family interests (Zellweger et al., 2013). Firms with a better reputation can more easily hire employees and charge more for their products (Fombrum & Shanley, 1990), and more easily access financial resources than comparable businesses with worse reputations (Yang, 2010). These benefits accruing to firms with good reputations suggest that trustworthiness is an asset that can provide reputable firms with a competitive advantage (Fink, 2010; Sageder et al., 2016; Steier, 2001).

In Zucker's conceptualisation of trust forms, reputation is a source of process-based trust for individuals and firms. Barney and Hansen adopt Zucker's concept and propose trustworthiness as a potential source of competitive advantage in economic exchange (Barney & Hansen, 1994:188). They identify three forms of trust differentiated by the strength of the competitive advantage they confer to a firm: weak form trust, when firms invest in costly governance mechanisms; semi-strong form trust, when firms have difficult-to-imitate skills and abilities; and strong form of trust, also referred to as 'hard core trust', when exchange partners share values and principles that are consistent with trustworthy behaviour and, thereby, exclude opportunism. Strong form of trust provides firms with difficult-to-duplicate sustained competitive advantage, either through reduced governance costs incurred by their partners, or a greater willingness of partners to collaborate on opportunities that they considered as too risky with less-trusted partners. Barney and Hansen argue that the transaction cost efficiencies

gained by strong trust relations are as economically valuable to a firm as any other asset that produces a cost advantage (Barney & Hansen, 1994:189).

Barney and Hansen's theoretical proposition is lacking in two respects. First, they cite concrete examples of weak and semi-strong forms of trust but no example of strong form trust, which confers the most sustainable competitive advantage. They claim that the individual and organisational attributes that make strong form possible are 'rare' and 'socially complex' (Barney & Hansen, 1994:188), which does suggest that this form may not exist. Second, their conceptualisation of trust forms does not address possible differences between macro, meso and micro levels of trust relationships. Of direct relevance to this dissertation is the question of whether trustworthiness as a competitive advantage is relevant at the institutional level, specifically whether trustworthiness in a category of firms, such the Mittelstand in Germany, confers a competitive advantage to firms identified as a member. The relationship between categorisation, access to finance and competitive advantage is discussed in Chapter 6.

The trust literature is vast, with contributions from scholars in a wide range of social science disciplines contributing fundamentally different perspectives on the sources, forms and outcomes of trust. The section reviewed the literature analysing trust from the sociological, psychological and financial economics perspectives. It discounted the usefulness of generalised trust to the analysis of mini-bond and P2B lending, despite it being a frequently referenced trust form in the literature. In particular, forms of trust have greater relevance. It reviewed Lynne Zucker's framework of process-based, characteristic-based, and institutional-based sources of trust used as the basis for identifying the dominant trust forms relied on by lenders to assess the trustworthiness of firms seeking loans in the mini-bond and P2B lending channels. The methodological approach draws on literature comparing rational and emotional-based forms of trust, concluding that these are co-existent and complementary forms of trust production rather than substitutes. It provided a review of empirical research examining lending relationships from economics and psychology, in addition to sociology, that provide support for the theoretical framework used to identify the sources of trust that are relevant to the analysis of alternative lending. This section concluded with a summary of the theoretical concepts used in the analysis including signalling of trustworthiness as distinguished from trust, and the role of categorisation in the production of trust.

Despite a large body of literature conceptualising trust from a theoretical perspective there are relatively few empirical studies examining of the role of trust in finance practices. This research contributes both empirical and theoretical insights to the literature by examining variation in the production of trust from a multi-level perspective in a cross-national context. It also examines both intermediated and direct alternative lending channels to contribute a fuller understanding of the influence of intermediation on trust relations.

This chapter reviewed the three bodies of literature that this dissertation draws on to address the research questions presented in this dissertation. The economic sociology literature contributes theoretical insight regarding embeddedness, both in an institutional and organisational context. The dissertation adopts the most-cited framework for cross-national economic comparison, namely *Varieties of Capitalism*, to compare the development of alternative lending practices between Germany and the UK. It also incorporates insight from the institutional theory literature regarding institutional entrepreneurship to address the limitation of the VoC model in explaining institutional change. The third and final section of the chapter reviewed theoretical and empirical contributions drawn from the trust literature to identify the social arrangements underpinning the institutional environment in each country. It reviewed the contribution of Lynne Zucker's categorisation of trust forms to the methodological approach for identifying the forms relied on by investors lending to firms in the mini-bond and P2B channels in the two countries. The following chapter discusses the data types and methodological approach used to undertake this analysis.



## Chapter 4: Data and Research Methods

This chapter is divided into two sections. It begins with a discussion of the data collected for the analysis, then discusses the research questions, hypotheses, and the methodology used in the analysis. The dissertation uses a *nested* mixed methods research design, which analyses three levels of primary data (interview, survey and transaction data), and is supplemented with secondary data sources to identify the behaviour of individuals investing in mini-bond and P2B loans.

### 4.1 Description of the Data

This section describes the types and sources of the data used in the analysis. Data was collected from both primary and secondary sources in the UK and Germany between late 2013 and early 2017. Primary data includes transaction-level data collected from firms issuing mini-bond and Peer-to-Business (P2B) lending platforms, data collected from questionnaires completed by P2B and mini-bond investors, and data collected in interviews with mini-bond and P2B investors. Table 4.1 provides a summary of the unique, primary data sets collected for this dissertation.

Table 4.1: Summary of Primary Data Sets

Description & Level of Data	P2B Lending		Mini-bond Lending	
	UK	German	UK	Germany
Aggregated investment & lending activity	Survey of platform lending volume (17 platforms)	Survey of platform lending volume (6 platforms)	New issue data (hand collected)	New issue data (supplied by 3rd party)
Investment by individual investors	Transaction data (6 platforms)	N/A	Transaction data (3 corporate issuers)	Transaction data (5 corporate issuers)
Investing behaviour of individual investors	Survey questionnaire (405 respondents)	N/A	Transaction data (3 corporate issuers)	Transaction data (5 corporate issuers)
	Interviews (20 investors)	N/A	Interviews (30 investors)	Interviews (20 investors)

Secondary data primarily consists of cross-national surveys of trust<sup>48</sup>, and economic data collected from the internet web sites of government and inter-governmental organisations. A description of the data and the collection methods follows.

<sup>48</sup> The questions used in the analysis include questions about trust in institutions and types of organisation and do not include questions about generalised trust.

#### 4.1.1 Peer-to-Business Lending Data Sets

P2B lending is an intermediated form of lending, in which online internet platforms act as intermediaries between borrowers and investors to make loan requests of borrowers available to investors who would otherwise be unaware of a borrower's need for a loan. Primary data was collected for P2B lending activity in UK and Germany from 2013 through 2015. The data was collected via a survey questionnaire distributed to P2B lending platforms in early 2016 by the Cambridge Centre for Alternative Finance<sup>49</sup> (CCAF). A list of the questions used in the survey is provided in Appendix 1. The survey did not seek to collect lending volume data prior to 2013 because P2B lending did not begin in Germany until 2012. The survey was completed by five German and 17 UK lending platforms, and these platforms are estimated, by the CCAF, to represent more than 90% of the P2B lending volume in each country during the 2013–2015 period.

The reported lending data is aggregated at the platform level, so platforms did not provide detailed data about either the loans made on their platforms or the individuals investing in these loans. The data set for the three-year period includes the following descriptive variables of the lending activity on each platform:

- (i) Number of loans: the total number of individual loans funded (by year);
- (ii) Total lending volume: total monetary value of the loans funded (by year);
- (iii) Average size of loan: the average monetary value of the loans funded in a given year;
- (iv) Number of investors registered on the platform (by year);
- (v) % of loan volume funded by individuals: the percentage of total lending volume in a given year funded by individual investors (versus institutional investors).

The CCAF also collected detailed information about individual P2B loans, and individual investor participation in these loans, from UK P2B lending platforms in late 2016. This data was collected as part of a research collaboration with the Financial Conduct Authority (FCA), the UK financial services regulator. The CCAF was commissioned by the FCA to conduct analysis of P2B lending as part of its review of the regulatory framework governing this lending channel in the UK market, and the CCAF sent a data request to six P2B lending platforms, which collectively were estimated to represent more than 95% of the P2B lending volume in the UK market. All six platforms provided transaction data related to their lending activity from 2012 to 2016, which in aggregate exceeded more than more than 9 million investments made by investors in more than 36,000 P2B loans to SMEs during the period<sup>50</sup>. The data is contained in four linked tables within the data set, with approximately 50 attributes associated with the

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<sup>49</sup> An inter-disciplinary research centre within the University of Cambridge Judge Business School. The author of this dissertation is the Director & Co-Founder of the CCAF and was one of the research team members who developed the survey questionnaire.

<sup>50</sup> Data was collected from 2010, when P2B lending activity began in the UK market.

borrower, the lender, and the loan instrument for each loan processed by the platforms<sup>51</sup>. The data field items for each processed loan are listed in Appendix 2<sup>52</sup>. The loan transaction data sets do not contain identifying information about the borrowers or lenders, and all postcodes in address data fields were shortened to the 4-digit postal district level to comply with requirements of the UK Information Commissioner's Office (ICO) Privacy Impact Assessment (PIA) for the protection of personal information. The platforms agreed to provide their data on the understanding that: (i) presentation of research findings will present findings in aggregated format without disclosing platform-specific information; and (ii) the data will be used for academic research purposes only.

In December 2016, the six UK P2B platforms that provided loan transaction data also sent an email to all the individual investors registered on their platforms inviting them to complete an internet survey. The invitation email contained a link to an online questionnaire developed in consultation with the FCA<sup>53</sup>. Appendix 3 contains a copy of the survey questions. The online survey consists of 26 questions asking investors about their investing process, return expectations, understanding of P2B loans as an asset class, and demographic characteristics. A total of 405 P2B investors completed the online questionnaire. The internet questionnaire also asked respondents if they were willing to be interviewed for their views on P2B lending. A total of 114 survey respondents agreed to be interviewed, and 20 of these investors were randomly selected and interviewed by telephone in January 2017. The invitation for the interview and the list of the structured questions for the interviews are contained in Appendices 4 and 5, respectively. The interviews covered three question areas: (i) motivations for investing; (ii) investing behaviour; and (iii) the influence of trust in the decision-making process of the investors. Each interview lasted from 45 minutes to 1 hour 15 minutes. The interviews were all recorded with the agreement of interviewees, and transcribed using a commercial audio transcription service.

#### **4.1.2 Mini-bond Data Sets**

The name 'mini-bond' is a term of art within the corporate finance community, and is used to describe a corporate bond with an issuance size that is much smaller than a traditional corporate bond sold by investment banks to investors in capital markets. Mini-bonds, like larger corporate bonds, can be either *unlisted* or *listed* instruments on a bond listing segment of a regulated financial exchange. Data was collected for both listed and unlisted mini-bonds from both secondary and primary sources to get a more complete picture of the mini-bond lending activity in each country. A description of the mini-bond data and collection methods follows.

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<sup>51</sup> The dissertation author was part of the research team and led the development of the data field specification distributed to the platforms.

<sup>52</sup> Not all platforms were able to provide information for all data fields.

<sup>53</sup> The dissertation author was part of the research team which developed the survey questions.



#### 4.1.2.1 German Mini-Bond Data Sets

In Germany, mini-bond issues can be listed on the specialised mini-bond (or 'Mittelstand bond') segments of five regional financial exchanges following the placement of the bonds with investors, providing the issue meets the listing criteria of the segment of the exchange. While information about listed mini-bond issues is publicly available and relatively easy to access from secondary sources, information about unlisted mini-bond issues is more difficult to obtain because many issuers are reluctant to disclose any information about their financing activities. Data must be acquired from primary sources, which is challenging given that the issues are highly reluctant to disclose information to third parties.

Information about both listed and unlisted mini-bond issues in the German market was provided by a German internet platform called Anleihen-Finder GmbH (A-F), which specialises in the collection and analysis of information about mini-bond issuances in Germany and Austria. A-F provides publicly available information on its website to German-speaking investors;<sup>54</sup> however, the data it provided for this dissertation included non-public data obtained from unlisted issuers through its strong relationships with mini-bond issuers and their advisors<sup>55</sup>. The data set provided by A-F includes aggregated mini-bond volume data for 117 listed and 144 unlisted issues<sup>56</sup> between 2009 and 2015 with the following attributes:

- (i) Total mini-bond lending volume (annual);
- (ii) Number of mini-bonds issued and average issue size (annual);
- (iii) Industry segment of issuers;
- (iv) Number of issues and issuance volume by financial exchange listing segment (if mini-bond is listed on an exchange);
- (v) Credit ratings of the issues (if rated);
- (vi) Interest rate coupon paid of each bond;
- (vii) Duration (term) of each mini-bond issue.

Despite this challenge in accessing information about unlisted mini-bond issues, five German firms that issued mini-bonds agreed to provide primary source transaction data<sup>57</sup>. The data sets contain mini-bond data at the level of the individual investor transaction, with approximately

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<sup>54</sup> The language used for the website is German only.

<sup>55</sup> The dissertation author met with executives at each of the firms assisted by a German-speaking employee of A-F, and also attended the Summer Garden Party for G5 mini-bond investors in July, 2013.

<sup>56</sup> The unlisted mini-bonds in the A-F data set do not include small mini-bond issues of typically less than €5 million issued by firms to local investors. These issues are placed with investors via locally-based financial advisors and are very difficult to source. Firm G3 in the transaction data set is an example of a small local mini-bond issue which is not included in the A-F dataset, and was sourced via a personal relationship with one of the G3 investors.

<sup>57</sup> Only one company requested the execution of confidentiality agreement to prohibit disclosure of the firm's identity, however the names of all companies contributing data companies have been anonymised.

25,818 mini-bond investments made by 12,633 individual investors in 39 mini-bond issues.<sup>58</sup> Each individual investment includes descriptive variables for the bond instrument purchased by the investor, such as size of issue, date of issue, interest rate and maturity, as well as investors' 5-digit postal code, the amount of the investment and date of the investment. A description of the issuers and their mini-bond issues is summarised in Table 4.2.

Table 4.2: Summary Statistics: German mini-bond issuers Supplying Transaction Data

Issuer	Turnover(1)	Employees(1)	Investors (current)	Mean Issue Size	Bonds Issued & Outstanding	Mean Amount Invested	Survey Response
Firm G1	€ 120,000,000	500	228	€ 4,000,000	€ 2,658,000	€ 11,658	-
Firm G2	€ 70,000,000	200	919	€ 10,000,000	€ 16,691,000	€ 18,162	-
Firm G3	€ 10,000,000	80	68	€ 1,400,000	€ 2,646,300	€ 38,916	-
Firm G4	€ 800,000,000	1,800	2,118	€ 30,000,000	€ 30,000,000	€ 14,164	49%
Firm G5	€ 600,000,000	2,500	9,000	€ 15,700,000	€ 200,000,000	€ 18,000	35%

(1) At time of bond issuance.

The mini-bond issuers vary significantly in their turnover, number of employees and the size of mini-bond issue they placed with investors. A brief description of each firm follows:

- (i) **Firm G1** is a 100-year-old producer of metal castings located in a Bavarian town of approximately 20,000 inhabitants. The firm employs approximately 500 people and is, therefore, relatively important to the local economy. Ownership of the company changed hands several times over the years, and in 2004 it was acquired by a privately owned, medium-sized castings manufacturer based in the mid-Western United States. The financial stress incurred by the company during the 2008 financial crisis led the firm to declare insolvency in 2009, as it could no longer service the debt it had taken on to finance the acquisition by the American owner. A group of private individuals from the local community where the company is located supported the management team to acquire ownership of the company in 2009 and, subsequently, issued a mini-bond as part of the debt refinancing of the firm.
- (ii) **Firm G2** is the utility company supplying gas and water to the inhabitants of a town of approximately 60,000 people in North Rhine-Westphalia in Northern Germany. In 2012, it was seeking a 10-year loan of € 10 million to refurbish its distribution network infrastructure. The firm decided to raise the required funding by issuing a mini-bond to local residents as an alternative to a higher-cost loan offered by the local Sparkassen savings bank;
- (iii) **Firm G3** is a small, 20-year-old machine tool manufacturer in a town of approximately 25,000 people in North Rhine-Westphalia in Northern Germany. The firm issued the

<sup>58</sup> The G5 mini-bond issuer provided transaction data for 22,482 investments made by 9,311 individual investors in 35 mini-bond issues that occurred between 2002 and 2013. Summary statistics for the G5 mini-bond issues are provided in Appendix 7.

bonds to help finance an expansion of its facility because it was unable to borrow all of the required funds from a bank lender;

- (iv) **Firm G4** is a 20-year-old developer and operator of renewable energy projects. It issued a € 30 million mini-bond alongside borrowing approximately € 100 million from a syndicate of German banks to finance additional projects;
- (v) **Firm G5** is a producer of industrial chemicals founded in the early 1990s with headquarters in a small city located in the Rhine-Ruhr area of Germany. The firm's entrepreneurial founder has funded the expansion of his business over the past 20 years by issuing more than 40 mini-bonds as an alternative to borrowing from banks. Figures 4.1 and 4.2 show investors attending the annual summer garden party in 2013 hosted by G5 for its mini-bond investors, and a kiosk manned by employees of G5 selling bonds to the party attendees.



Figure 4.1: The G5 Mini-Bond Investors' Summer Garden Party in 2013



Figure 4.2: Kiosk Selling G5 Mini-Bonds at Investors' Summer Garden Party

The G4 and G5 firms that provided mini-bond transaction data also agreed to distribute a questionnaire containing approximately 50 questions by mail to a random sample of their mini-bond investors. The structure and format of the questions followed questions previously used in the European Values Study, Eurobarometer surveys and other social attitudes surveys. Appendix 8 contains the English translation of the questions used in the survey. The questionnaire was designed to gather information on socio-demographic status, word-of-mouth interactions before and after purchasing the bond, investment considerations for purchasing the bond, the consumer relationship with the bond, and trust in institutions.

The survey was distributed in two waves. Surveys were first distributed in person to investors and potential investors attending a series of five investor information events held by the G5 mini-bond issuer in cities across Germany<sup>59</sup> during November and December 2013<sup>60</sup>. The first wave was used to test the survey questions, and two additional questions were added to the survey during the first wave. In the second wave, the questionnaire was distributed by mail by the company, rather than via the internet, to the investors to reduce the risk of sampling bias following discussions with the mini-bond issuers about their investor base, which revealed that a large number of the investors were elderly people who may not be regular users of the

<sup>59</sup> Dusseldorf, Hamburg, Frankfurt, Berlin, Munich and Duisburg.

<sup>60</sup> The dissertation author attended each investor event, and distributed and collected survey questionnaires assisted by a German-speaking employee of A-F.

internet. The questionnaire was mailed by the mini-bond issuers to the selected investors in January and February 2014. Each survey mail package included instructions for returning the completed questionnaire to a post office box in Cambridge, UK, using a pre-paid return envelope also included in the package. A total of 630 questionnaires were collected during the two waves. The completion response levels for the mailed survey were considered to be very high, at 49% for G4 and 35% for G5, respectively<sup>61</sup>. Summary socio-demographic statistics for G4 and G5 mini-bond investor survey respondents are provided in Appendix 9<sup>62</sup>.

Structured interviews were conducted by telephone in mid-2014 with 20 German investors, who were randomly selected from among the G5 investors who had completed the questionnaire and volunteered to be interviewed. The length of each interview ranged from 30 minutes to 45 minutes. The interviews with the German investors were conducted in German by a German-speaking researcher using a set of semi-structured questions<sup>63</sup>. The interviews were audio recorded with the agreement of the interviewees, and the interviews were transcribed and translated to English using a specialised commercial supplier based in the UK. Robustness checks confirmed that there were no statistically significant differences in the characteristics of the interviewee and the survey respondent samples.

Socio-demographic data for all German households within 5-digit postcode areas (average 5,000 households) and 8-digit household areas (average 500 households) were acquired from a commercial data supplier in Germany. The socio-demographic data sets were merged with the investor survey data sets. The socio-demographic data includes information about household purchasing power, population density, foreign population, and affinity to purchase speculative financial investments. Table 4.3 provides a summary of the distribution of socio-demographic characteristics of survey respondents (at the postcode level) relative to all German households.

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<sup>61</sup> The dissertation author set up the PO Box return address using Mailboxes Unlimited in Cambridge, printed and prepared the packages of questionnaire as well as return pre-addressed envelope. The packages were then shipped to the G4 and G5 mini-bond issuers. Stamps were purchased in Germany by A-F and sent to G4 and G5 and an employee of each company attached an address label and stamp and mailed the packages to the sample of investors from their premises.

<sup>62</sup> The data entry, coding and statistical analysis of the German and UK mini-bond transaction data sets, mini-bond survey data sets and investor interview data sets was performed by the dissertation author.

<sup>63</sup> The interviews were conducted in German by the same German-speaking employee of A-F who participated in the distribution of survey questionnaires at the G5 investor information events. The interviews followed a script of question areas prepared by the dissertation author.

Table 4.3: Socio-Demographic Statistics in 5-digit Postcode Areas in Germany

	% Foreigners	% Urban HHs	Number of HHs	Purchasing Power per HH	Affinity for Speculative Investments (% of HHs)		
					Low	Average	High
<b>All Germany</b>							
Postcodes	8,256	8,256	8,256	8,266	8,266	8,266	8,266
Missing	10	10	35	-	-	-	-
Mean	18	19	4,894	41,000	60	12	27
Median	10	-	2,947	42,824	64	11	19
N	372	372	372	372	372	372	372
	19	19	19	19	19	19	19
Mean	2,242	49	9,977	44,370	42	10	47
Median	2,075		9,770	43,776	42	10	43
N	159	194	159	179	179	179	179
	35	-	35	15	15	15	15
Mean	2,142	35	8,885	45,221	42	12	46
Median	1,690		8,975	44,576	39	11	43
<b>Survey Respondents N=630</b>							
Postcodes	521	521	521	521	521	521	521
Valid	590	593	590	630	591	591	591
Mean	23	49	9,722	41,889	47	42	11
Median	21	-	9,619	43,400	43	41	11

#### 4.1.2.2 UK Mini-Bond Data Sets

A mini-bond has four characteristics that distinguish it from other types of corporate bonds: (i) the *issue size* is small, always less than £150m and typically less than £50m; (ii) the *nominal amount* is small, typically £1,000 versus £100,000 for corporate bonds; (iii) the *regulatory requirements* for issuance are lower;<sup>64</sup> and (iv) the *distribution* of the bonds to investors has less involvement from financial intermediaries. In the UK market, the closest equivalent to a mini-bond listed segment is the Order Book for Retail Bonds (OBR) segment of the London Stock Exchange, which lists corporate bonds with small nominal bond amounts. As a result, bonds listed on the OBR segment are referred to as *retail bonds* because the nominal bond amounts have been structured to appeal to individual rather than institutional investors. Almost all retail bonds issues are large companies issuing bonds with very few issues below £100 million that are small enough to be considered mini-bonds<sup>65</sup>. Even the smaller retail bond issues, however, cannot be considered as equivalent to mini-bonds because the exchange and regulatory requirements for listing are the same as for a corporate bond, and the placement of corporate bonds with institutional investors involves more intermediation by advisors and investment banks. As a result, retail bonds have been excluded from the analysis of mini-bond financing in the UK market.

<sup>64</sup> For financial instruments intending to be placed with retail investors.

<sup>65</sup> Some small companies that have tried to issue small bonds on the OBR have failed. An example is Stobart Group, which announced a £25 million OBR bond in November 2014 but quickly pulled the offering after failing to attract sufficient investor interest.

There is no equivalent to Anleihen-Finder operating in the UK market, and therefore data for mini-bond lending in the UK was hand-collected via internet searches for online press announcements of mini-bond fundraisings<sup>66</sup>. These announcements were issued by PR firms retained by mini-bond issuers to make as many individual investors as possible aware of the mini-bond offering and, thereby, increase the likelihood of receiving the target amount for the mini-bond fundraising. The press announcements typically contain a link to the documentation detailing the terms of the offering, which can be downloaded by interested investors. An overview of the UK unlisted mini-bond issues is contained in Appendix 10.

Primary source data was collected during 2014 from three UK firms that issued mini-bonds<sup>67</sup>. The data sets contain mini-bond transaction data at the individual investor level, with mini-bond investments made by 4,695 individual investors in 3 mini-bond issues. The set of descriptive variables for each bond investment is the same as the German mini-bond transaction data sets. Each individual investment includes descriptive variables for the bond instrument purchased by the investor, such as size of issue, date of issue, interest rate and maturity, as well as the investors' 5-digit postal code, the amount of the investment and date of the investment. The issuers and their mini-bond issues are summarised in Table 4.4. The firms vary significantly in turnover, number of employees and the size of mini-bond issue they placed with investors.

Table 4.4: Summary Statistics: UK Mini-Bond Issuers Supplying Transaction Data

Issuer	Turnover (1)	Employees (1)	Investors (current)	Avg. Issue Size	Bonds Issued & Outstanding	Avg. Amount Invested	Survey Response Level
Firm UK1	£ 34,000,000	100	2,221	£ 5,000,000	£ 4,000,000	£ 2,251	-
Firm UK2	£ 14,000,000	151	324	£ 2,272,500	£ 2,272,500	£ 7,014	-
FirmUK3	£160,000,000	500	2,150	£ 25,000,000	£ 25,000,000	£ 11,811	37%

(1) At time of bond issuance

- (i) **Firm UK1** is an e-commerce retailer of wine which was founded in 2008 by a veteran of the UK wine industry. The firm's business model is to finance the harvest of emerging wine producers in order to acquire the produced wines at lower cost and, thereby, offer wines at lower prices than competitors. It issued a mini-bond to finance the additional harvest inventory needed to expand its business;
- (ii) **Firm UK2** is a developer and operator of small-scale renewable energy projects founded in the 1990s in Australia. It issued a mini-bond in 2011 to finance wind farm projects in the UK;

<sup>66</sup> This data was collected and analysed by the dissertation author.

<sup>67</sup> The dissertation author cold-called every firm in the UK that had issued a mini-bond prior to June 2014 and only three of these mini-bond issuers agreed to contribute data.

- (iii) **Firm UK3** is the owner and operator of 200-year-old enterprise of horse racing courses across the UK. It issued a bond in 2012 to finance the refurbishment of the grandstand and grounds at its flagship facility after discovering that the cost of a loan from its traditional bank lender could only be obtained on terms that were significantly more onerous than the terms for similar loans entered into before the financial crisis.

One of the UK firms (UK3) that provided mini-bond transaction data also agreed to mail a questionnaire containing approximately 50 questions to a random sample of its mini-bond investors. The questionnaire was distributed by mail to reduce the likelihood of sampling bias affecting the analysis when comparing UK and German mini-bond investors, since the questionnaire had been distributed by mail to the German mini-bond investors. The mailing was completed in April 2014, using the same collection method as the German survey mailing. A total of 276 completed questionnaires were received at the Cambridge post office box address. The completion response level was high for the survey mailing, at 37%.

Structured interviews were conducted by telephone during 2014 with 30 of the investors in the UK3 mini-bonds who had completed the questionnaire and volunteered to be interviewed<sup>68</sup>. Interviews lasted from 40 minutes to one hour using a set of semi-structured questions. All interviews were recorded with the consent of the interviewees, and the audio recordings were transcribed by the same commercial provider of transcription services used for the German interview transcriptions.

Summary socio-demographic statistics for the UK3 mini-bond investor respondents completing the survey are provided in Appendix 9. Robustness checks confirmed that there are no statistically significant differences in the characteristics of the interviewee and the survey respondent samples.

#### **4.1.3 Other Data Sets**

The following additional data sets obtained from secondary sources have been used in the analysis.

- (i) Eurobarometer cross-country trust survey data: Survey data about individuals' beliefs in the trustworthiness of known entities from a question in the 2010 Eurobarometer Survey Secondary was obtained from a public internet data source;
- (ii) Business lending by banks in the UK and Germany: Data for lending volume by the traditional bank channel in the UK and Germany was collected from the Bank of England, the British Business Bank, and British Bankers Association for the UK market, and the Deutsche Bundesbank and European Central Bank for the German market;

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<sup>68</sup> The dissertation author conducted all of these interviews.



(iii) Regulation and policy data for the UK and Germany: Information about regulation and policy developments was collected via internet searches of the websites for the government entities in the UK and Germany. In the UK, this included the HM Treasury, the two regulatory bodies for financial services (the Financial Services Authority and its successor the Financial Conduct Authority), and the state-owned business development bank (British Business Bank). In Germany, information was collected from the German Ministry of Finance, the financial services regulator (the Federal Financial Supervisory Authority, or 'BaFin'), and the state-owned business development bank (KfW).

## 4.2 Research Methodology

This section of the chapter sets out the research methodology used to investigate the development of alternative lending channels in the UK and Germany since the 2008 financial crisis, and analyse how trust has influenced the development of these channels. It discusses three research questions and associated hypotheses, and the methodological approach used for testing each hypothesis.

### 4.2.1 Research Question 1: Alternative Lending and VoC Predictions

Question 1: How have the P2B and mini-bond channels developed in each country since the crisis, and do their development trajectories fit with the propositions of the Varieties of Capitalism framework?

Hypothesis 1: *The development trajectories of the channels differ between countries, and these trajectories are congruent with propositions of the VoC model.*

The analysis for testing the first hypothesis uses a three-step approach. In the first step, the development trajectories of the lending channels are identified along four dimensions: (i) lending characteristics; (ii) supply of patient capital; (iii) policy enactments; and (iv) response of incumbent lenders. The following characteristics are associated with each of these dimensions:

- (i) Lending characteristics: Six characteristics for each lending channel are analysed using data contained in the aggregated lending data from the survey of P2B platforms: The A-F data set for aggregated mini-bond lending in Germany, the P2B loan transaction data provided by UK platforms, and the hand-collected data set of mini-bonds issued in the UK market. *Cumulative lending volume* provides an estimate of the market size of each channel in each country. *Average size of loan/bond* provides information about the type of firm using each form of funding, and the *number of loans/bonds issued* indicates how prevalent the channels were as a form of funding for firms. *Average investors per loan* and *average investment amount* characteristics providing information about the investment style of the funders in each channel, and the *number*

*of investments* characteristic, indicates the level of adoption by individual investors of P2B loans and mini-bonds as an 'investable' asset class.

- (ii) Supply of patient capital: The supply of patient capital in each lending channel is indicated by the cumulative proportion of funding provided by repeat investors versus one-time investors in the loans/bonds issued by repeat borrowers over time. The longitudinal mini-bond data supplied by German mini-bond issuer 'G5' contains data for the repeat investments made by investors in 35 bonds issued by the company over an 11-year period (*'repeat G5 mini-bond investment'*). Qualitative data for repeat investment of UK mini-bond issues is contained in press releases and other secondary sources. The transaction data supplied by UK P2B platforms provides data representing the investments of both repeat and one-time investors investing in loans of repeat P2B borrowers (*'repeat UK P2B investment'*).
- (iii) Policy enactments: Secondary sources are used to analyse the effect of policy enactments introduced in the UK and Germany during the 2009 to 2015 period on the development of mini-bond and P2B lending in each country. Enactments are categorised as *enabling*, *constraining* or *neutral* in their impact on the development of the channels. The analysis examines *economic stimulus policies* designed to increase lending to SMEs, and *regulatory changes* targeting mini-bond and P2B lending activities. The analysis also uses data collected in the survey of P2B lending platforms in the UK and Germany to assess the platforms' perception of the regulatory environment in which they are operating. These variables reflect the level of state support for alternative finance channels serving SMEs and mid-sized firms within each economy.
- (iv) Response of incumbent lenders: This analysis uses secondary data sources to examine the response of the incumbent bank lenders to mini-bond and P2B lending activities, and the influence of this response on the business models and growth of the channels in each country.

The second step of the analysis is to use the propositions of the VoC thesis to develop a set of predictions for the development of the channels, and to assess the congruence of the *observed* versus the *predicted* trajectories of development. The VoC framework contends that the different institutional arrangements of CMEs and LMEs provide different levels of institutional support for how firms carry out their activities, with the result that firms' operations align with this support, thereby producing differing comparative advantages between firms located in CMEs and LMEs. Two areas of differing comparative advantage within the corporate governance sphere (which includes financing practices) are used as dependent variables to derive the VoC prediction: 'transactional (market) versus relational (bank) finance', and 'inter-firm relations. The analysis investigates the extent to which the regulatory changes and policy

initiatives in each country have produced outcomes consistent with these characterisations. The analysis also attempts to define the form(s) of change unfolding in each channel using Streeck and Thelen's (2005) framework for categorising institutional change, and examines the role of mini-bond issuers and P2B platforms as institutional entrepreneurs in bringing about institutional change.

#### **4.2.2 Research question 2: Role of Trust in Alternative Lending**

Question 2: What has been the role of trust in the development paths of P2B and mini-bond lending in the two countries?

Hypothesis 2: *Investors rely on different forms of trust for different types of lending, and the presence and strength of these forms varies across the two economies.*

This research question introduces a broader perspective on the important role played by trust in the financing practices of firms in CMEs and LMEs than was discussed in the VoC literature. The starting point for the analysis is the assumption that trust is a necessary condition for economic exchange for a firm, regardless of whether it is located in a CME or LME. VoC literature highlights the importance of a trustworthy reputation for CME firms reliant on relationship-based banking relationships, but is silent on the role of trust for firms in LMEs that are assumed to be more reliant on market-based sources of financing. The hypothesis complements the VoC dichotomy by proposing that trustworthiness impacts both CME and LME firms' access to finance; however, these ideal type economies are differentiated by the forms of trust relied on by the providers of financing to firms.

In the case of mini-bond and P2B lending, individual investors have provided most of the funding, and so the object of analysis for testing the hypothesis is individual investors as *an investor group*. The adoption of new alternative lending practices by these investors (the trustors) is conceptualised as a matter of trust, with the perceived trustworthiness of borrowers (the trustees) determining the willingness of investors to provide funding for loans requested by borrowers. More specifically, the underlying assumption is that the level of perceived trustworthiness influences the investors' expectations regarding the future behaviour of the borrower regarding the repayment of the loan. For an investor, a sufficiently high level of trustworthiness in the borrower mitigates any adverse selection risk resulting from the information asymmetry problem in lending.

The analysis of the second research question proceeds in two steps. The first step identifies the presence and strength of forms of trust influencing the lending decisions of investors within each channel in each economy. In the second step, the analysis compares the relative dominance of trust forms between channels in the two economies. Variation in the presence and/or strength of trust forms between the channels is a necessary, but not sufficient, condition for validating the hypothesis. Inter-channel variation indicates that there may be channel-

specific factors, but not necessarily country-specific factors, influencing lenders' perceptions of borrower trustworthiness. Channel-specific factors can include the level of intermediation between lenders and borrowers,<sup>69</sup> differences in the collateral security of P2B loans and mini-bonds which are preferential to lenders in one of the channels, or differences in the creditworthiness between firms using P2B lending versus mini-bonds as a form of financing.

A frequently used approach for measuring trust is to ask individuals about their beliefs in the trustworthiness of other people, in the case of generalised trust, or of a known entity in the case of focussed trust (e.g. Guiso et al., 2007; Sapienza et al., 2010; Tabellini, 2010). The methodology of this dissertation also incorporates a belief-based measure of trust similar to that used in prior trust research, by analysing investors' beliefs in the relative trustworthiness of different organisation categories within the financial system of each country. The strength of these beliefs is measured by an ordinal score related to the Lickert scale used in the questions, and compares these scores with similar questions answered by participants in the Eurobarometer cross-country trust survey.

Scholars have identified a number of problems in trying to directly measure trust. Determining causality is a significant measurement challenge: was the decline in the perceived trustworthiness of banks a result of their financial deterioration during the crisis, or did the deterioration result from a reduction in trustworthiness produced by other factors? It is difficult to observe properties like internalised norms, rules, or moral codes, which are implicit and seldom articulated directly. In addition to measuring beliefs, the methodology incorporates a second approach for measuring trust in an effort to address some of the measurement issues. In her study of trust production in the US economy, Zucker measures trust indirectly by observing *indicators* that signal the presence of different forms of trust (Zucker, 1986). The analysis that was used to investigate the second research question about the role of trust applies Zucker's 'three forms of trust' taxonomy to a set of characteristics indicating the presence of these trust forms in the lending practices of P2B and mini-bond investors. The methodology also incorporates a measure of strength for these trust forms, by using the framework of space, time and intensity dimensions, as used by Stolowy et al. in their study of the Madoff investment fraud to assess the strength of the trust relied on by Madoff's investors (Stolowy et al., 2014:358).

#### **4.2.2.1 Description of Trust Indicators**

The indicators of presence for the three trust forms used in the analysis, along with their measures of strength, are discussed below.

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<sup>69</sup> For example, whether the P2B platform or the individual investors select the individual loan investments in investors' portfolios.

## ***Usage of Product/Service and Reputation of Borrower as Indicators of Process-Based Trust***

Zucker identifies direct experience and reputation produced by indirect experience as sources of process-based trust in individuals and firms (Zucker, 1986). The data collected from the surveys and interviews with mini-bond and P2B investors are analysed to identify the presence of process-based trust arising through *usage of product or services* by investors. Characteristics reflecting the *strength* of process-based trust on the lenders include: (i) the *frequency* with which the product or service has been used by the investor; and (ii) the *duration*, or length of time, the investor has been using the product or service.

The data sets also contain information about the *reputation of borrower* as a second indicator of process-based trust. Investors were asked about sources of second-hand information about the borrower that they obtained from third parties prior to investing, and the distance that the third party lives from the investor. Close geographic proximity to the issuer can provide the investor with 'soft information', or tacit knowledge about the issuer that is separate from the financial and operating information about the firm that is available to all potential investors.

Granovetter highlights the reliance on social relationship by buyers and sellers, depending on how easy it is to assess quality of goods through brand names or other impersonal standards (Granovetter, 2005:39). He discusses the role of distance and norms in the context of network density as one of his core principles of social structure and economic outcomes:

*Norms - shared ideas about the proper way to behave - are clearer, more firmly held and easier to enforce the more dense a social network. Thus, greater density makes ideas about proper behavior more likely to be encountered repeatedly, discussed and fixed; it also renders deviance from resulting norms harder to hide and, thus, more likely to be punished.*

(Granovetter, 2005:34)

The strength of this indicator is indicated by the social proximity defined by the nature of the relationship of the third party supplying information to the investor.

## ***Investor-Borrower Social Relations and Investor-Borrower Proximity as Indicators of Characteristic-Based Trust***

In Zucker's modes of trust production, characteristic-based trust is produced by social similarity with shared social values and norms informing a trustor's expectations of how a trustee will act in the future in relation to the trustor. The greater the number of social similarities exist, the more the parties in the transaction assume that common background expectations do exist, hence trust can be relied on (Zucker, 1986:63) In the case of P2B and mini-bond investors, shared norms and values may increase a trustee's confidence in predicting how the issuer will

behave in honouring the future repayment obligation. On this basis, evidence of a social relationship between the investor and the borrower which pre-dates the lending relationship indicates the presence of characteristic-based trust. The strength of the characteristic-based trust present is indicated by several characteristics contained in the investor survey and interview data sets: (i) the number of pre-existing social relationships between a firm and its investors/lenders; and (ii) the 'social distance' of the pre-existing relationships, with immediate family relationships between a borrower and lender, indicating stronger characteristic-based trust rather than a casual acquaintance.

*Investor-borrower proximity* is the second indicator of characteristic-based trust. This indicator reflects Zucker's observation that the social similarities embodied in characteristic-based trust are 'intra-local', which limited its substitution for locally produced process-based trust as the distance between transacting parties increased during the expansion of the US economy (Zucker, 1986:63:83). The analysis in this dissertation assumes that the geographic distance between a firm and its investors is a proxy for social similarity, with an inverse relationship between distance and similarity. There is a substantial body of sociology literature supporting this assumption. The social networks literature studies homophily as a social mechanism, and finds evidence of an increased likelihood of individuals with similar characteristics establishing a social connection (Rivera, Soderstrom, & Uzzi, 2010:94). Several studies of proximity mechanisms have found evidence of a positive relationship between the proximity of individuals and their social attachment, and that being geographically proximate increases the likelihood of new relationship being formed and of existing relationships being maintained (Rivera et al., 2010:105).

Investor-lender proximity in the analysis is the measure of the geographic distance between the home of the investor and the main operating location of the borrower. The postal code of each borrower-lender pair was geo-coded into longitude and latitude coordinates, and straight-line distance was calculated using a formula derived from the Pythagorean theorem. Pair-wise distances have been calculated for all investors in both loan transaction and investor survey data sets. The indicator of the strength of this characteristic-based trust indicator is the distance between lender and borrower, with strength inversely proportional to distance.

### ***Regulation and Category Reputation as Indicators of Institutional-Based Trust***

Zucker argues that the structural changes in the late-nineteenth century economy disrupted the production of process and characteristic-based trust because they became less reliable in predicting the behaviour of the actors engaged in economic exchange. Institutional trust mechanism emerged to fill a void of reliable predictors needed for economic exchange in larger, more complex, modern economies. Regulation is a particularly important trust mechanism in financial services because it provides a formal system of societal guarantees

that can be enforced with formal sanctions in the event of malfeasance by actors in the financial system.

There are two types of institutional-based trust in Zucker's conceptualisation, namely firm-specific and intermediary mechanisms, and the dissertation investigates indicators for each type. In the case of firm-specific institutional trust, the *regulatory authorisations* obtained by the firms issuing mini-bonds or borrowing via P2B platforms are analysed as indicators. The strength of firm-specific institutional trust is measured via the interviews with investors and their self-reported influence of regulatory authorisations on investors' perceived trustworthiness of the channel. Zucker also highlights the important role played by intermediaries in producing institutional trust by guaranteeing the performance of counter-parties. In this context, the analysis considers *screening approval* of the P2B platforms and financial exchanges as intermediary mechanisms to be an indicator of institutional-based trust.

The analysis also examines *category reputation* as an indicator of firm-specific institutional-based trust. Zucker argues that there were formidable obstacles and few mechanisms for the production of process-based and characteristic-based trust at a societal scale in the US economy during the late 1800s (Zucker, 1986:83). Zucker identifies credentialisation as a mechanism for embodying the constitutive properties of the localised forms of trust in firm-specific institutional-based trust. The analysis in this dissertation views credentialisation in a broad context, recognising that the value of a credential is socially constructed and can be applied in either a formal or informal context. The analysis uses data collected from the mini-bond and P2B investors' surveys and interviews about the investors' perception of trustworthiness of the SME/Mittelstand category of firm relative to other types of firms in the economy.

#### **4.2.3 Research question 3: Micro-foundations of trust production**

Question 3: How do the social and institutional arrangements in the UK and Germany produce the forms of trust influencing the development of alternative lending channels?

Hypothesis 3: *Different social and institutional arrangements in each country provide the basis for producing different forms of trust relied on by alternative finance investors.*

The third research question investigates the social and institutional arrangements in each country that give rise to the micro-foundations of the trust forms identified in the second research question. The hypothesis for the third question proposes a social embeddedness model of trust production, in which forms of trust have micro-foundations within the social and institutional arrangements of an economy and which differ across economies. In this context, the social forces produced by an increase in immigration and urban migration in the US during the late 1800s, as described by Zucker, are an example of how social arrangements enable and inhibit the production of trust. She argues that cultural homogeneity is an antecedent for

characteristic-based trust, which was disrupted as social forces undermined the 'taken-for-granted' expectations of behaviour in interpersonal and inter-firm relations (Zucker, 1986:68). This dissertation follows Zucker's approach to identify variation in the social relationship between individuals and firms in the UK and Germany that influence the production of trust. The analysis examines one of the five institutional spheres which firms in an economy must engage with in order to solve their coordination problems. The analysis compares the *social relations of individuals and firms* within the vocational training and education system of each country as a micro-foundation for the production of trust.

This chapter provided an overview of the nested mixed methods research design used to analyse the lending practices in the mini-bond and P2B lending channels in the UK and Germany. It also summarised the primary and secondary data used in the analysis of each of the three research questions and the testing of the associated hypotheses. The following chapter outlines the findings of the analysis of the first research question by examining the development trajectories of the channels in each country, and the fit of these development paths with the propositions of the VoC model.





## Chapter 5: Development Trajectories of Alternative Lending and Varieties of Capitalism

This chapter addresses the first research question investigated in this dissertation: *How have the P2B and mini-bond channels developed in the UK and Germany since the crisis, and do their development trajectories fit with the propositions of the Varieties of Capitalism framework?* The chapter has three main sections. The first section discusses the development of the channels following the onset of the crisis by analysing the lending characteristics and the policy actions relevant to each channel. It discusses how their trajectory of development has been a catalyst for changing the lending practices of incumbent bank lenders in each country. The second section builds a prediction for the development of the channels through the lens of the Coordinated Market Economy (CME) and Liberal Market Economy (LMEs) dichotomy in the VoC framework, by estimating the level of institutional support for each type of lending in the two countries. The concluding section discusses the validity of the research question hypothesis: *the development trajectories of the channels differ between the countries, and these trajectories are congruent with the propositions of the VoC model.* The concluding section also discusses some limitations of the VoC framework as an explanatory model in the context of alternative lending developments.

### 5.1 Development of Mini-Bond and P2B Lending Following the Financial Crisis

#### 5.1.1 Comparison of Lending Characteristics by Channel

The financial crisis was the catalyst that increased both the supply and the demand for alternative forms of financing as banks reduced their lending to small and medium-sized businesses. On the supply side, investors in all developed economies suddenly faced a dramatic reduction in investment yields as governments reduced interest rates near zero or into negative territory, as they tried to stimulate economic growth following the crisis. This motivated many investors to start ‘chasing yield’ by investing in alternative asset classes capable of generating higher returns than traditional asset classes. In principle at least, there was new capacity available from investors to invest in P2B loans and mini-bonds.

The development pattern of P2B and mini-bond lending during the 2009 to 2015 period is represented by seven characteristics of the lending activity summarised in Table 5.1. Three of the characteristics provide insight into how *firms* engaged with the channels: (i) *cumulative lending volume* characteristic provides an estimate of market size; (ii) *average size of loan/bond* provides information about the type of firm using each form of funding; and the (iii) the *number of loans/bonds issued* indicates how prevalent the channels were as a form of funding for firms. The other four characteristics provide insight into how *investors* engaged with the channels: *mean # of investors per loan* and *mean investment amount* characteristics providing information about the investment style of the funders in each channel; the *mean*

*portfolio value* and *number of investments* characteristic indicates level of adoption of P2B loans and mini-bonds by individual investors as an investable asset class. These characteristics were analysed from several of the data sets: (i) the P2B transaction data collected from UK platforms; (ii) the transaction data collected in the online questionnaire completed by German and UK P2B platforms; (iii) the German mini-bond dataset supplied by Anleihen-Finder (A-F); and (iv) the hand-collected data set of UK mini-bond issues. Not all of the characteristics for both channels in both countries were contained in the data used in the analysis<sup>70</sup>.

Table 5.1: Lending Characteristics of the Channels (2009 – 2015)

Characteristics	UK		Germany		Total	
	P2B	Mini-bond	P2B	Mini-bond	P2B	Mini-bond
Cumulative lending volume (€ millions)	2,294.0	275.0	55.0	7,942.0	2,349.0	8,217.0
Mean size of loan/bond (€)	138,500	9,808,000	53,700	30,430,000	129,679	28,432,526
Total # of loans/bonds issued	17,092	28	1,022	261	18,114	289
Mean # investors per loan/bond	523	1,600	-	-	-	-
Mean investment amount	265	7,857	-	16,000	-	-
Mean portfolio value	8,115	-	6,471	-	-	-
Number of investors	282,700	35,000	8,500	-	291,200	-

The lending volume in both channels combined, totalling approximately €10.5 billion over the period, is relatively insignificant when compared to the volume of lending by banks during the period. Based on the bank lending data for Germany and the UK presented in Chapter 2, the combined channel volume represents well under 1% of lending to SMEs and mid-sized businesses. In relative lending volume, there was significantly more lending volume through the mini-bond channel by a factor of almost 4:1, despite fewer than 300 mini-bonds being issued versus more than 18,000 P2B loans<sup>71</sup>. The greater mini-bond lending volume is a result of much larger mini-bond issue size, averaging €28.4 million, which is approximately 200 times

<sup>70</sup> For example, the survey of P2B platforms in Germany and the UK included a question about the number of investors per loan, however not all platforms provided this data. Therefore, the ‘mean # of investors per loan’ characteristic could be calculated for P2B lending in the UK using the transaction data supplied by UK P2B platforms, but not for Germany since there was no transaction data collected from the German P2B platforms. Also, the ‘mean investment amount’ for mini-bond investing in Germany was calculated using the transaction data collected for unlisted minibond issues as there was no individual investment data available for listed mini-bonds.

<sup>71</sup> The data collected from the survey of P2B platforms in the UK contains fewer loans and investments than the transaction data supplied by UK P2B platforms because the latter includes some platforms that were excluded from the survey data because these platforms were not classified as P2B lenders when the survey data was collected on the basis that only a part of their lending activity involves P2B borrowers.

larger than the €129,679 average size of a P2B loan. This difference in size of loan suggests that the vast majority of P2B borrowers are 'micro' companies with less than €2 million in annual revenues, while a firm issuing the average size mini-bond of €28 million would need to have annual revenues of at least €30 million euros. This size range places mini-bond financing solidly in the large SME segment, which includes firms with annual revenues of €25 million to €50 million.

From the perspective of investors, there are some striking similarities and differences in the investment amounts in the channels across the two countries. The size of individual investors' P2B loan portfolios, at approximately €6,500 after stripping out investments by institutional investors<sup>72</sup>, is quite similar in the UK and Germany. This indicates the average P2B loan portfolio of these investors is well diversified with approximately 25 investments of €200 to €300 per investment<sup>73</sup>. These characteristics are very different for the mini-bond lending. Although data is not available in the AF dataset for the average investment amount, the average investment amount for the five datasets provided by German firms that issued mini-bonds suggests that the average investment amount per individual German mini-bond is approximately €16,000, which is more than twice the average amount invested in a portfolio of P2B loans. This difference in individual loan amount suggests different investment strategies by P2B and mini-bond investors. Mini-bond investors are more exposed to substantial financial loss in the event of a default relative to P2B investors with diversified loan portfolios. The analysis suggests that a similar number of investors participated in each channel during the sample period. Assuming the average investment amount of €16,000 for German mini-bonds, and adjusting for the investments made by institutional investors in the AF dataset, then the number of mini-bond investments exceeds 300,000, which is similar to the 282,700 individuals investing in P2B loans in the period.

In summary, the analysis of lending characteristics provides insight into the development patterns of the channel following the crisis. At an *aggregated level* of analysis, the large difference in lending volume between the two channels indicates that mini-bonds were the more established form of financing for firms during the period. The analysis also indicates that the channels are not substitutes for each other. The disparity in the average amount raised by P2B versus mini-bond fundraisings suggests each channel is serving a different segment of the market based on size of firm. The analysis of average investment amount and investor portfolios suggests that the channels appeal to investors with different investing styles, with

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<sup>72</sup> The mean portfolio size for UK P2B loans is overstated because the data provided by platforms included investments made by institutional investors in addition to individual investors. Institutional investment during the period is estimated at €600 million in approximately 4,500 loans. The mean size of P2B loan portfolios in the UK is reduced to approximately €6,500 after stripping out the loans funded by institutions, which is similar to the mean portfolio size of P2B loan portfolios in Germany.

<sup>73</sup> This calculation assumes the mean investment amount in Germany is the same as the UK, which is a reasonable assumption given the similar portfolio sizes.

P2B lending offering greater portfolio diversification. While there is some variation in development of the channels at an aggregated level of analysis, the more significant variation is revealed at the country level of analysis, and this is addressed in the next section.

### **5.1.2 Channel Development by Country**

Examining the development of the two channels on a country level reveals a reverse pattern of development for the channels in each country, with mini-bonds the more dominant form of financing in Germany and P2B lending the more dominant in the UK. Mini-bond issuance volume in Germany during the period was approximately €8.2 billion, which was about 30 times greater than mini-bond issuance of €275 million in the UK. P2B lending was the mirror opposite of the mini-bond pattern, with €2.4 billion of lending in the UK about 40 times larger than the €53.7 million of P2B lending in Germany. In both cases the large differences are a product of both the number of issuances and the average size of each loan or bond issued. There were 261 mini-bonds issued in Germany versus 28 in the UK with an average issue size of €30.4 million in the former and €9.8 million in the latter. More than 17,000 P2B loans were issued in the UK versus approximately 1,000 in Germany, with an average loan size of €129,679 versus €53,700 respectively. By some estimates, by 2015 P2B lending volume in the UK had grown to represent approximately 12% of lending by banks for loans of less than £1 million (Zhang et al, 2016)

Analysing the lending volume of the two channels *over time* reveals divergence in the *trajectories* of development that are not apparent in the analysis of aggregated data for the 6-year period. Figure 5.1 plots the annual issuance volume for the channels in the 2009 to 2015 period. Mini-bonds re-emerged in Germany as a preferred alternative to bank lending soon after the peak of the financial crisis had passed in late 2008 and early 2009, and issuance volume grew quickly to exceed €1.5 billion per year in the 2010 to 2013 period. P2B lending in Europe started in the UK in 2010, and growth in lending volume began to soon accelerate, with the result that UK P2B lending had overtaken German mini-bond lending by 2014. In contrast to the accelerating growth of UK P2B lending, mini-bond issuance volume in Germany started falling precipitously in 2013 as investors' interest in listed mini-bonds began to wane. This decline is discussed in more detail in the following section.

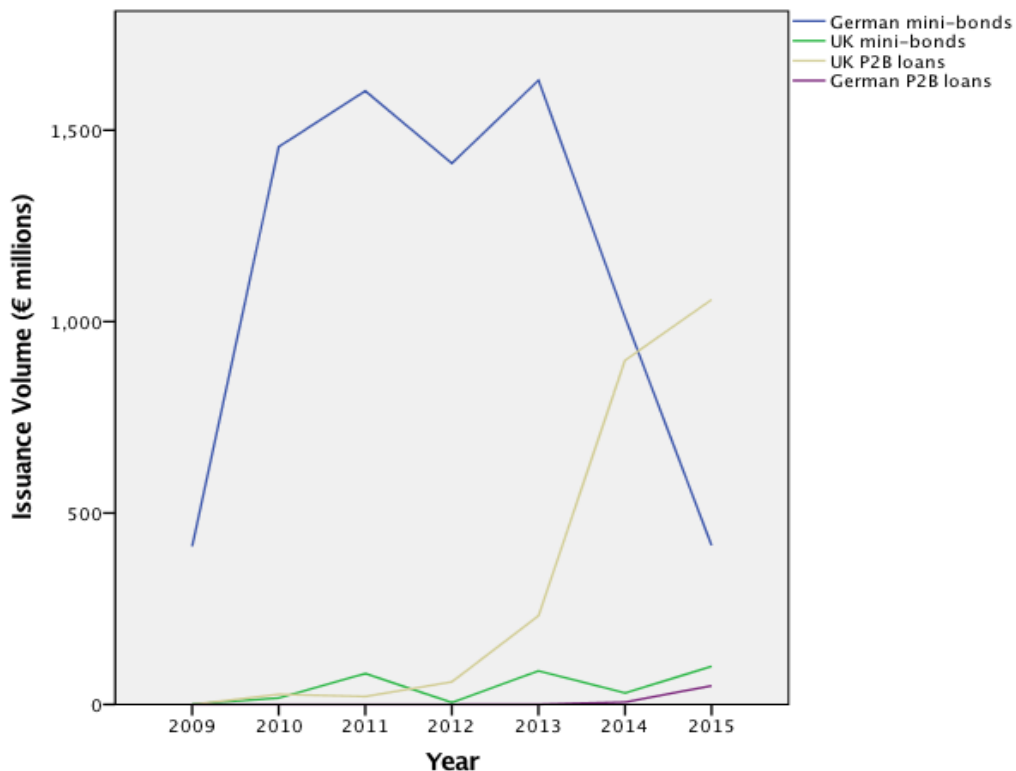


Figure 5.1: Estimated Annual Issuance Volume by Channel in Germany & UK (2009 – 2015)

The first mini-bond was issued in the UK in 2009, and P2B lending did not begin in Germany until 2013<sup>74</sup>. Neither UK mini-bonds nor German P2B lending had a ‘breakout’ in lending volume trend change over the period, and remained insignificant as financing channels in these markets relative to the dominant channels. These divergent patterns of channel development in each country are discussed in the following sections.

### 5.2.2.1 Channel Development in Germany

Figure 5.2 shows the percentage distribution of mini-bonds issued in German for number of mini-bonds issued and issuance volume by size range. The range of issue size is very broad, ranging from less than €5 million to €150 million, indicating that a wide range of firms from medium-sized SMEs to relatively large firms issued mini-bonds. However, over 60% of the bonds issued were in the €5 million to €50 million range. The discussion in Chapter 2 highlighted the variation in access to bank financing for firms following the financial crisis. This divergence in bank financing access by firm size is a factor explaining the dominance of mini-bond financing relative to P2B lending in the German market. It was the larger SMEs with revenues between €25 million and €50 million and mid-sized firms with revenues between €50 million and €500 million that faced the contraction in bank lending and were too small to access funding via capital markets.

<sup>74</sup> Chapter 2 discussed Peer-to-Peer (P2P) lending to consumers in Germany, which began in 2008 with the launch of the Auxmoney platform.

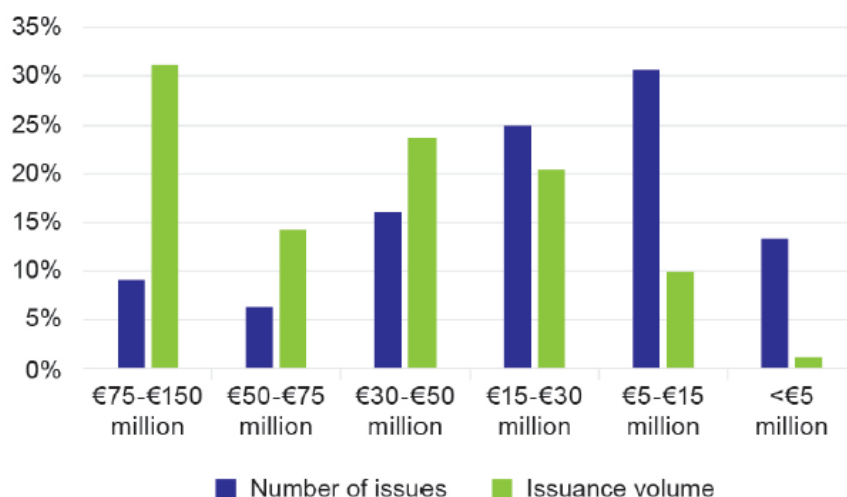


Figure 5.2: Size Distribution of German Mini-bond Issues<sup>75</sup> (% of Total)

Chapter 2 discussed the role of the German banks as intermediaries in the issuance of more than €5 billion of mezzanine loans<sup>76</sup> for approximately 700 large SMEs in the 2004 to 2007 period. These loans were bundled into securitisation vehicles<sup>77</sup>, and then the securities were sold on to institutional investors. The repayment of these loans became due in 2011 – 2014 when the securitised mezzanine loan market was shut, so mini-bond issue was one of the few alternative sources of financing available to the many firms that were unable to increase their borrowings from a bank lender. One of the mid-sized first firms to issue a mini-bond following the crisis was Klett, a family-owned company founded in 1897 and well known for producing the stationary used in the German public school system. In mid-2009, it borrowed €50,000,000 from individual investors, many of whom were teachers, and placed the bond directly with investors in a matter of weeks. The success of Klett motivated similar firms to issue mini-bonds, and the bonds became known as *Mittelstand bonds* given many of the issuers were family-owned businesses well-known in the communities in which they operated. The Mittelstand issuers were a mix of industrial products producers and consumer-facing businesses. such as Textilkontor Walter Seidensticker GmbH, a 93-year-old family-owned shirt manufacturer in Bielefeld with sales of €105 million. In 2011, Wiener Feinbäcker Heberer GmbH, a 120-year-old family-owned bakery chain, sold much of its €8.5 million bond to customers of the bakery and used part of the proceeds to repay bank debt. The Seidensticker

<sup>75</sup> There were 10 mini-bond issues great than €150 million during the period that have been excluded.

<sup>76</sup> Loans with repayment rights ranking below senior loans secured by a first charge on the assets of the borrower. Senior secured loans are the common form of loan made by banks.

<sup>77</sup> The process of securitisation consists of pooling assets in a special purpose vehicle (SPV), a form of corporate entity owning only financial assets; then vertically dividing the pool of assets into different tranches reflecting different levels of repayment risk; then selling financial securities associated with each tranche of risk to investors with different risk/return preferences. These were a common form of financing for US home mortgages prior to the financial crisis but their opaque characteristics made them unappealing to investors during the post crisis period.

CEO explained the rationale for his borrowing program: ‘We wanted to be independent from big banks after we realized that restrictions have clearly increased...we don't know when the next crisis will come’ (Lawton, 2012).

By 2011, the growth in privately-placed mini-bond issuance volume attracted the attention of the five regional financial exchanges in Germany. The exchange operators believed the relatively high interest rates offered by bonds issued by companies based in the region of the exchange, combined with the greater liquidity<sup>78</sup> offered by a listed versus unlisted bond, would appeal to the individuals and small institutional investors that form the core investor base for these small exchanges. The exchanges targeted larger mini-bond issuers with a set of listing requirements much less onerous than the main corporate bond segment, consisting principally of a €25 million minimum issue size and stipulating a requirement to retain a corporate finance advisor for the issuance and obtain a bond rating provided by one of the German rating agencies. Two exchanges quickly launched specialised listed Mittelstand bonds segments: The *Entry Standard* segment on the Frankfurt exchange and the *Bond-M* segment on the Stuttgart exchange. The other three exchanges quickly followed with their own Mittelstand bond segments, with Dusseldorf launching its *Mittelstandsmarkt*, Hamburg launching its *Mittelstandsboerse*, and Munich launching *m:access*. Table 5.2 describes the number of listed mini-bonds and issuance volume listed on the German regional exchanges between 2010 and 2015. A summary of the industry classifications for the listed issuances is provided in Table 5.3.

Table 5.2: Overview of A-F Listed and Unlisted German Mini-Bond Data Set

Volume in € millions	2010		2010		2011		2012		2013		2014		2015		Total	
	Vol	#	Vol	#	Vol	#	Vol	#	Vol	#	Vol	#	Vol	#	Vol	#
Listed (Exchange/Segments)																
Düsseldorf: Mittelstandsmarkt	-	-	-	-	300	9	138	5	45	2	8	1	-	-	491	17
Frankfurt/Entry Standard	-	-	25	1	295	8	713	18	763	23	210	8	25	1	2,031	59
Frankfurt/Prime Standard	-	-	-	-	100	1	175	2	200	2	480	4	-	-	955	9
Hamburg Mittelstandsboerse	-	-	-	-	75	2	-	-	-	-	-	-	-	-	75	2
München m:access	-	-	-	-	-	-	15	1	15	1	-	-	-	-	30	2
Stuttgart mbond	-	-	298	6	690	11	363	7	177	4	-	-	-	-	1,528	28
Total - Listed	-	-	323	7	1,460	31	1,404	33	1,200	32	698	13	25	1	5,110	117
Unlisted	413	16	1,134	28	142	33	9	20	430	24	315	12	391	11	2,834	144
Total Listed+Unlisted	413	16	1,457	35	1,602	64	1,413	53	1,630	56	1,012	25	416	12	7,943	261

<sup>78</sup> In reality, listed mini-bonds issues are still too small to provide investors with the liquidity needed to re-sell the bonds.



Table 5.3: Industry Composition of Listed German Issuers

Industry	2010	2011	2012	2013	2014	2015	Total
Construction	1	1	1	2			5
Finance, Insurance, Real Estate	3	11	8	10	7		39
Manufacturing	3	8	8	12	3	1	35
Mining				1			1
Retail Trade			2	1			3
Services		7	5	4	2		18
Transportation & Public Utilities		3	4	2			9
Wholesale Trade		1	5	1	1		8
<b>Total</b>	<b>7</b>	<b>31</b>	<b>33</b>	<b>33</b>	<b>13</b>	<b>1</b>	<b>118</b>

Source: Anleihen-Finder and Mietzner et al, (2017)

Listed mini-bond issuance exceeded €1 billion between 2011 and 2013, before dropping sharply in 2014 and effectively disappearing by 2015. The decline of issuance volume was due to a wave of defaults by mini-bond issuers; by mid 2014, 18 of 104 listed mini bonds issued had declared insolvency, which represented a default rate in excess of 20% of the value of the issued bonds (Mietzner et al., 2017). Many of the issuers had obtained credit ratings from regional ratings issuers as a condition of being listed, and the assigned ratings significantly underestimated the default risk of the rated issues. Most of the defaulting issuers were renewable energy companies rather than industrial Mittelstand firms, but the increase in defaults frightened investors and effectively dried up funding for issuers of all industry types. All of the exchanges, with the exception of Frankfurt, closed down their mini-bond segments during 2014.

### 5.1.2.2 Channel Development in the UK

Figure 5.3 shows the distribution of mini-bonds issued in the UK by issue size for number of issues and issue volume, based on the hand collected data set of 28 mini-bonds issued in the UK between 2009 and 2015 (see Appendix 10). The range of issue size is much narrower than the German issues, with no UK issue larger than £50 million, and heavily skewed towards small issues of less than £6 million in issue size.

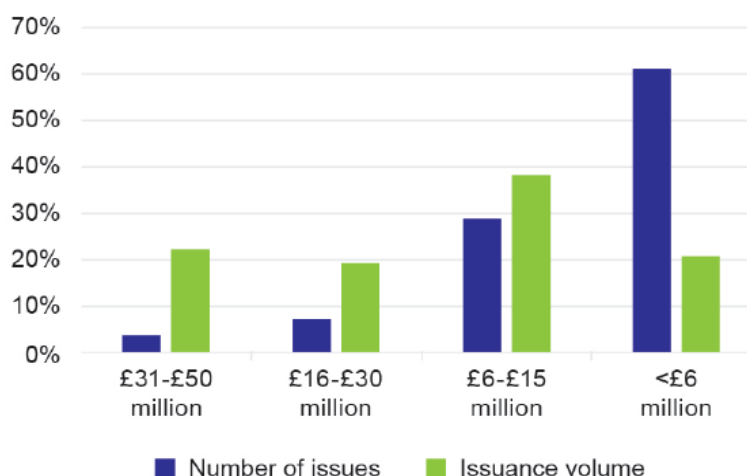


Figure 5.3: Size Distribution of UK Mini-Bond Issues (% of Total)

Early UK mini-bond issuers were inspired by the use of mini-bonds in Germany to finance locally-known brands or renewable energy projects. The first UK bond was placed in by a small brand of men's shaving products called 'King of Shaves', raising only £627,000 from 400 investors during the first six months of 2009. Two larger bond issues followed in 2010. Hotel Chocolat raised £4 million with its 'Chocolate Bond' to fund an expansion of the company's network of retail stores and its chocolate manufacturing operations. The 1,800 Chocolat Bond investors were solicited from its mailing list of 100,000 customers in its Chocolat Club customer loyalty programme. The annual interest payment of 7% over the 3-year term of the bond was paid entirely in chocolate rather than in cash, at the rate of six chocolate boxes per year for each £2,000 invested, and with the value of the chocolate fully taxed as interest income. Ecotricity, an electricity distributor producing 'green' energy placed its 'Ecobond' of €10 million to help finance an expansion of wind farm projects for its renewable energy business. The offering was over-subscribed, with Ecotricity's residential customers for its supply of electricity taking up more than 80% of the bond placement, partly motivated by receiving an additional 0.5% interest credit in the form of a discount on their annual electricity bill. Ecotricity issued another mini-bond in 2011 for £10 million with similar financial terms, which was again over-subscribed with strong demand coming from its residential electricity customers.

These early UK mini-bond issuances attracted the attention of the mainstream UK press looking for stories that played to the popular resentment against the big banks in the post crisis era. Headlines along the lines of 'Entrepreneurs turn to customers to finance growth' began to appear alongside 'UK lending to small business collapsed last year' in the mainstream press (Telegraph, 2010). The founders of the early bond issues gave frequent interviews that reinforced this sentiment. Ecotricity's founder and CEO, Dale Vince, talked about his motivations in launching the bond, stating: "We wanted to cut out the middle man...when we started, we wanted to cut out the middle man who wouldn't give us a good price for our electricity, and now we're doing the same with the financial sector" (Arnott, 2011). These UK bonds combining financial return with customer loyalty incentives were being sometimes referred to as 'loyalty bonds' (SyndicateRoom, 2017). Hotel Chocolat's chief executive, Angus Thirlwell, endorsed the view that mini-bonds were as much about customer engagement as financing: "This was prompted by our customers asking how they could get more involved with the company. We found a way of inviting them to invest in our development plans in exchange for a return paid in chocolate" (Hurley, 2010). Mini-bonds received a legitimising endorsement in early 2011 when John Lewis, one of the most trusted companies in the UK, issued a £50 million mini-bond available only to its employees and store credit card holders. The bond offered an annual interest rate of 4.5% plus an additional 2% which could be used as credit for purchases made at John Lewis stores. The issue was fully-placed in 8 days, despite a cap of

£10,000 on the amount that could be invested by a single investor.

While UK firms were intrigued with the idea of using mini-bonds as a form of financing, most saw its application limited to firms that were customer-facing and able to offer investors a blended return of financial and consumer loyalty premium. These differed from German issuances in several respects. This was a much narrower application than shown in the German market, where the return earned by investors excluded any consumer loyalty premium. This was reflected in the types of firms that have issued mini-bonds in the UK versus Germany. Unlike the UK, many of the German issuers were producers of industrial products having no connection to consumers.

The mini-bonds in the UK were not adopted by financial exchanges that provided the opportunity to expand the distribution of bonds to a larger base of investors. In Germany, the regional financial exchanges were quick to detect the broad appeal of mini-bonds to German investors and launch specialised mini-bond segments. However, the conditions exempting UK mini-bonds issues from the UK prospectus requirement included non-transferability<sup>79</sup>, meaning they could not be listed and traded on a regulated exchange. Despite the limitations imposed by the restriction on transferability, the largest UK equity crowdfunding platform, Crowdcube, attempted to develop a mini-bond fundraising platform alongside its equity platform, and offered mini-bonds issues on its platform in 2014 and 2015. Crowdcube managed to raise a total of less than £15 million<sup>80</sup> in mini-bond investment and some issues failed to attract sufficient investor interest, while during the same two year period it raised more than ten times that amount in the form of equity investment for firms listed on its platform (Crowdfund Insider, 2018). Crowdcube effectively abandoned its effort to build a mini-bond financing business after concluding that mini-bonds were not attractive enough for the platform's investor base relative to the equity investment opportunities (Williams, 2017).

### **5.1.3 Alternative Lending as a Source of Patient Capital**

Two of the transaction datasets collected, one mini-bond and one P2B, were analysed to investigate the potential for each channel to be a source of patient capital for the borrowing firms. For the German mini-bond channel, the longitudinal dataset of G5 investments between 2002 and 2013 reveals a high incidence of repeat lending by investors over time, suggesting that mini-bonds are a potential source of patient capital for firms. Approximately 9,300 investors made 22,482 investments in the 35 bonds issued during the 11-year period for a total value of €343 million. A summary of the investment transaction data is provided in Appendix 7. The summary statistics for the investments of one-time versus repeat investors in the G5 mini-bonds is provided in Table 5.4. The repeat investors accounted for 84% of the total investment

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<sup>79</sup> The bonds could not be transferred, exchanged, or redeemed prior to maturity.

<sup>80</sup> This amount included one issuer raising £10 million.

volume of €342.6 million during the period. Repeat investors made an average of 3.7 investments in bonds with an average duration of 3.3 years, meaning that these repeat investors, on average, supplied 12.2 years of funding to G5.

Table 5.4: Summary Statistics for One-Time vs Repeat Investments in G5 Bonds

	Minimum	Maximum	Sum	Mean
<b>Multiple investments by investor N=18,024</b>				
Macaulay duration of the bond issue (yrs)	1	5	57,370	3.3
Number of investments	2	20	18,024	3.7
Amount invested in bond (€)	1,000	700,000	287,097,000	15,926.8
<b>One investment by investor N=4,459</b>				
Macaulay duration of the bond issue (yrs)	1	5	14,355	3.3
Number of investments by investor	1	1	4,459	1.0
Amount invested in bond by investor (€)	1,000	300,000	55,532,000	12,462.3

Figure 5.4 illustrates the percentage of *repeat investors* and *first-time investors* investing in each of the 35 bonds issued by G5 during the 11-year period. The chart illustrates a general increase in the proportion of repeat investors over time. However, there are two additional observations that are relevant to the supply of patient capital. First, the proportion of first investments is highest (except for the first issue in the time period) in December 2005 when the firm listed its bonds for the first time. This suggests that a listing and the potential to sell the bond in the secondary listed market was attractive to some investors who would not have otherwise invested. The pattern of repeat investor increasing participation soon resumes in 2006. More importantly, the firm issued two bonds in the midst of the financial crisis, in December 2008 and October 2009. More than 90% of the investors participating in those bond issues were repeat investors, suggesting that a loyal base of investors was willing to continue funding G5 during a period of economic uncertainty when wholesale capital markets were shut to most borrowers.

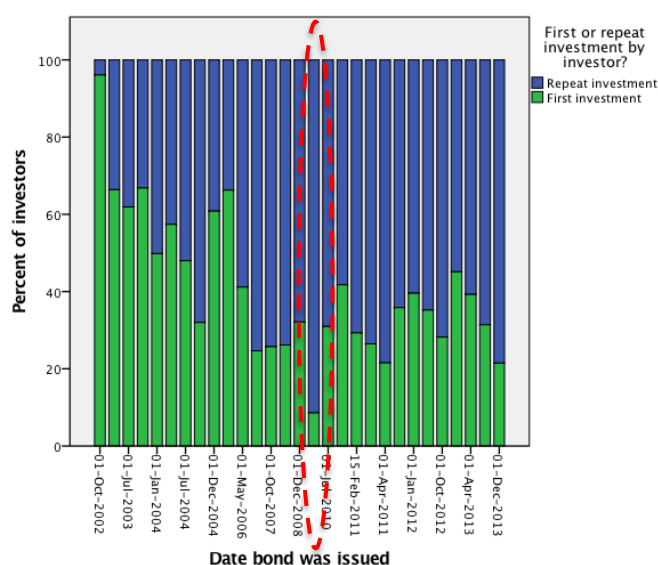


Figure 5.4: Participation of Repeat versus One-Time Investors in G5 Bond issues

The data collected in the UK did not include transaction or survey data from any repeat mini-bond issuers. Interviews with UK3 investors included a question about their willingness to reinvest in the event that UK3 issued another mini-bond and almost all of the investors interviewed stated they would reinvest and do so with a larger investment. Public and privately-reported information was collected about three of the twenty-eight UK mini-bond issuers that either issued a second mini-bond (Ecotricity and Hotel Chocolat) or offered their investors the opportunity to extend the maturity of a mini-bond as an alternative to repayment (Hotel Chocolat and Jockey Club). These issuers all reported high levels of repeat investment and maturity extensions which provides further evidence that mini-bonds are a potential source of patient capital. In the case of Ecotricity, senior management privately stated that more than 80% of the investors in EcoBond II were also investors in EcoBond I. The Jockey Club publicly reported that individual investors funding 96% of its 5-year £25 million 'Racing Bond' elected to extend the repayment date of the bond rather than being repaid their original investment.

The experience of Hotel Chocolat illustrates how mini-bonds can be used as a source of patient capital in the financing strategy of firms. In 2010, Hotel Chocolat raised £4 million via a mini-bond with a three-year maturity, and subsequently offered its 1,800 investors the opportunity to extend the maturity for another three years. It reported that 96% of the 1,800 investors elected to extend the maturity, which is notable because investors received interest payments in the form of (taxable) chocolate boxes rather than cash. In 2014, firm issued a second mini-bond which increased the total amount of mini-bond issuance outstanding to £7.3 million. The proceeds of the bonds were used to fund capital investment in manufacturing facilities and expanding its retail store network in the UK and internationally (Hotel Chocolat, 2014). The company's earnings (before interest, depreciation and amortisation) increased from £1.5 million in 2011 to £8.1million in 2015, and this growth enabled Hotel Chocolat to go public in 2016, raising £55 million on the London Stock Exchange. It repaid all outstanding bonds in 2018 from excess cash flow being generated by the company's operations, preferring to use its retained earnings for investment (Jackson & Ram, 2016).

In contrast to the findings of the mini-bond analysis, the analysis of P2B transaction data in the UK market reveals a relatively high level of repeat lending by the *platforms* but a much lower level repeat investing by P2B *investors* in the loans of repeat borrowers on the platform. The transaction data set contains 26,217 P2B loans made by the UK P2B platforms between 2010 and 2015 and 12,218 loans of these loans were selected for the analysis<sup>81</sup>. Summary statistics for the P2B loans made by the *platforms* are provided in Table 5.5. Loans made to repeat

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<sup>81</sup> There were three reasons for eliminating loans from the analysis. First, some of the loans made by the platforms could not be matched to the individual investors on the platform. Second, some reported loans were actually sub-parts of larger loans. Third, loans of less than 24 months were eliminated to more closely match the duration of the P2B loan maturities with mini-bonds.

borrowers accounted for 46% of all the loans made during the period<sup>82</sup>. There was little difference in the mean duration of the term of the loan, interest rate, and amount of the loan for the loans made to one-time and repeat borrowers. The mean interest rate of 9.5% is approximately 30% higher than the mean interest rate of the UK mini-bonds issued during the same period.

Table 5.5: Repeat versus One-time loans Made by P2B Platforms (2010 – 2015)

	# of Loans	% of Total N	Minimum	Maximum	Sum	Mean
<b>Loan to One-Time Borrower</b>						
Term of loan (months)	6,585	54%	24	60	-	49
Interest rate (%)	6,585	54%	-	18.30	-	9.64
Loan Amount (£)	6,585	54%	5,000	3,400,000	406,465,862	61,726
<b>Loan to Repeat Borrower</b>						
Term of loan (months)	5,633	46%	24	60	-	46
Interest rate (%)	5,633	46%	-	18.37	-	9.52
Loan Amount (£)	5,633	46%	5,000	1,000,000	333,427,080	59,192

The dataset containing the investments of individual P2B investors was analysed to identify the repeat investments of the *investors* in the loans of repeat borrowers. Table 5.6 presents the summary statistics of the analysis, which indicates that only 12% of loans representing 8% of loan value was made by investors in two or more loans to a repeat borrower. The analysis also shows significant skew in the distribution of individual investment amounts, which reflects the larger amounts funded by a relatively small number of institutional investors.

Table 5.6: Repeat versus One-time Investments Made by Investors in Loans of Same Repeat Borrower<sup>83</sup>

	# of Loans	% of Total N	Minimum	Maximum	Sum	Mean
<b>One-time investor in repeat borrower loans</b>						
Total amount invested (£)	4,583,024	88%	-	-	623,563,419	-
Mean of amounts Invested (£)	4,583,024	88%	81	2,453	-	524
Median of amounts invested (£)	4,583,024	88%	20	160	-	60
<b>Repeat investor in repeat borrower loans</b>						
Total amount invested (£)	630,385	12%	288,615	24,167,676	58,793,770	-
Mean of amounts Invested (£)	630,385	12%	75	1,006	-	303
Median of amounts invested (£)	630,385	12%	20	312	-	86

The smaller proportion of *repeat investors* funding repeat loans relative to the number of repeat loans funded by the *platform* can be attributed to the automated allocation system used by the platform operators to randomly allocate portions of loan investments to the investment portfolios on their platforms. The randomising nature of the allocation system creates incentives for platform operators to focus on short term returns in order to attract flows of investment funding, particularly from institutional investors which are a growing proportion of the investment volumes of the P2B platforms. The relevance of automated loan investment

<sup>82</sup> It's possible that some borrowers categorised as 'one-time' may be repeat borrowers beyond 2015 since the analysis defines 'repeat borrowers' as borrowers borrowing more than once in the 2010 to 2015 period.

<sup>83</sup> The second column of the table labelled '# of Loans' refers to the number of investments made by investors in the loans made by P2B platforms. In total, 5,213,409 investments funded the 12,218 P2B loans made to borrowers.

allocation functionality to the business models in the UK is discussed further in section 5.1.5 of this chapter.

The analysis of the mini-bond and P2B transaction data sets, along with the publicly-reported accounts of re-investment by UK mini-bond investors, suggests that mini-bonds are much more likely to be a potential source of patient capital for SMEs than P2B loans. Intermediation by P2B platforms appears to be a significant factor in de-coupling the relationship between the individual funders of P2B loans and the borrowers, which leaves firms' access to P2B funding vulnerable to shifting market conditions that patient capital flows are unaffected by.

#### **5.1.4 Policy Enactments**

Anger expressed by voters towards banks and other financial intermediaries for causing the crisis and then needing massive state support led to a demand for more bank regulation (Zingales, 2011) and, in some countries, shifted policy-making sentiment away from protecting incumbents and towards changing financial services through increased competition. At the same time, the policy and regulatory landscape in both countries following the financial crisis recognised the urgent need to stimulate growth in their respective economies. How this focus manifested itself in the implementation of policy and regulation regarding alternative lending channels was very different in Germany as compared with the UK. These differences had significant repercussions for the development of P2B and mini-bond lending, and how these alternative channels impacted the lending practices of incumbent banks.

##### **5.1.4.1 Policy Enactment in the U.K.**

The UK has been in the forefront of countries that view innovation within the banking system as a positive catalyst for stimulating economic growth, a perspective which may be influenced by the UK's historical reliance on financial services as a significant contributor of economic output. It enacted a number of material changes to policy and regulation following the crisis to bring this about through structural change in the banking system. In 2012, it adopted the model of Germany's KfW development bank in creating the British Business Bank (BBB), a new state-owned development bank with a mandate to serve the financing needs of small and mid-sized UK businesses. KfW has a programme of providing guarantees to banks lenders for loans made to firms deemed credit-worthy but lacking sufficient collateral to obtain a bank loan without the support provided by the guarantee<sup>84</sup>. The KfW guarantee provides banks with a higher recovery of the amount loaned to a borrower in the event of a default by the borrower, and so both increases the amount of lending and lowers the cost of loans made by banks. Unlike the KfW bank guarantee model, however, the BBB's aim was to be an additional system for funding firms by lending directly rather than via the banks. In April 2013, the BBB launched

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<sup>84</sup> Seventeen regional guarantee banks in Germany also provide credit guarantees supporting small business by granting loan guarantees to the firms' main banks backed by counter guarantees from the state. The guarantee banks and the state cover up to 80% of the risk and the borrowers' main banks (respectively investment firms) bear at least 20% of the risk (Hennecke, Neugerger, & Ulbricht, 2017).

its Investment Programme to invest £400 million alongside 'private sector investors' which included non-bank P2B lending channels. The initial P2B platforms receiving BBB co-investment funding were Funding Circle and MarketInvoice.

The launch of the BBB was followed by the creation of the Financial Conduct Authority (FCA) in 2013 as the UK's new financial services regulator. The FCA succeeded the Financial Services Authority (FSA) as the regulator. 'Promoting competition' was added to the FCA's operational objectives. The FCA has modified the regulatory framework to encourage new entrants providing services in competition with banks, for example, by authorising several new 'challenger banks' using digital platforms to accept deposits and provide loans. It has also created programmes to facilitate the innovation in the development of services using alternative channels not currently covered by existing regulation, such as alternative payment service providers and alternative lenders, and introduced access obligations<sup>85</sup> for incumbents aimed at levelling the playing field for these new entrants. In 2014, the FCA introduced bespoke regulation for several forms of crowdfunding, which imposed a relatively light regulatory burden on P2B lending platforms in recognition that this activity differs materially from traditional banking.<sup>86</sup> Policy support for financial services was explicitly stated in a report published by the UK Government Office for Science titled *FinTech Futures*:

*'The Government's stated ambition is for the UK to cement its world-leading position in developing FinTech, and to become a global hub for financial innovation. To succeed, it will be necessary to foster the best investment environment, the right tax system, the appropriate regulatory framework and the best infrastructure for FinTech companies to flourish within the UK.'*

FinTech Futures, March 2015

#### **5.1.4.2 Policy Enactment in Germany**

Policy actions in Germany designed to stimulate economic growth avoided tinkering with any innovation in the banking system that changed the status quo of how it functioned in providing loans to small businesses. Policy initiatives were aimed at making more funding available to Mittelstand firms, which was consistent with the long-held view of German policy makers that the Mittelstand was the engine of the German economy and its source of innovation (Bank, 2013). In 2009, the federal government announced a €50 billion stimulus programme that channeled funding to the Mittelstand via the loan guarantee programme provided by KfW to the country's banks. In effect, the stimulus programme pumped new funding through the

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<sup>85</sup> Sharing of account info, access to BACS API payment rails.

<sup>86</sup> P2B lending platforms neither accept deposits, nor do they engage in 'liquidity transformation', which involves making a loan for a longer maturity than the maturity of the funding used to make the loan.



existing distribution system of KfW and the banks, and maintained the status quo of lending to firms within the banking system.

The status quo regarding the banking system was also maintained from a regulatory perspective. Regulation regarding the prospectus requirements for mini-bond lending predated the financial crisis, and there was no change in relevant legislation post the crisis. The changes to regulation, or lack thereof, had much more impact on the development of P2B lending. No new regulation was introduced to cover crowdfunding until 2015, and this legislation was primarily designed to cover equity crowdfunding rather than lending activities. The stance of the BaFin was that entities soliciting, arranging and granting loans must have a banking licence and be regulated as credit institutions, including lending platforms arranging loans funded by groups of investors. Statements by the Bundesbank, the German central bank, about FinTech were the opposite in tone to those of UK policy makers, and have been consistent in expressing resistance to introducing regulatory changes designed to accommodate change within the banking system:

*'There is no regulatory justification for systematically giving preference to new technologies. On the contrary, I am of the firm belief that we require a system of regulation that treats technologies neutrally. A special regulatory treatment of fintech companies is therefore neither desirable nor legally compliant.'*

Andreas Dombret, Member of the Executive Board of Deutsche Bundesbank, 2016

The differences in the level of policy support for P2B lending are reflected in the perceptions of the platform operators in the two countries regarding the adequacy of their respective regulatory environment. The questionnaire distributed to German and UK P2B platform operators by the Cambridge Centre for Alternative Finance in 2015 survey included the following question:

*Based on the type of alternative finance your platform operates, what are your perceptions of the existing national regulation?*

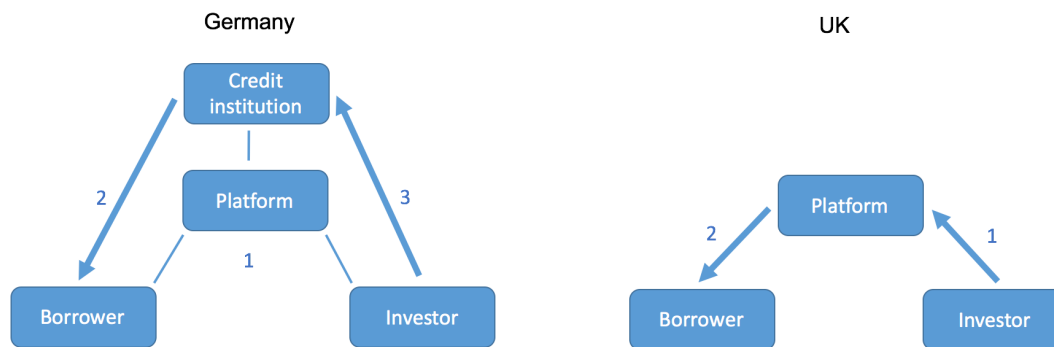
Two-thirds of the German platforms perceived the existing regulatory environment for their activity to be *excessive and too strict*, and the remaining one-third perceived it to be *adequate and appropriate*. These perceptions of the German regulatory environment are in sharp contrast to the sentiment of the UK platforms, 100% of which perceived the UK regulatory environment to be *adequate and appropriate*.

### **5.1.5 Response of Incumbent Actors in the Financial System**

The variation in the development trajectories of the two channels has produced different responses from the incumbent actors in the banking system of each country. Mini-bonds are a benign development from the banks' perspective and, if anything, benefited lenders by increasing the assets their borrowers could offer as loan collateral and thereby increase the

recovery of loan principle in the event of default. The other actors benefiting from mini-bond development are small advisory firms which are retained to engage in the development of the information and marketing activities associated with mini-bond issuance. P2B lending is a much more disruptive threat to traditional lending practices and therefore has elicited a stronger response from the incumbent banks. P2B lending is a direct substitute for bank lending, and leverages rapidly-advancing technological developments to reduce the barriers to entry produced by the operating scale and information advantages that have historically protected the market position of banks. P2B platforms operators are more agile than banks hampered by outdated and inefficient legacy IT systems, and better able to respond to the changing preferences of borrowers as social and commercial engagement migrates online.

In the face of these forces the regulatory environment is a critically important variable in determining the level of threat that P2B lending poses to incumbent bank lending practices. There are stark differences in the regulatory frameworks for P2B lending in the UK and Germany, beginning with the definition of what this activity entails and what type of party qualifies as a lender in the view of each regulator. In the UK, the FCA refers to P2B lending as a 'loan-based crowdfunding' activity 'covering a number of different models involving the platforms *facilitating* loans from *individual investors* to businesses (citation). Section 32 (1) of the German Banking Act (*Kreditwesengesetz – KWG*) refers to P2B lending as 'crowdlending', and defines it as: 'the *brokering* of a loan over an Internet services platform between a customer (the borrower) and a *credit institution* (the lender)...' (BaFin, 2017). In Germany, the P2B platforms have been relatively more constrained than UK platforms in lending activities, with a less competitive offering because the loans they originate must be funded by an incumbent bank. The fee charged by the German bank lender increases the cost of making a loan and the lending bank gains knowledge about the borrower which it may not have otherwise obtained. In principle, the German platforms could seek to be licenced as credit institutions, but as a practical matter this was not viable for start-up firms with limited resources to manage the same regulatory compliance obligations the country's banks are subject to. The UK platforms are able to operate with complete autonomy from the incumbent banks, because any entity can make a loan without being regulated providing they are lending their own money. Figure 5.5 illustrates entrenched position of the banks in the business model of the German platforms relative to the UK platforms.



Step 1: Would-be borrowers place their loan requests on a platform for selection by investors.

Step 2: If there are enough investors, the platform brokers a loan agreement between an investor (which must be a credit institution in Germany) and the borrower.

Step 3: In Germany (only), the credit institution then resells the repayment claim arising from the loan agreement in the form of partial claims to individual investors through agreements on the purchase of receivables, and transfers the receivables.

Figure 5.5: Business Models of German versus UK Platforms

For the German banks, the disruptive threat of P2B lending has been mitigated by the business model that German P2B lenders have had to adopt. The banks willing to act as lenders have charged German P2B investors  $\frac{1}{4}\%$  to  $\frac{1}{2}\%$  of the loan value as a fee, which was a profitable activity given a bank only owns a loan for a few minutes before reselling it to the P2B investors (step 3 in Table 5.5). The fee has also pushed up the cost of a P2B loan for the borrowers, making these loans less competitive with traditional bank loans. In effect, the threat posed by the German platforms was limited to being more efficient originators of loans, with the severity of the threat dependant on their ability to originate loans more efficiently than the banks. This is a tall order in Germany, given the strong relationship between Mittelstand firms and Hausbank lenders. In the UK, the broader business model meant that P2B lenders were in direct competition with banks and were motivated to innovate not only in loan origination, but also in credit analytics and loan monitoring. The UK platforms have also been able to play an intermediation role that is more akin to an asset manager, offering their investors the option of having the platform assemble their loan investment portfolio with loans selected by the platform. This ‘auto-select’ tool has become an increasingly important feature of UK platform business models, and by 2015 the majority of new P2B investors on the largest UK P2B platform were electing to delegate the selection of their loan portfolio rather than selecting their own loans (Hurst, 2017).

The response of incumbent bank lenders in each country reflects these differences in the level of business model innovation. In both markets, banks have explored originating loans via P2B platforms in customer segments that are underserved by banks because high origination costs make these segments unprofitable, such as making small loans to very small businesses (Atkinson, 2013). Commerzbank, second largest of the four commercial banks in Germany,

launched its own P2B platform called Main Funders ostensibly to compete with 3<sup>rd</sup> party P2B platforms. The platform matches Commerzbank clients seeking loans with institutional investors that are also Commerzbank clients (Commerzbank, 2016). On closer examination, the Main Funders platform differs from 'mainstream' P2B lending in two important respects. First, it makes loans of €200,000 to €10,000,000, a size range which is larger than the loan amounts typically funded on P2B platforms. Second, the loans are unsecured, which means they are subordinated to the borrower's secured bank loan provided by Commerzbank. In many ways, the Main Funders platform is reconstituting the mezzanine loans of the 2003 – 2007 period, but matching borrowers directly with institutional investors via an online platform rather than via an intermediated securitisation sold in capital markets.

In the UK, the banks have gone beyond tactical collaborations serving unprofitable segments to more strategic collaborations targeting profitable segments which are more central to the banks' core business (Dunkley & Evans, 2015). UK banks have also been aggressively investing in and partnering with early-stage FinTech firms providing alternative approaches to credit analytics and monitoring systems for loans, in an effort to pro-actively become more efficient and prevent P2B lenders from gaining market share in profitable market segments. For example, Santander UK entered into an agreement with Kabbage, a US-based alternative lender to small businesses, to provide small SMEs with working capital funding between £500 and £100,000 using Kabbage's automated credit scoring and near real-time monitoring system (Santander Ventures, 2016). Providing working capital loans of this size using Santander's credit approval process takes between two and twelve weeks. Kabbage uses multiple external sources of data, including social media and data captured from online marketplaces. The collaboration with Kabbage was projected by Santander to reduce loan approval times from more than two weeks to a few minutes (Santander Ventures, 2016). Other UK banks, such as Metro Bank, have been collaborating with P2B platforms by investing their customer deposits in P2B loans (Dunkley & Evans, 2015).

## **5.2 The VoC Prediction for the Development of Mini-bond and P2B Lending**

This section of the chapter presents a prediction for the development of P2B and mini-bond lending derived from the propositions of the VoC framework, and discusses the fit of this prediction with the actual development of the channels in each country. The VoC framework identifies five institutional spheres in the economy that firms must engage with in order to advance their interests: industrial relations; the education and training system for workers; corporate governance (which includes the financial system); inter-firm relations; and employee relations. Two of these spheres, corporate governance and inter-firm relations, are of central importance to the financing of firms. The predicted response of firms to the post crisis contraction in bank lending is derived from the likely level of institutional support provided to

alternatives as posited by the VoC framework. The response of firms then uses these to derive a prediction for the development of the channels in each country.

The VoC framework was developed to understand how variation in institutions between economies can explain differences in economic outcomes, such as differences in economic performance or different capacities for adapting to institutional change. Firms are assumed to be the 'crucial actors' in an economy and are therefore at the centre of the VoC framework (Hall & Soskice, 2001:6). Firms engage with institutions by necessity to address the coordination problems they encounter in carrying on business, and are therefore seen to be key 'agents of adjustment' in the economy as they respond to shifts in the global competitive environment and changes brought about by technology. In the VoC literature the institutional environment influences *how* firms go about adjusting to change because firms are naturally inclined to engage in practices that have institutional support within their economies. Since the VoC literature posits that there are distinctly different institutional arrangements in CMEs versus LMEs, then the level of institutional support for P2B and mini-bond lending should differ in the two economies given the different characteristics of the two lending channels. These differences should produce different trajectories of development as firms seeking alternative sources to bank financing gravitate towards either P2B lending or mini-bonds financing. Evidence of this institutional support should also be reflected in the regulatory and state policy regime that the institutions relevant to the financing of firms are subject to.

The approach used in the analysis for building the prediction follows a similar analysis used by Hall and Soskice, the authors of the VoC framework, to predict variation in the response of CME-based and LME-based firms in their seminal introductory chapter of *Varieties of Capitalism: the Institutional Foundations of Comparative Advantage* (Hall & Soskice, 2001:16). Hall & Soskice cite a study comparing the response of UK and German exporters to a sudden change in exchange rates which increased the cost of their goods in foreign markets (Knetter, 1989). The UK firms tended to pass the cost along to maintain profitability, while German firms tended to maintain price in order to maintain market share. Hall and Soskice argue that this outcome fits with the predicted responses based on the variation in the corporate governance and industrial relations spheres in the two economies. In LMEs (the UK), access to capital is directly linked to profitability and firms can more easily dismiss workers to help offset the cost of a decline in volume. In CMEs (Germany), firms can sustain a decline because they can continue to access capital independent of periods of reduced profitability, and long-term employment strategies make lay-offs difficult. Knetter's findings suggest that firms facing challenges react differently, depending on the type of economy they are located in (Knetter, 1989). In VoC terms, the financial crisis was a shock that changed the availability of bank financing, and so firms had to respond by turning to alternative sources of funding. Which

alternative source they gravitated to is influenced by the amount of institutional support for a given source in that economy.

The case presented by Hall and Soskice is relatively simple, since firms faced a binary choice in how they could respond to the increase in the cost of their goods resulting from exchange rate movement, by either increasing or by maintaining the price. The VoC prediction of their behaviour is based on an analysis of the level of institutional support for each alternative action in their respective economies. The decision set available to firms deciding how to respond to a contraction in bank lending is more complex. In the first instance, firms must decide whether or not they should seek financing through *any* alternative lending channel. The institutional environment in an economy could be broadly hostile to any form of non-bank lending, which would suggest that firms in that economy are unlikely to pursue non-bank financing alternatives. In the event they deem there is sufficient institutional support for non-bank alternatives, they then need to decide *which* type of non-bank lending to pursue. The choices faced by firms are summarised in Table 5.7. There are four possible outcomes in each country, from a total of 8 possible outcomes. If there is weak institutional support for any form of non-bank lending then we would expect negligible development of either P2B or mini-bonds, and the incumbent bank lending channel would remain dominant and unchanged.

Table 5.7: Alternative Lending Choices for Firms

		Mini-Bond Lending	
		Weak Institutional Support	Strong Institutional Support
P2B Lending	Weak Institutional Support	Do not pursue either type	Pursue mini-bond lending
	Strong Institutional Support	Pursue P2B lending	Pursue mini-bond and/or P2B lending

At the opposite end of the spectrum, strong institutional support for all forms of non-bank lending will likely result in similarly strong trajectories of development for both P2B lending and mini-bonds, and be a catalyst for change within the incumbent banking system. If there is strong institutional support for only one of the alternative lending channels then we would expect to see divergence in the trajectory of development as firms adopt that form.

The predicted development of the lending channels, therefore, is based on a determination of the strength of institutional support for the channels in each country by applying the characteristics of CMEs and LMEs in the VoC framework. It considers four institutional variables influencing the level of support: (i) how firms in the economy engage with institutional

spheres; (ii) the comparative institutional advantage of the economy; (iii) the approach to economic policy-making; and (iv) the capacity for adapting to change.

### **5.2.1 Engagement with Institutions**

In the VoC corporate governance sphere, the financing of firms is characterised by a 'relational lending' versus 'market lending' dichotomy in CMEs and LMEs respectively. CME firms have access to 'patient capital' finance from bank lenders that is not tied to factors influenced by short term profitability, and thus their lending relationships should remain more stable than the lending relationships of firms in LMEs through an economic downturn. In the context of relational lending, there should be relatively little need for German firms to pursue non-bank sources of financing either during or following a financial crisis. In the event that CME firms are not supported by their bank lender, then it is plausible that their choice of non-bank sources will be consistent with 'pecking-order' theory and inter-firm relations would play a role in their preference of non-bank funding sources. Pecking order theory is well-developed in the finance literature to describe the capital structure of firms. It assumes a direct relationship between the cost of funding and the level of information asymmetry between the funder and the firm, such that the firm will prefer sources of funding facing the lowest level of information asymmetry (Myers & Majluf, 1984). In the VoC framework, CME firms are highly reliant on inter-firm collaborations in their business activities, and this collaborative behaviour should have a positive bearing on CME firms' access to finance relative to LME-based firms. Collaborators in a network are sources of reliable information about other firms in the network, and this private information can be used by both bank and non-bank actors to assess the financial strength of potential borrowers. Financially strong firms should be motivated to provide bi-lateral forms of non-bank financing to others in the network because collaborations including a high level of inter-dependence create vulnerabilities if a collaborator weakens financially, particularly if it is a supplier. This suggests firms in collaboration networks both the potential lenders and borrowers, are likely to prefer more private non-bank alternatives to either P2B or mini-bond lending.

In the event that a CME-based firm cannot access financing via a collaboration relationship, then German firms are more likely to raise funds via mini-bonds than P2B because the former is a complimentary form of finance which allows the borrower to maintain its relationship with its hausbank. Firms located in LMEs like the UK are more vulnerable to interruptions in the supply of credit, because of the strong link between current financial performance and access to finance. LME firms rely on market relations to solve coordination and there is less institutional support for non-market forms of coordination. In the case of financing for firms, this includes the use of public rather than private sources of information about firms by lenders. The intermediation services provided by P2B lending included screening loan applicants for creditworthiness which relies on information provided by 3<sup>rd</sup> party data sources, such as of

credit bureaus. The UK has a more developed ecosystem of commercial information providers than Germany, suggesting relatively strong institutional support within the financial system for P2B lending in UK.

### **5.2.2 Comparative Institutional Advantage**

In the VoC literature, the concept of comparative institutional advantage proposes that the institutional structure of an economy provides firms with advantages for engaging in specific types of activities because of institutional support for those activities, and the institutions relevant to the activities are not distributed evenly across countries. The VoC thesis highlights the impact of comparative advantage on firms' capacity for innovation. CMEs have comparative advantage in incremental innovation, supported by extensive collaboration and a more deliberative process which results in high quality production outputs. By contrast, LMEs' comparative advantage in radical innovation involves the development of major changes to processes or entirely new products that entail significant risk. The capacity for radical innovation is especially valuable in rapidly-changing and complex system-based products. In the context of alternative lending channels, mini-bonds are not innovative from a technological perspective, whereas the development of P2B lending is part of a broader, rapidly-changing 'FinTech' phenomenon which is a product of radical innovation. Advanced data analytics technologies are being applied by P2B platform operators to enhance the analysis of P2B borrower creditworthiness and the enhance the provision of advice and processes for P2B investors. An analysis of FinTech ecosystems found the UK had a FinTech talent pool almost five times larger than Germany, received almost 50% more investment in FinTech firms, and had more supportive regulation, government policies and taxation supporting FinTech firms (E&Y, 2016). This suggests that the UK's comparative advantage in radical innovation, particularly in technology-enabled financial services, provides greater institutional support for P2B lending.

### **5.2.3 Economic Policy-Making**

Economic policies in LMEs are aimed at increasing market competition, while policy-making in CMEs focuses more on increasing the capacities of actors for non-market coordination (Hall & Soskice, 2001:46). Therefore, economic policies will be effective only if they are *incentive compatible* with the existing coordinating capacities (Mitchell, Agle, & Wood, 2018). Given P2B lending is a substitute for bank lending, its development requires policy initiatives that challenge the incumbent system. Mini-bonds are a complement to bank lending and do not require initiatives to stimulate market competition. This suggests that there is likely to be higher institutional support for P2B lending in the UK than in Germany.



### 5.3 Institutional Change

The analysis indicates that the institutional change taking place in the practices of lending to SMEs is at an early stage of development in both Germany and the UK. VoC envisions institutional change in an economy occurring as a result of external shocks, which force firms to modify their practices as they seek to retain their comparative advantages, which can lead to changes to the institutions with which they interact. In that context, the financial crisis was a shock that affected the bank lending practices in both countries. However, it is unclear whether the alternatives that emerged following the crisis would be catalysts for processes producing permanent change preventing institutional practices reverting to the status quo that existed before the crisis. Streeck and Thelen's (2005) categorisation of change processes assumes a more gradual process of change and thereby provides a useful template for analysing institutional change produced by mini-bond and P2B lending.

In Germany, it does not appear that either mini-bond nor P2B lending has yet been a catalyst for changing the behaviour of banks lenders. In the case of P2B lending, the launch of the Main Funders lending platform by Commerzbank is indicative of a *layering* process which could ultimately crowd out the legacy lending practices over time. The likelihood of change actually occurring is highly questionable given the low level of P2B lending volume and the institutional support. Commerzbank appears to be approaching the Main Funders initiative as a complement to its existing activities, suggesting that as the host institution it is not playing the role of an institutional entrepreneur seeking to 'implement changes that diverge from existing institutions' (Battilana, Leca, & Boxenbaum, 2009:70). The financial exchanges were another candidate for the role of institutional entrepreneur with the introduction of a listed mini-bond segment on the regional financial exchanges in Germany. This was a potentially more potent catalyst for institutional change through *displacement* of bank lending via another financial institution. However, the high default rate of listed mini-bonds and the subsequent closure of these specialised segments has made it highly unlikely that incumbent bank lending practices will be displaced by financial exchanges in Germany. Notwithstanding the high level of defaults, it is difficult to envision a scenario in which the regional exchange operators seriously challenge the incumbent lending practices of the banks given both the exchanges and the local and regional banks are owned by the same regional governments. In the case of Germany, both the incumbent banks and the regional exchanges embody the *paradox of embeddedness*, which reflects the constraining influence of the structure in which an institutional entrepreneur is embedded in trying to bring about change from within incumbent institutions (Battilana, 2006).

In the UK, the limited growth of the mini-bond issuance volume has been inconsequential to incumbent institutional practices and has not instigated any institutional change. In contrast to Germany, the collaboration by incumbent bank lenders with P2B lending platforms for serving

distinct segments of SME borrowers suggests that institutional change through layering is a possibility. There are two other possibilities for P2B lending instigating institutional change over time through a process of displacement. First, institutional change in lending practices could come about as a result of P2B platforms obtain banking licences and thereby competing directly with banks on their own terms with their 'platform' lending model<sup>87</sup>. Second, P2B lenders with more 'asset management' business models could produce a similar effect in asset management if they were to become more sophisticated in their intermediation services for investors and become fully regulated as asset managers<sup>88</sup>. In any case, given the early stage of development of P2B lending it is likely there will be more than one form of institutional change process underway in the UK at different points in time. There is a strong case for the UK P2B platform operators playing the role of institutional entrepreneurs. These entrepreneurs have emerged from outside of the institutional practices they seek to disrupt and thus are unaffected by the influences constraining actors embedded in the incumbent system seeking to bring about change.

In the VoC approach, the capacity for change in the financial system is related to the level of institutional complementarity in the economy. A high level of complementarity will cause change to 'either ripple throughout the system, or will be rather marginal because the competitive advantages of being rooted in the existing system lead actors to resist more radical change' (Deeg, 2010:324). Actors in CME financial systems are presumed to be resistant to adopting change increasing non-bank funding because non-market coordination supports their competitive advantage, although this resistance has been starting to erode as it applies to large firms ((Deeg, 2010:324; Thomson, 2018). VoC scholars argue that Germany has been reluctant to accept deregulation of financial services proposed by the European Union because of its desire to retain the profitability of incumbent actors and preserve the 'capacities for network monitoring that sustain the terms on which domestic capital is available to firms' (Hall & Soskice, 2001:53).

Despite being in a nascent stage of development, the relative level of institutional change observed in Germany and the UK appear to be consistent with predictions of change based on the propositions of the VoC framework, despite these propositions not specifying the type of change likely to take place nor addressing the role played by institutional entrepreneurs in enacting change. The VoC approach indicates there will be stronger institutional support for P2B lending in the UK compared with Germany, and this should produce a more rapid pace of adoption and development of P2B lending in the former. It should also produce more change

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<sup>87</sup> In 2017, the largest P2P consumer lending platform in the UK, Zopa, announced that it intended to apply for a full banking licence.

<sup>88</sup> In 2015, the largest P2B platform in the UK, Funding Circle, launched a fund for investment in P2B loans originated on its platform. In early 2018, Funding Circle also announced its intention to undertake an Initial Public Offering of its shares (IPO) expected to value the company at more than £1.5 billion.

to legacy lending practices within the incumbent UK banking system because P2B lending is a direct substitute for bank lending. The VoC analysis indicates there will be more institutional support for mini-bond lending in Germany than the UK, which should result in greater adoption in the former than the latter. In contrast to the substitutive nature of P2B lending, the complementarity of mini-bond lending to bank lending means its adoption is less likely to lead to change in the incumbent bank lending practices in Germany.

## **5.4 Conclusion**

### **5.4.1 Comparison of Predicted versus Observed Development**

The development of P2B and mini-bond lending since the financial crisis generally fits the trajectories predicted by the VoC framework. While both types of lending are present in both economies, the significant differences in the observed lending volume for each channel are consistent with the predicted dominance of P2B lending in the UK and mini-bond lending in Germany. The direct lender-borrower relationship in mini-bond lending is more characteristic of relational bank lending in CMEs, while the intermediation of online platforms in the P2B channel is more characteristic of the market-based lending associated with LMEs. Market-based P2B lending characteristics are also stronger in the UK than in Germany, influenced by the impact of the regulatory environment on the business models for P2B lending in each country.

Comparative advantage of LMEs versus CMEs is reflected in the divergent development of the two channels. In the UK, P2B lending platforms gain comparative advantage by being concentrated in London, where they can easily access risk capital and large pools of workers with finance and technology expertise. Banking and finance activity is less geographically concentrated in Germany, and most of the P2B platform operators are based outside of Frankfurt, the country's main financial centre. In Germany, this regional distribution of financial institutions has been a positive factor supporting the development of the mini-bond market, as the six regional financial exchanges were quick to introduce listing segments for mini-bonds issued by firms within their respective regions that broadened the base of potential investors.

The analysis of the data for repeat borrowing confirms the VoC prediction that mini-bonds lending is a source of patient capital. The analysis indicates that P2B lending is unlikely to be a source of patient capital because the intermediation strengthens the link between a firm's current financial performance and access to P2B funding. The power of P2B platforms to determine whether a prospective P2B borrower obtains a loan has increased as P2B investors have increasingly elected to have the platform select loan investments on their behalf. This increases the relational distance between investors and borrowers, and increases the link between borrowers' financial performance and access to finance because the platforms'

lending decisions are influenced by the need to compete for investors on the basis of the financial return they can produce versus other investment alternatives.

The approach to policy and regulation also fits the VoC prediction. Policy initiatives and regulatory change in the UK have been strongly supportive of P2B lending, underpinned by a desire to increase market-based competition in financial services. At the same time, the regulatory framework for mini-bonds in the UK is much more restrictive than the comparable mini-bond legislation in Germany, where platforms have had to adopt business models which have reinforced the incumbent position of banks within the financial system.

#### **5.4.2 Limitations of the VoC Framework as an Explanatory Model**

The trajectories of mini-bond and P2B lending development generally fit the VoC prediction, but the analysis also reveals limitations of VoC as an explanatory model. The framework was originally conceived to explain institutional similarities and differences among the developed economies and predict how these institutional arrangements influence policy decisions, firm behaviour, economic performance and institutional change (Hall & Soskice, 2001:1). The propositions regarding institutional arrangements of CMEs and LMEs provided the basis for predicting an outcome, in this case the development of the two lending channels. However, the VoC framework does not provide an explanation about *why* the institutions in each economy came to be in the first place. As a result, the VoC model does not provide the explanatory insight needed to intervene in order to change outcomes. Applying the VoC thesis to explaining the development of mini-bond and P2B lending falls short in three areas.

First, the observed development of alternative financing channels indicates that the 'bank versus market' dichotomy used to describe the financing of firms in CMEs and LMEs may be too superficial to capture the variation of lending practices within each economy. The explanatory power of the model is weakened by failing to account for the presence of mini-bond and P2P lending in *both* the UK and Germany, despite these two countries being frequently cited by VoC analysts as the ideal type representations of LME and CME financial systems. The macro-level analysis at the level of institutional arrangements implies that firms have less latitude than they are predicted to have in pursuing alternatives to those prescribed by the institutional arrangements in which they are embedded.

Second, VoC provides little insight into how bank lending practices will change as a result of the development of alternative lending channels. VoC assumes institutional change is a result of firms adjusting to an exogenous shock, and seeking to re-establish equilibria that sustain the comparative advantage existing prior to the shock. This is an overly-functionalist perspective on the sources and process of institutional change, and underestimates the complex interaction among multiple contemporaneous factors. While the financial crisis was an exogenous shock, there were other forces of change to the banking system that were

*endogenous* and unfolded more gradually following the financial crisis. In the UK, for example, banks were engaged in series of dubious business practices, from rigging Libor rates and front-running foreign exchange trades to mercenary business lending practices, which produced a constant drip feeding of negative news stories until well after the peak of the crisis had passed. This produced very negative public sentiment against banks and fuelled a broader social movement advocating greater economic equality which, in turn, influenced the sentiment among policy makers enacting changes in financial services regulation that began forcing change on banks. In parallel, the FinTech movement emerged in Germany, the UK and many other countries with a mission to 'democratise finance' by exploiting advancements in data analytics to disintermediate banks in areas of their business where they were popularly perceived to be 'ripping people off' (Hinrikus, 2017). The complexity of the variables producing change in incumbent lending practices may be better conceptualised as *nested change*, with banks being forced to respond to developments in multiple, layered *fields* (N. Fligstein, 2001), only one of which is occupied by alternative lenders.

Finally, the VoC framework falls short in explaining the behaviour of the investors in alternative lending. The firm-centric perspective of the VoC approach predicts the motivation of firms to solve 'coordination problems' by seeking mini-bonds or P2B loans as an alternative to bank loans, and which form of lending should be dominant in each country. Firms adopting new finance practices are the *institutional entrepreneurs* in this conceptualisation, playing the role of the adopters of new finance practices and catalysing change by abandoning incumbent practices. However, the willingness of the firms to seek non-bank financing is a necessary *but not sufficient* condition for change, because their ability to obtain alternative funding is dependent on the willingness of investors to supply the funding. The willingness of UK investors to supply P2B loans via intermediated online platforms is consistent with the VoC perspective regarding the role of public information sources and market-based relations in the financing of LME-based firms. VoC offers less insight in explaining why individuals should be motivated to invest in mini-bonds. If bank lending in Germany is dependent on private sources of information and network monitoring mechanisms, then why did individual investors lend if they cannot access equivalent sources of information and monitoring? This is an intriguing question, particularly given the extraordinarily high default rate for mini-bonds listed on the regional financial exchanges in Germany, which suggests that investors did not accurately assess the default risk of the bonds they were buying. VoC may be more useful as a *predictive* model rather than an *explanatory* model, at least in the case of comparing cross-national finance practices, given other mechanisms influencing the behaviour of economic actors. The next chapter explores a complementary explanation for the development of alternative lending, by investigating trust as a determinant in the willingness of investors to supply the capital needed to fund mini-bond and P2B loans.

## Chapter 6: The Role of Trust in Alternative Lending Practices

The previous chapter discussed the development of P2B and mini-bond lending channels in Germany and the UK in the period from 2009 to 2015 following the global financial crisis. The empirical analysis revealed inverse patterns of growth for the two lending channels, with P2B lending volume more than 8 times greater than mini-bond lending in the UK and mini-bond lending volume approximately 144 times greater than P2B lending in Germany. More than 97% of the combined mini-bond lending volume took place in Germany while more than 98% of the combined P2B lending volume took place in the UK. These findings are consistent with the Coordinated Market Economy (CME) and Liberal Market Economy (LME) proposition in the Varieties of Capitalism framework, and the evidence of institutional arrangements supporting the development of the dominant lending channel in each country is also consistent with VOC theoretical propositions. This chapter extends the empirical analysis of collected data to investigate the *trust* relationships of borrowers and investors as a factor influencing the development of the two lending channels and discusses the social arrangements particular to each economy that influence the formation of this trust.

This chapter considers the influence of trust as a supply-side variable, by investigating the willingness of investors to supply funding to prospective borrowers in each channel. This does not imply that the variation in the growth of the P2B channel discussed in Chapter 5 has been influenced solely by supply-side factors. Chapter 2 described how the contraction in lending by the incumbent banks during the financial crisis impacted SMEs and their access to funding differently. Many small SMEs in Germany, with borrowing requirements of less than €5 million, were largely unaffected by the contraction in bank lending, whereas most SME in the UK and many larger SMEs in Germany were more severely impacted and therefore had greater demand for alternative sources of lending. Therefore, the supply side analysis in this chapter only focuses on P2B lending in the UK market on a stand-alone basis and comparatively analyses mini-bond lending in Germany versus the UK.

This chapter is divided into three sections. The first two sections address the second research question posed in this dissertation: *What has been the role of trust in the development paths of P2B and mini-bond lending in the two countries?* The hypothesis asserts that P2B and mini-bond investors rely on different forms of trust for each type of lending, and the presence and strength of these forms varies between the two economies. The first section of the chapter discusses the trust forms, and the strength of these forms, that are present in the investor-borrower relationships within each lending channel. The second section discusses how the trust forms observed in the mini-bond channel vary in presence and strength *between* the two countries. The third section extends the analysis of cross-national variation in trust forms to address the third research question: *How do the social and institutional arrangements in the UK and Germany produce the forms of trust influencing the development of alternative lending*

*channels?* Again, the analysis is comparative and focuses on the development of the mini-bond lending channel. The hypothesis is that different social arrangements in each country are micro-foundations for the production of trust forms, and differences in these arrangements produces variation in the dominant forms of trust relied on by investors in the two countries. This dissertation argues that differences in the education and training systems has contributed to differences between Germany and the UK in the social distance between firms and the communities in which they are embedded. The third section of the chapter also discusses categorisation as a micro-foundation for the production of trust.

### **6.1 Forms of Trust Present in P2B and Mini-bond Lending**

What role has trust played in the development paths of P2B and mini-bond lending in the two countries? The hypothesis proposes that the individuals investing in the loans provided to the borrowers in each lending channel rely on different forms of trust to overcome the information asymmetry problem which exposes these lenders to adverse selection risk. The analysis uses the typology of three trust forms proposed by Zucker to test the hypothesis: process-based, characteristic-based, and institutional-based trust. Given the methodological challenges of directly observing trust discussed in Chapter 4, the analysis also follows Zucker's approach for indirectly identifying the presence of these forms of trust by measuring indicators that signal their presence (Zucker, 1986). The relative *strength* of each form of trust is measured using dimensions proposed by Stolowy et al. (Stolowy et al., 2014:358).

The analysis of trust presented in this chapter focuses on the trust forms relevant to individual investors. Individuals rather than institutions were the dominant source of funding for both lending channels in the 2010 to 2015 period, with individuals accounting for more than 70% of P2B lending volume and more than 90% of mini-bond lending respectively. The proportion of institutional investor participation increased over the period as lending volumes in each channel grew large enough to satisfy the size requirements of these investors<sup>89</sup>. However, there is a strong argument that the investment opportunity would not have been created for institutions had it not been for the earlier participation of individual investors. Therefore, the trust forms relied on by individual investors were of critical importance in the development of the channels because individual investors had to contend with a higher level of adverse selection risk in the early years of P2B and mini-bond lending when there was little accumulated repayment experience with the borrowers in either channel. In the analysis which follows, therefore, the borrower is the *object of trust* and referred to as the *trustee* in the lender-borrower trust relationship, and the individual lenders are referred to as the *trustors*.

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<sup>89</sup> This increasing institutional investor participation over time is important to note, as it suggests that institutional funding is likely to become the dominant form of funding in both lending channels at some point.

### 6.1.1 Forms of Trust Present in Mini-bond Lending

Summary socio-demographic statistics for the mini-bond investors that completed the questionnaire distributed by the three German and UK mini-bond issuers is provided in Appendix 9. The investors in all three mini-bond offerings are broadly similar in average age (55 to 64) and gender (80% to 86% male). However, other characteristics in the profile of the three investor groups vary significantly. The investors in Germany have lived at their current address for an average of 28.3 years, which is more than 8 years longer than the UK investors. More than half of the G5 and UK3 investors are retired compared with less than one-third of the G4 investors, which indicates that the G4 investors are the youngest on average amongst the three investor groups. The most significant difference between the investor groups is their level of educational attainment, with 87% of UK investors having attended university versus 57% and 43% of the G4 and G5 investors. The average level of educational attainment of the investors in both countries is higher than their respective national averages for tertiary education, which is approximately 38% and 26% for the 55 to 64 year old cohort in the UK and Germany respectively (OECD, 2017).

#### 6.1.1.1 Presence of Process-based Trust

Process-based trust is a form of trust produced by experience of prior exchange, with information about a 'record of prior exchange' obtained by a trustee through either *direct* experience or through the *second-hand* experience of others (Zucker, 1986:60). Two variables indicating the presence of process-based trust are considered in the analysis. The first variable is *product usage*, and reflects an investor's direct experience with the borrower, specifically her use of a product or service produced by the borrower prior to investing in the loan. The second variable indicating the presence of process-based trust is *reputation*, which reflects second-hand information an investor has acquired from a 3<sup>rd</sup> party having direct experience with the borrower.

#### Product Usage as a Trust Indicator

The validity of product usage as an indicator of process-based trust is supported by literature studying the influence of affect heuristics<sup>90</sup> on investment decisions discussed in the review of trust literature in Chapter 3. Characteristics reflecting the *strength* of process-based trust include: (i) the frequency with which the product or service has been used by the investor; and (ii) the duration, or length of time, the investor has been using the product or service.

The questionnaire distributed to mini-bond investors and interviews with mini-bond investors included questions about the investors' use of products or services produced by the borrowing

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<sup>90</sup> Also referred to as affect impressions.



firm<sup>91</sup>. Figures on product usage by the mini-bond investors are provided in Table 6.1. Only nine of the 621 German investors answering this question indicated they used the product of the mini-bond issuer versus 84% of the individuals investing in the UK3 mini-bond. These response levels reflect the different business activities of the issuers, with G5 producing industrial chemicals products, G4 producing renewable energy and UK3 providing consumer leisure services and entertainment. The strength of the product usage indicator measured by the frequency and use is only relevant to the UK3 investors. The mean 'frequency of use' is in the 'once or twice per year' range, which could be considered relatively infrequent. However, the UK3 investors have, on average, been consuming the UK3 services for more than 5 years, suggesting this experience is likely a relatively strong source of process-based trust. While UK1 did not participate in the survey of mini-bond investors, the transaction data it provided included information indicating that only 9% of its investors were registered as customers prior to the mini-bond issue. UK1 saw its issuance of its mini-bond as part of its overall marketing efforts aimed to attract new customers as well as obtain the funding it needed.

Table 6.1: Use of borrower's Product or Service

	Mini-bond Issuer								
	G5-Germany			G4-Germany			UK3-UK		
	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent
<b>Use issuer's products</b>									
Yes	9	2.1	2.1	-	-	-	230	84.2	84.2
No	418	97.9	100.0	194	100.0	100.0	43	15.8	100.0
Total	427	100.0		194	100.0		273	100.0	
Missing	9			-			3		
Total	436			194			276		
<b>Frequency of use</b>									
Every day	4	0.9	0.9	-	-	-	1	0.4	0.4
Once or twice per week	1	0.2	1.1	-	-	-	9	3.3	3.6
Once or twice per month	2	0.5	1.6	-	-	-	85	31.0	34.7
Once or twice per year	6	1.4	3.0	-	-	-	137	50.0	84.7
Not applicable	423	97.0	100.0	194	100.0		42	15.3	100.0
Total	436	100.0		194	-	-	274	100.0	
Missing	-			-			2		
Total	436			194			276		
<b>Duration of usage</b>									
Less than 1 year	3	0.7	0.7	-	-	-	15	5.5	5.5
Between 1 and 2 years	3	0.7	1.4	-	-	-	19	6.9	12.4
Between 2 and 5 years	2	0.5	1.8	-	-	-	21	7.6	20.0
More than 5 years	7	1.6	3.4	-	-	-	178	64.7	84.7
Not applicable	421	96.6	100.0	194	100.0		42	15.3	100.0
Total	436	100.0		194	-	-	275	100.0	
Missing	-			-			1		
Total	436			194			276		

The positive influence of investors' affinity for the product produced by a mini-bond issuer is supported by the analysis of mini-bond investor survey data. The questionnaire asked how important different factors were in the decision to purchase the bond<sup>92</sup>, including 'high coupon', 'I like the company's products' and 'company's values are similar to my own'. Table 6.2 provides the response levels for the latter as a factor influencing the investment, and shows a significant difference between the investor groups, with 77.7% of UK3 investors versus only

<sup>91</sup> Refer to Questions 24, 25 and 26 in Appendix 8: Questionnaire distributed by mail to mini-bond investors.

<sup>92</sup> See Q22 in Appendix 8

32.9% of G5 investors agreeing or strongly agreeing that their liking the issuer's product was a factor in their investment decision. As pointed out earlier, neither G5 nor G4 investors actually use the issuer's products because these firms do not produce products used by consumers, and therefore the relatively high level of importance of product affinity stated by G4 investors may be related to investors' affinity with the issuer's values, which is discussed in more detail in section 6.1.1.2.

Table 6.2: Product Affinity as a Factor in Investment Decision

	Mini-bond Issuer								
	G5-Germany			G4-Germany			UK3-UK		
	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent
<i>'I like the Company's products'</i>									
Strongly disagree or disagree	67	17.4	17.4	13	6.7	6.7	5	1.9	1.9
Neutral	192	49.7	67.1	35	18.1	24.9	55	20.4	22.3
Strongly agree or agree	127	32.9	100.0	145	75.1	100.0	209	77.7	100.0
Total	386	100.0		193	436.0		269	436.0	
Missing	50			1			7		
Total	436			194			276		

Secondary sources also provide evidence the influence of product affinity as a source of process-based trust in the mini-bond channel in the UK. UK mini-bond issuers and their advisors were explicit about the role of mini-bond issuers' dual relationship with individuals purchasing mini-bonds. Capita, a UK provider of an administration services of mini-bond issues, marketed the value of mini-bond to potential issues by stating: ‘

*Finance teams often look to either restructure debt or raise new funds, whilst the Marketing department want to encourage customer loyalty and connect with investors. Mini-bonds enable companies to achieve both objectives, providing them with an alternative means of raising debt while also engaging with customers...*

(Capita, 2013)

### Reputation as a Trust Indicator

The second variable indicating the presence of process-based trust is reputation, which reflects *second-hand* information an investor has acquired about a borrower from a third party having direct experience with the borrower. Branding and reputation are important sources of second-hand information because they signal information about the trustworthiness of a trustee to trustors (Zucker, 1986).

The questionnaires distributed to mini-bond investors asked how the mini-bond investors first became aware of the bond offering and the extent to which they communicated with other individuals before purchasing the bond<sup>93</sup>. The most-cited source of awareness by investors in

<sup>93</sup> Refer to Q10 in Appendix 8: Questionnaire distributed by mail to mini-bond investors.

all of the three mini-bond groups was a newspaper article or advertisement, with awareness levels ranging from 38% to 51%. The second-most cited source for G5 investors was 'a friend, relative, or colleague' (25%), and either the website of the issuer or another website was second-most cited by G4 investors (42%) and UK3 investors (34%). The G4 and UK3 investors cited 'friend, relative or colleague' at 15% and 8% respectively. the G4 investors (15%) and the UK3 investors (8%). reported communicating about the borrower with 3<sup>rd</sup> parties prior to investing, as summarised in Figure 6.3.

Table 6.3: Source of Initial Awareness

	Mini-bond Issuer								
	G5-Germany			G4-Germany			UK3-UK		
	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent
<b>Q.10 Source of initial awareness of the mini-bond</b>									
Newspaper article	166	39.1	39.1	70	37.6	37.6	122	44.7	44.7
Television or newspaper advertising	49	11.5	50.6	-	-	37.6	21	7.7	52.4
Website of issuer	50	11.8	62.4	57	30.6	68.3	77	28.2	80.6
Another website	31	7.3	69.6	22	11.8	69.6	17	6.2	69.6
A friend, relative or colleague	104	24.5	94.1	27	14.5	94.1	23	8.4	94.1
A financial advisor	25	5.9	100.0	10	5.4	100.0	3	1.1	100.0
Other	-	-	-	-	-	-	10	3.7	-
Total	425	100.0		186	100.0		273	100.0	
Missing or n/a				8			3		
	436			194			276		

The higher share of personal relationships as the initial source of awareness for G5 investors may be related to the much larger number of bonds issued by G5 in comparison to the single bonds issued by G4 and UK3, and additional analysis was undertaken to better understand the variation in awareness sources between investor groups. The survey questionnaire asked investors if they referred the bond to someone else after they invested, and the responses are summarised in Table 6.4. The proportion of G5 investors who discussed the bond (63%) after investing is significantly higher than for both the G4 investors (47%) and the UK3 investors (38%), so it's plausible that the larger base of G5 investors more actively discussing the bond is a significant factor in the larger proportion of G5 investors first learning about the bond through an acquaintance.

Table 6.4: Discussed Mini-Bond After Investing

	Mini-bond Issuer								
	G5-Germany			G4-Germany			UK3-UK		
	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent
<b>Q20. Discussed bond with someone after investing</b>									
No	138	36.7	36.7	102	53.4	53.4	170	61.6	61.6
Yes	238	63.3	100.0	89	46.6	100.0	106	38.4	100.0
Total	376	100.0		191	100.0		276	100.0	
Missing or n/a	60			3					
	376			194			194		

Given the large number of G5 mini-bonds issued since 2002, the G5 data was also analysed in order to gain more insight into the relationship between the length of time an investor had

owned a G5 bond and their referral of the bonds to a 3<sup>rd</sup> party. The result of a correlation test are presented in Table 6.5, and indicate there is a statistically significant positive correlation between the duration of the G5 investment and the investor referring the bond investment. Also, G5 investors who first heard about the mini-bond from another person were the most likely to tell another person about the bonds while investors hearing about the mini-bond from advertising were least likely to tell another person about the bonds. This observation may be a result of advertising being introduced relatively recently by G5, meaning investors buying the bonds after seeing the advertisement have been G5 investors for a relatively short period of time.

Table 6.5: Relationship Between Length of Ownership and Referral

		<b>Investor referred bond to someone after investing</b>
Length of time investor owned bonds issued by G5	Pearson Correlation	.228**
	Sig. (2-tailed)	0
	N	373
** Correlation is significant at the 0.01 level (2-tailed).		

Additional insight into the word-of-mouth behaviour of G5 investors regarding recommending the bond investment to 3<sup>rd</sup> parties was provided by the interviews with G5 investors, and a summary of extracts from the investor interviews is provided in Appendix 11. Most investors interviewed recommended the bond investment to either other adult family members or to small groups of friends with whom they informally exchanged information about potential investment opportunities. Interviewees stated that identifying relatively safe investments with higher interest income in a low interest rate environment was important to friends and family given most were retired. However, recommending an investment opportunity that turned out badly could endanger the investors' relationship with these individuals, so investors were cautious about their referral of the G5 investment to 3<sup>rd</sup> parties. Most of the investors waited until they had received interest payments or had a bond repaid before recommending the investment. The following excerpt from one interview illustrates the investors' rationale for this approach to recommending the bond to third parties:

Investor: *'[Company G5] has very good returns in terms of investment, on the other hand that awakens mistrust in many people's eyes. For example, why do they return such high yields. Will they soon disappear or have problems? With me it was the same, I observed for a year how it developed. My first contact was I believe with [ Company X ] from Wirtschaftwoche (Germany economy magazine) I think at some point which was an investment 12 years ago I believe or 14 years ago, I must check when, but I started small with an investment costing 5,000DM and then I invested more as it developed.'*

Interviewer: ‘So as you made money over the years and for the reason that you wanted to let others know about the trust you’d built up with them?’

Investor: ‘Yes, yes.’

The findings from the analysis suggest that reputation is present as an indicator of process-based trust, and appears as a relatively stronger indicator in the G5 investor group versus the other groups as a result of the experience gained by a large number of individuals investing in G5 bond issuances in the 11 years preceding the survey.

#### **6.1.1.2 Presence of Characteristic-Based Trust**

Characteristic-based trust is a form of trust produced by affinity, or attributes of the borrower familiar to the lender, as a result of being connected by shared values within the same community (Zucker, 1986:60). Two variables indicating the presence of characteristic-based trust are considered in the analysis of mini-bond lending. The first variable is *social relations*, which reflects an investor’s connection to a borrower prior to investing in the loan, reflected in either a lender’s *direct* social relationship as a stakeholder (as an employee, supplier or customer) with the borrower, or in a lender’s *indirect* social relationship via a third party connected to the borrower. The strength of this indicator of social connection is measured by the number of these relationships, the directness of the relationships (ie degrees of separation between issuer and investor) and the social distance indicated by the type of relationship (e.g. employee versus investor). The second variable is *proximity*, which assumes that the geographic distance between borrowers and their lenders is a proxy for shared community values. The degree to which these values are shared is assumed to be inversely related to the geographic distance between a lender and the borrower.

#### **Social Relations as a Trust Indicator**

Data from the responses to three questions<sup>94</sup> in the questionnaire distributed to mini-bond investors was analysed to reveal the social relationships between investors and the firms issuing mini-bonds prior to the investment. The results of the data analysis are contained in Table 6.6. Less than 2% of the investors in any of the mini-bonds had either a direct relationship or a relationship via a family member with any of the mini-bond issuers prior to making the investment. Outside of the investors’ households, 16% of the G5 investors knew an individual who was a G5 investor, a finding which is consistent with the high level of word-of-mouth communication already identified in the analysis. Uniquely, almost 10% of G4 investors knew an individual who worked for the company. In summary, the low level of pre-existing social relationships suggests it is a relatively weak indicator of characteristic-based trust.

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<sup>94</sup> Refer to Questions 15, 16 and 17 in Appendix 8: Questionnaire distributed by mail to mini-bond investors.

Table 6.6: Pre-existing Investor-Issuer Relationship

	Mini-bond Issuer								
	G5-Germany			G4-Germany			UK3-UK		
	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent
<b>Q15. Investor relation to issuer</b>									
Employed by the issuer	8	2.1	2.1	2	1.0	1.0	-	-	-
Employed or formerly employed by entity related to issuer		-	2.1	2	1.0	2.1	-	-	-
No relation	379	97.9	100.0	190	97.9	100.0	-	-	-
Total	387	100		194	100		-	-	
Missing or n/a	49			-			276		
Total	436			194			276		
<b>Q16. Investor's hhd relation to issuer</b>									
Employed by the issuer	6	1.6	1.6	1	0.5	0.5	4	1.5	1.5
Formerly employed by the issuer	-	-	1.6	1	0.5	1.0	3	1.1	2.6
Employed or formerly employed by entity related to issuer	-	-	1.6	-	-	1.0	3	1.1	3.6
None of the above	380	98.4	100.0	192	99.0	100.0	264	96.4	100.0
Total	386	100.0		194	100.0		274	100.0	
Missing or n/a	50			-			2		
Total	436			194			276		
<b>Q17. Someone you knew prior to investing was connected to the issuer</b>									
Employed by the issuer	9	2.3	2.3	19	9.8	9.8	13	4.7	4.7
Formerly employed by the issuer	-	-	2.3	-	-	9.8	4	1.5	6.2
Employed or formerly employed by entity related to issuer	1	0.3	2.6	-	-	2.6	2	0.7	2.6
An investor in the issuer's bonds	60	15.5	18.0	-	-	18.0	-	-	18.0
None of the above	318	82.0	100.0	175	90.2	100.0	255	93.1	100.0
Total	388	100.0		194	100.0		274	100.0	
Missing or n/a	48			-			2		
Total	436			194			276		

### Proximity as a Trust Indicator

The proximity of investors to mini-bond issuers was calculated by measuring the straight-line distance between the centre-points of the postcodes of a borrower and its investors using the methodology described in Chapter 4. The mean distance between each of the five German and three UK mini-bond borrowers and their respective investors is summarised in Tables 6.7 and 6.8. The distance between the postcode of each mini-bond issuer and all German postcodes has been weighted for household density and purchasing power to normalise the proximity by controlling for the effect of population distribution and wealth<sup>95</sup>.

Table 6.7: Mean Distance Between German Mini-bond Investors and Issuers (kms)

Issuer	Investor Postcode	All German Postcodes (5-digit)		Actual as % of Un-Weighted	Actual as % of Weighted
	Actual Distance (km)	Un-weighted Distance (km)	Weighted Distance (km)		
Firm G1	36	285	268	13%	13%
Firm G2	2	292	282	1%	1%
Firm G3	39	261	259	15%	15%
Firm G4	153	298	286	51%	54%
Firm G5	234	297	285	79%	82%

<sup>95</sup> The UK data is weighted for household distribution only.

Local bias is present in all of the bond issues analysed, however the amount of bias varies significantly by firm. Firm size is negatively correlated with local bias, a finding consistent with the finance literature examining the effect of firm size on the distance between a firm and its bank lender (Bellucci, Borisov, & Zazzaro, 2013; Ivković & Weisbenner, 2005). Firm G5, the largest issuer in terms of both number of active investors and number of bonds issued, exhibits much less local bias in the geographic proximity of its investors relative to the other mini-bond issuers. This could also be a result of having completed 35 mini-bond offerings over the preceding 11-year period, whereas the other issuers are smaller firms and have issued only one or two bonds.

Significantly less local bias is present in the distance between investors and the UK mini-bond issuers compared with the German issuers. Interestingly, the actual average distance between UK3 and its investors is slightly *greater* than the weighted average distance.

Table 6.8: Mean Distance Between UK Mini-bond Investors and Issuers (kms)

Issuer	Investor Postcode	All UK Postcodes (4-digit)		Actual as % of Un-Weighted	Actual as % of Weighted
	Actual Distance (km)	Un-weighted Distance (km)	Weighted Distance (km)		
Firm UK1	256	269	259	95%	99%
Firm UK2	192	231	226	83%	85%
Firm UK3	223	200	194	112%	115%

Proximity as an indicator of characteristic-based trust is intended to be a proxy for cultural values shared between the investors and the issuer. UK3 operates 10 venues across the UK which could be frequented by potential investors rather than the London-based headquarters of the firm<sup>96</sup>. The analysis of distance between each of these venues and UK3 investors shows much greater local bias versus the UK3 headquarters location. Section 6.1.1.1. discussed the relatively strong influence of product affinity in the investment decision of UK3 investors, and therefore the proximity of UK3 investors to these venues UK suggests this is more indicative of the presence of process-based trust rather than characteristic-based trust.

The analysis of investor survey data also indicates that the product affinity was a relatively important factor for G4 investors even though they were not users of the renewable energy produced by G4. Table 6.9 provides the response levels for the alignment of investors' values with values of the mini-bond issuer. This factor was particularly important for the G4 investors, with 81.4% of G4 investors stating it was either an important or very important factor. In contrast, only 27.3% of G5 investors and 48.7% of UK3 investors felt it was either an important or very important factor in their decision to purchase the bond. In the case of G4, investors' relatively strong identification with the issuer's values is a form of characteristic-based trust

<sup>96</sup> Neither UK1 nor UK2 operate facilities that can be visited by a potential mini-bond investor.

which is independent of the investors and issuer being located in close proximity. The source of this variation of characteristic-based trust could be social movements, such as environmental activism in the case of G4, propagated by social media technology that did not exist in the 1840 to 1920 time period studied by Zucker.

Table 6.9: Importance of Alignment of Values as a Factor in Mini-Bond Investments

	Mini-bond Issuer								
	G5-Germany			G4-Germany			UK3-UK		
	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent
<i>Company's values similar to my values'</i>									
Strongly disagree or disagree	45	12.0	12.0	11	5.7	5.7	32	11.6	11.6
Neutral	210	56.1	68.2	24	12.4	18.1	109	39.6	51.3
Strongly agree or agree	119	31.8	100.0	158	81.9	100.0	134	48.7	100.0
Total	374	100.0		193	100.0		275	100.0	
Missing		-		1			1		
Total		100.0		194			276		

The significant variation in local bias across the German and UK mini-bond issuers is illustrated in Figures 6.1 through 6.8 which plot the longitude-latitude centre-point coordinates for the investors in each of the 8 mini-bond issues for which transaction and geo-location data was collected. The red dots indicate the postcode centre-point location of issuers' headquarters<sup>97</sup>, and the black dots indicate the location of postcode centre points of the investors.

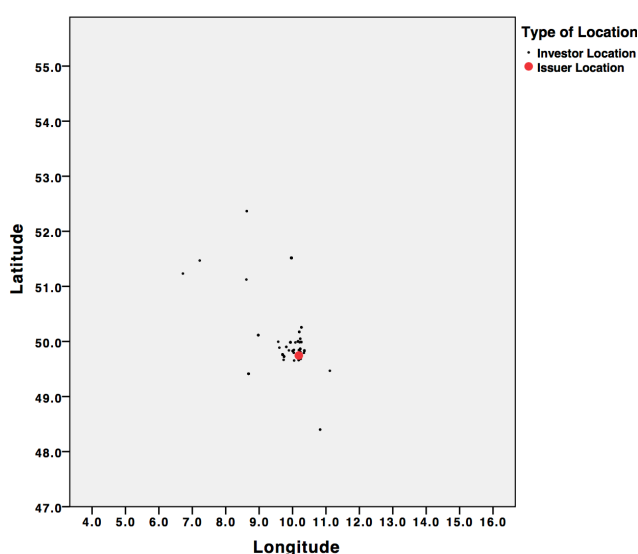


Figure 6.1: G1 Investors Plot

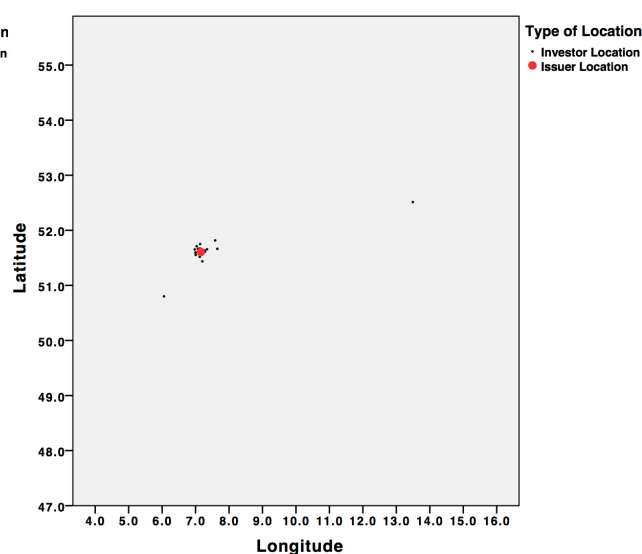


Figure 6.2: G2 Investors Plot

<sup>97</sup> The locations of UK3 operating facilities are indicated instead of its headquarters location.



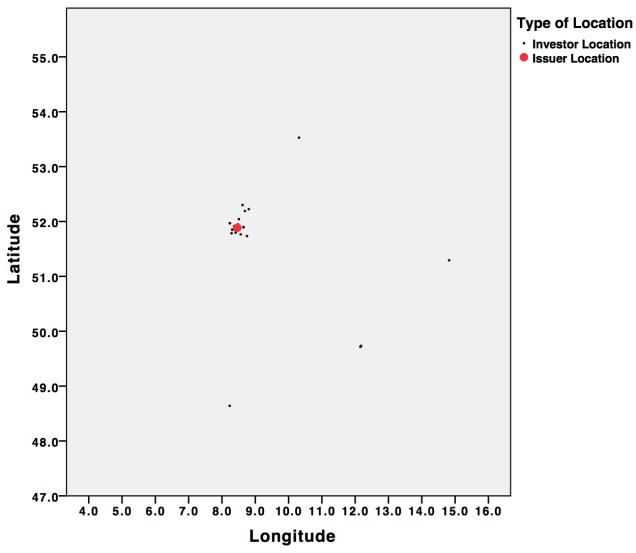


Figure 6.3: G3 Investors Plot

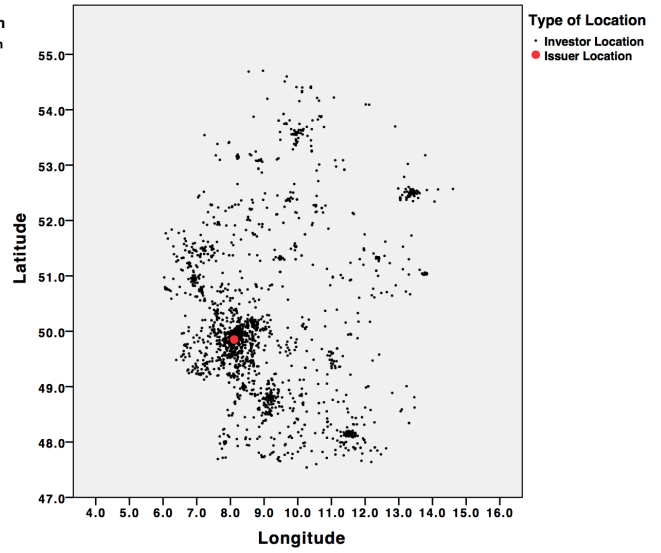


Figure 6.4: G4 Investors Plot

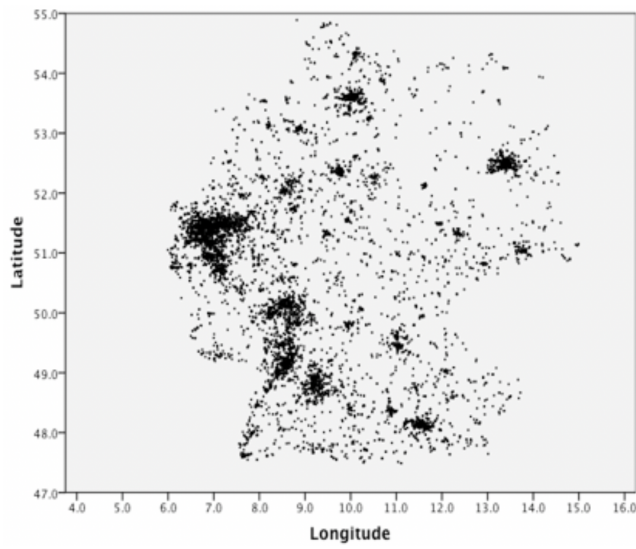


Figure 6.5: G5 Investors Plot

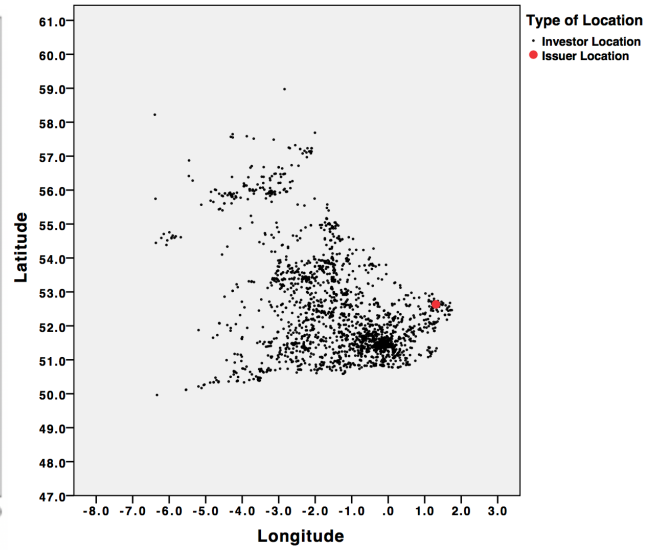


Figure 6.6: UK1 Investors Plot

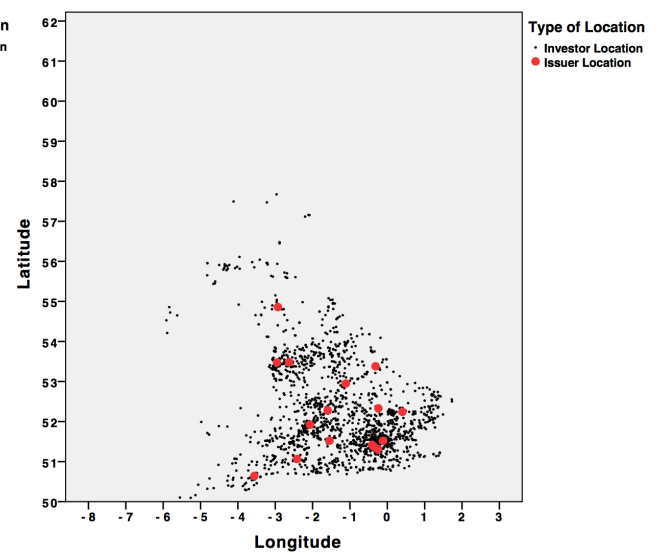
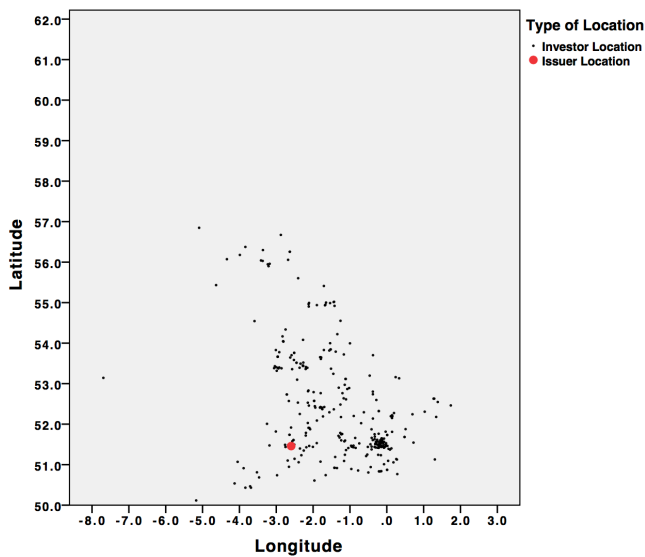


Figure 6.7: UK2 Investors Plot

Figure 6.8: UK3 Investors Plot

Analysis of proximity data for word-of mouth communication with 3<sup>rd</sup> parties obtained in the mini-bond investor survey also supports the use of investor-issuer proximity as an indicator of characteristic-based trust. Table 6.4 earlier in this chapter summarised word-of-mouth communication as an indicator of process-based trust. The analysis of the proximity of the individuals with whom the investors spoke is presented in Table 6.10 below. More than three-quarters of these individuals live within an hour of travel time from the investors in all three investor groups, suggesting that the communities in which investors are sharing information are highly localised.

Table 6.10: Mini-bond Investors Word-of-Mouth Proximity

	Mini-bond Issuer								
	G5-Germany			G4-Germany			UK3-UK		
	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent
<b>Q21 Proximity of person with whom investor discussed bond</b>									
In immediate neighborhood	33	14.2	14.2	9	9.9	9.9	12	11.4	11.4
In same town or city	84	36.1	50.2	31	34.1	44.0	31	29.5	41.0
In a place about an hour away	85	36.5	86.7	30	33.0	76.9	38	36.2	77.1
Further away in the country	26	11.2	97.9	21	23.1	100.0	24	22.9	100.0
Outside of the country	5	2.1	100.0	-	-	100.0	-	-	100.0
Total	233	100.0		91	100.0		105	100.0	
Missing or not applicable	203			103			171		
	436			194			276		

Additional analysis of the G5 data set was performed to gain further insight into investor-issuer distance as an indicator of trust. Figure 6.9 illustrates the relationship between the number of investments made by an investor in the 35 mini-bonds issued by G5 between 2002 and 2013 and the distance between the investor and the issuer. The chart illustrates an inverse relationship, suggesting that investors living closer to the issuer perceive less risk associated with the investment on average and are therefore willing to invest more frequently in the G5 mini-bonds. This relationship between distance between investors and G5 has also been consistent over time. The data analysis illustrated in Figure 6.10 indicates each of the mini-bond issues has consistently had a group of repeat investors living on average closer to the user than investors only investing once during the 11-year period.

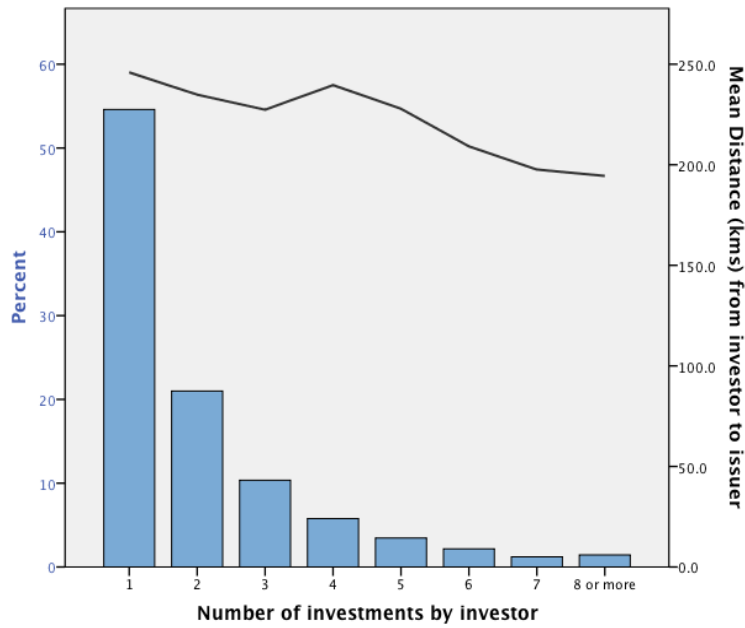


Figure 6.9 Number of Investments versus Distance from G5 Issuer

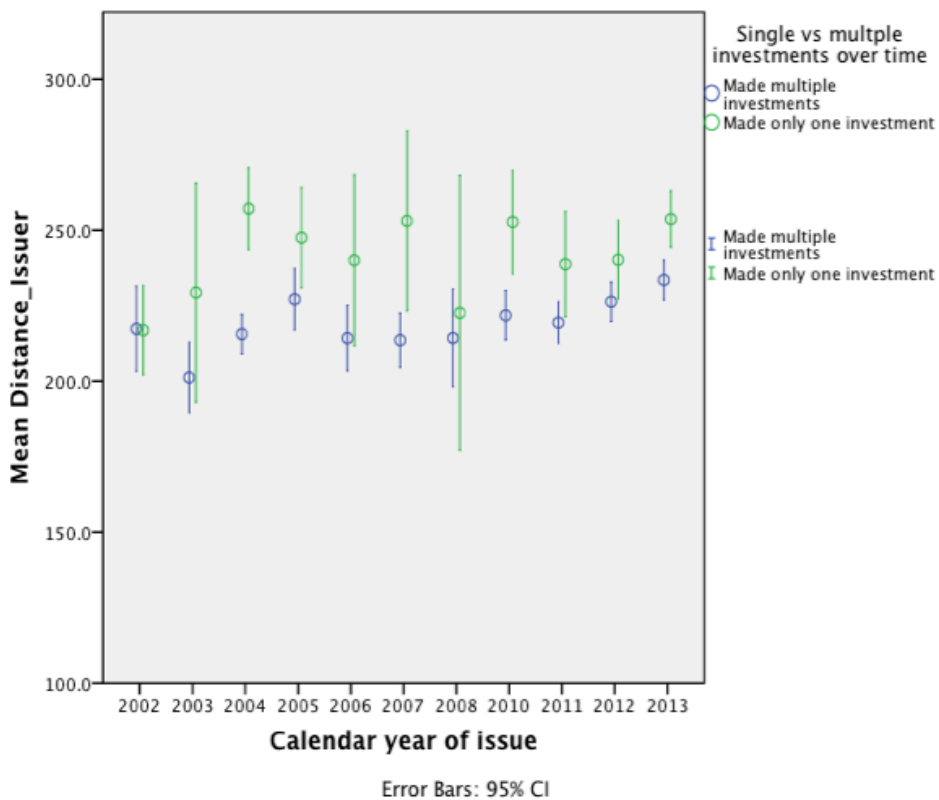


Figure 6.10: Multiple versus One-time Investor Participation by Issue

In summary, the analysis of investor proximity to mini-bond issuers suggests that there is a relatively high level of characteristic-based trust in the five German investor groups, and the proximity is directly related to the size of the firm issuing the bonds. The only UK mini-bond

issuer with local bias in proximity is UK3, however this is only apparent in the proximity of investors to the UK entertainment venues distributed around the UK, suggesting this is more an indication of process-based trust produced by visitations to the venues by investors.

### **6.1.1.3 Presence of Institutional-based Trust**

Zucker argues that large developed economies must produce forms of trust that are not contingent on trustors and trustees having prior exchange experience or shared characteristics in order to function at scale (Zucker, 1986:63). She identifies a more generalised form of trust, institutional-based trust, which embodies the 'constitutive expectations' of the localised forms of trust without the contingency of close geographic or social distance. Institutional-based trust can be either firm-specific or associated with intermediary mechanisms. In the case of the former, it is produced by formal mechanisms such as 'credentialisation', that provide information about the trustworthiness of parties in exchange such as membership in industry associations, or standards accreditation<sup>98</sup> bodies. The strength of these bodies, and the credentials provided by associations, is derived from their perceived legitimacy in the context of the social system in which they are embedded. Trust in intermediary mechanisms is produced by guarantee mechanisms mitigating the risk of non-completion for the parties in an exchange (Zucker, 1986:64).

### **Firm-specific Indicators of Trust**

The questionnaire distributed to mini-bond investors and interviews with mini-bond investors included questions about investors' perceptions of relative trustworthiness of small firms, referred to respectively as 'SMEs' and 'the Mittelstand' in the UK and Germany<sup>99</sup>, in comparison to large firms and banks as other organizational classifications in the economy common to both Germany and the UK. The perceived trustworthiness of each organizational type in Germany and the UK, measured using a Lickert scale ranging from 1 ('Absolutely no trust') to 5 ('A great deal of trust') is presented in Figure 6.11.

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<sup>98</sup> An example is the International Standards Organisation (ISO) which publishes international standards for quality management of products, management systems and industrial processes. It then certifies companies that meet these standards. Many companies will not commercially engage with organisations that are not 'ISO certified'. Standard-setting bodies in Germany typically establish national standards that are higher than the ISO standards.

<sup>99</sup> In Germany, the term 'Mittelstand' is used to describe SMEs. Not all Mittelstand firms are SMEs, however almost all SMEs fit the criteria of Mittelstand firms. See chapter 2 for a more detailed discussion of the German Mittelstand.

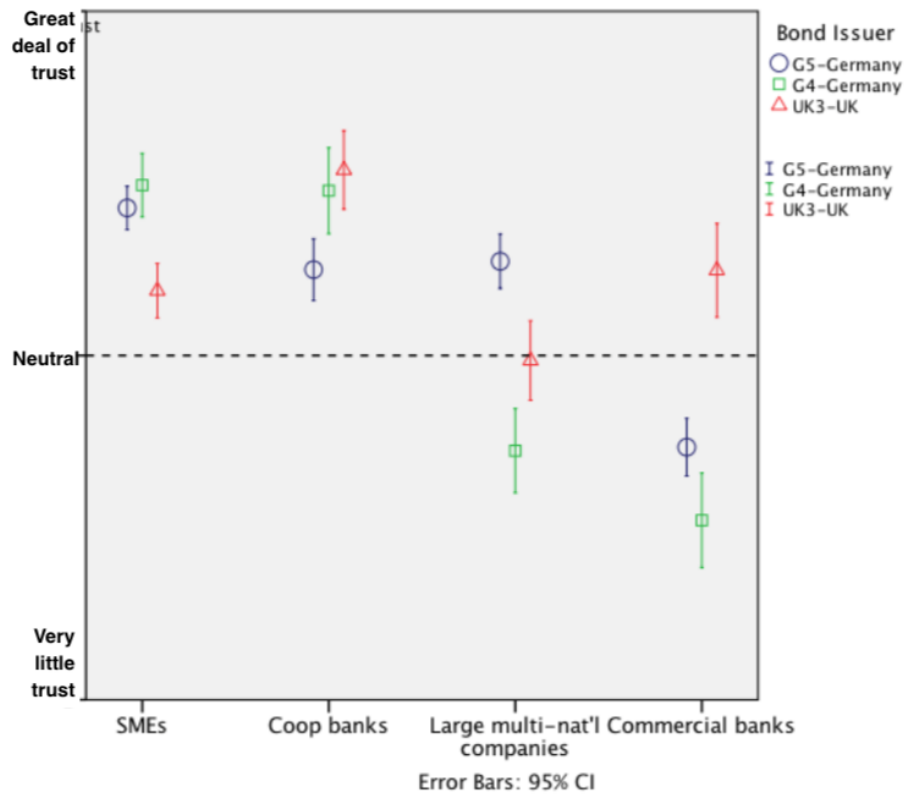


Figure 6.11: Perceived Trustworthiness of Organization Types

The analysis indicates that both German investor groups perceive the SME/Mittelstand classification of firms to be more trusted than the three other organization types. UK investors are more neutral in their views of SMEs and on average do not perceive SMEs to be more trustworthy than any other category at the 95% confidence interval. German investors have a higher level of trust in the Mittelstand than UK investors have in SMEs. These findings are statistically significant. The high level of trust that the German investors appear to have in Mittelstand firms is particularly noteworthy because they are perceived as being more trustworthy on average than the local Sparkassen savings banks<sup>100</sup> and cooperative banks that are popularly considered to be amongst the most trusted institutions in the German economy (Sorge, 2018).

The high level of perceived trust in the German Mittelstand appears to be robust, even when accounting for differences in motivations for investing in mini-bonds issued by different companies. The German mean trust scores for each institution were calculated separately for each of the two mini-bond investor groups surveyed because there was a significant variation in the relative importance of the considerations that each group took into account in making their investment decision. The survey questionnaire contained questions<sup>101</sup> about investment considerations including maximising financial return, maximising return relative to risk,

<sup>100</sup> The data analysis included both regional state-owned Landesbanken and the Sparkassen savings banks but this has been excluded from the chart as there are no comparable classifications of banks in the UK economy.

<sup>101</sup> Refer to Question 22 in Appendix 8: Questionnaire distributed by mail to mini-bond investors.

alignment with the values of the issuer, and affinity for the issuer's products. Compared with the bond investors of the German industrial chemicals company, the investors in the bonds issued by the German renewable energy company were less influenced by financial return ('best return/risk' and 'high coupon') and more influenced by their alignment with the issuer's values and their affinity towards the issuer's product when they purchased the bonds.

The analysis of German mini-bond investor survey data also found relatively low levels of trust for some banking institutions, and the variation in trust levels for different types of German banks is consistent with other surveys conducted since the onset of the financial crisis. An annual survey of trust in German Banks (Forsa, 2014) has consistently found that the highest level of trust is in local Sparkassen savings banks, although this trust level declined from 54% to 46% between 2009 and 2014.

The analysis of the investment and survey data reveals that German mini-bond investors have relatively high levels of process-based trust in Mittelstand firms relative to other categories of firms in the financial system and the economy. Furthermore, this high level of trust is consistent across groups of investors with varying socio-demographic attributes and with different investment considerations. Survey respondents were also asked to indicate how the current perceived trustworthiness in each institution compared with the level of trustworthiness prior to the financial crisis ('less', 'about the same' or 'more' trust). The mean scores for the change in the level of trust of each institution since the beginning of the financial crisis is illustrated in Figure 6.12. In Germany, the trust scores are consistent for both groups of investors across all of the institutions. Mittelstand firms are the only group that did not suffer a drop in the level of trust during the financial crisis. These results are consistent with other surveys of institutional-based trust that find Germans have high levels of trust in SMEs relative to the populations of other countries (Eurobarometer, 2010).

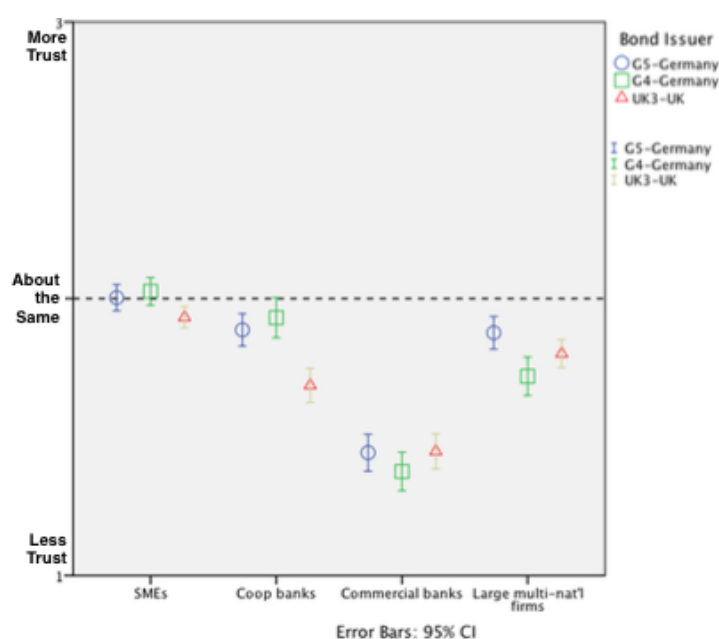


Figure 6.12: Change in Perceived Trustworthiness Since the Financial Crisis

There is anecdotal evidence providing support for the high level of trust retained by Mittelstand firms following the financial crisis, as Mittelstand firms made decisions and took actions during the crisis that signalled trustworthiness to individuals within their communities. For example, a representative of the machine tool industry association in Baden-Württemberg contacted as part of this research project stated that local machine tool manufacturers saw orders decline by 29% from 2007 to 2008, and yet these firms laid off less than 5% of their employees<sup>102</sup>. He stated that the decision of one family owner to invest €75 million in the firm to fund losses and retain the workforce during the initial period of the financial crisis was well known in the region. He also explained that this behaviour by Mittelstand owners was not interpreted by most Germans as benevolence, but rather as a willingness to 'do what it takes' to retain skilled workers and ensure the long-term viability of the owner's business.

The analysis of the change in the level of trust in the banks in both Germany and the UK is consistent with the findings of other surveys of trust in financial institutions before and after the financial crisis. An annual survey of trust across 25 nations asked individuals how much they trusted banks to 'do what is right' on a scale of 0% to 100%. In the UK in 2008 the average response was 47% and by 2011 it had fallen to 16%, and in Germany trust in banks fell from 42% to 22% during the same period. In both countries the banking was the least trusted industry of the eleven industries included in the survey (Edelman, 2012).

Secondary data obtained from two pan-European surveys containing questions about trust was analysed so the level of perceived trustworthiness of organisation types among the general populations of Germany and the UK could be compared with the results of the mini-bond investor surveys in the two countries. First, a comparison of means test was conducted for UK and German responses to the trust question in the European Values Study conducted in 2008 and found no statistically significant difference in the levels of generalised trust for UK and German respondents. The same test was conducted for the responses to questions about trust contained in the 2010 Eurobarometer survey, which asked participants whether they 'tended to trust' or 'tended to distrust' various institutions and organisation types including large companies and small companies (Eurobarometer, 2010). Eighty-five per cent of German respondents tended to trust SMEs versus 75% of Britons (statistically significant at the .05 level). By contrast, there was no statistically significant difference between Germans and Britons in their trust of large companies, which was only 24% and 28% respectively.

An alternative explanation for the different levels of trustworthiness of small and medium-sized companies across countries is variation in the level of trust in companies, regardless of size, across countries. Additional analysis of the Eurobarometer data was performed to try to control

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<sup>102</sup> This anecdote was cited by an employee of the VDMA in Stuttgart during a meeting with the dissertation author in February 2013.

for this by comparing the difference in the levels of trust between small and large companies across Western European countries. The results of the analysis are contained in Figure 6.13. The analysis indicates that the level of trust in small companies varies significantly across countries even when controlling for differences in the trust levels of companies of all sizes. Respondents in all surveyed countries had higher levels of trust in small versus large companies by 42 points on average, but ranging from a difference of only 20 points in Italy to more than 60 points in Germany.

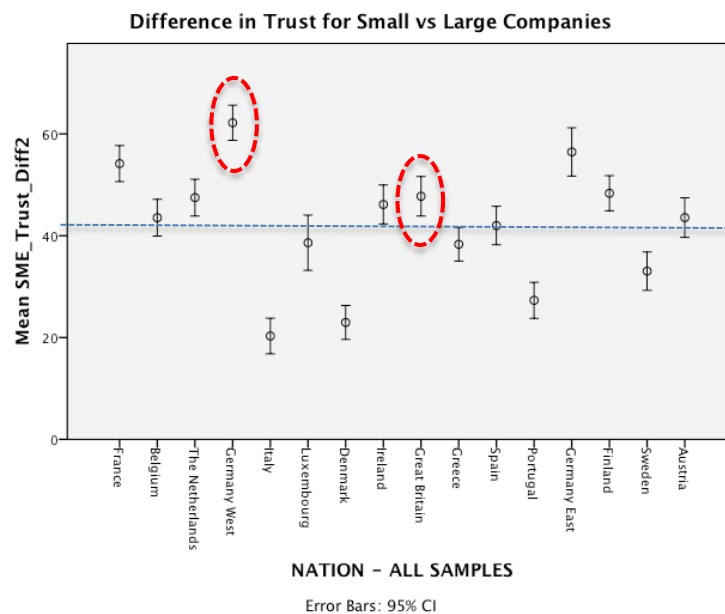


Figure 6.13: Difference in Trust for Small versus Large Companies (Eurobarometer, 2010)

The analysis of both the primary and secondary source survey data indicates that SMEs in Germany, the Mittelstand firms, are perceived by both individual investors and the general population to be a more trusted type of organisation than SMEs in other countries. In contrast, the mini-bond data analysis indicates that UK3 investors are relatively neutral about SMEs and do not have a statistically significant higher level of trust on average in SMEs versus either large multi-national corporations or commercial banks. The UK investors' perception of SME trustworthiness since the onset of the crisis declined less than that of the other types of organisations, which suggests that both UK and German investors considered SME/Mittelstand firms to have been more victims than perpetrators of the crisis.

### Indicators of Trust in Intermediary Mechanisms

Financial services are heavily regulated activities in most developed economies, and therefore the presence of institutional-based trust in mini-bond lending is indicated by the *regulatory authorisations* obtained by mini-bond issuers. A regulatory authorisation is an institutional credential that implies a vetting process of the issuer and its investment proposition, and thereby signals information about trustworthiness about the borrower to investors. The



strength of the institutional-trust production is measured by the *number and type of regulatory authorisations* obtained by the issuer.

Chapter 5 discussed the policy actions initiated by UK and German legislators and financial regulators in response to the introduction of P2B lending following the financial crisis. By contrast, the issuance of mini-bonds was an activity already covered by existing regulation in both countries, and hence there was no need to introduce or modify legislation. In Germany, mini-bonds as financial securities were not considered as ‘loans’ in the context of the regulation, and therefore there was no requirement for mini-bond investors to be licensed as credit institutions. Companies intending to make mini-bonds available for sale to the public need to comply with the German Securities Prospectus Act, which requires them to make a prospectus available to investors after having it approved by the regulator (the BaFin). The specifications for the prospectus content is quite prescriptive and relatively limited<sup>103</sup> in comparison to the disclosures and representations typically contained in fundraising prospectuses in liberal market economy countries like the US and the UK. The BaFin checks whether the minimum information is contained and is comprehensible to investors, however *it does not examine whether the information contained in the prospectus is accurate* (Winheller, 2018). While approved prospectus is a form of regulatory authorisation obtained by the issuer, the lack of vetting for content veracity in the BaFin approval process suggests it is a relatively weak form of institutional-based trust.

Regulatory authorisations obtained by issuers of *listed* mini-bonds in Germany represent a stronger form of institutional-based trust than a BaFin approved prospectus. Chapter 5 reviewed the development and growth of the listed mini-bonds in Germany from 2010, with the five regional financial exchanges creating listing segments for bonds issued by Mittelstand firms with financing needs too large for the local banks to satisfy and too small to interest investors in traditional capital markets. Each exchange operator created a set of listing criteria which issuers had to satisfy in addition to obtaining prospectus approval from the BaFin. The most active exchange in listing mini-bonds, Stuttgart, described its listed bond segment for Mittelstand bonds, Bondm, as follows:

‘Bondm is a trading segment for bonds from medium-sized enterprises. The issuers of the bonds are committed to ongoing compliance with stricter standards of transparency and publicity than those applying to the normal open market (also referred to as regulated unofficial market).’ (Boerse Stuttgart, 2018)

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<sup>103</sup> The issuer must present and explain the risk factors that are specific to the issuer and its industry and/or that are likely to impair its ability to meet its obligations to investors; present the issuer's business situation and financial position (operating and financial review); make pro forma disclosures based on historical data concerning the issuer; make forecasts about the future business development; comment on the adequacy of working capital for the current needs and need to raise more capital in the future; provide information about the identity of the persons involved in the management; describe the rights and obligations attaching to the securities.

A Bondm listing required issuers to meet the several listing requirements, including: a minimum issuance size of €25 million; retaining an approved corporate finance advisor ‘coach’; obtaining a credit rating for the issuer and/or the bond offering. While the BaFin is responsible for supervising the *firms* issuing mini-bonds, either listed or unlisted, the regulatory supervision of *exchanges* is the responsibility of the stock exchange supervisory office of each of the federal state in which the exchange is located. Exchange conduct is supervised in accordance with the Stock Exchange Act (Börsengesetz), which contains explicit investor protection provisions relating to issuer liability regarding statements made in an offering prospectus. Hence, firms issuing listed bonds obtained layered regulatory authorisations consisting of BaFin prospectus approval and financial exchange approval which indicate a relatively strong form of institutional-based trust relied on by investors.

Analysis of investor participation data for one German mini-bond finds supporting evidence for the influence of institutional-based trust in listed mini-bond lending. PCCSE issued 16 unlisted mini-bonds between 1998 and 2004, and then issued its first listed mini-bond on the Open Market Segment of the Frankfurt Exchange in July 2005. Table 6.11 illustrates the mean amount invested and mean distance between PCCSE and the individuals investing in these bonds. Both first time and repeat investors purchasing the listed bond invested approximately 14% more and lived, on average, 20 kilometres further away from PCCSE than investors purchasing the unlisted bonds. This finding suggests that the regulatory authorisation provided by the financial exchange as a requirement for the listed bond may have produced incremental institutional-based trust which complemented the production of characteristic-based trust and extended the proximity range of investor participation. The increase in amount invested by repeat investors in both listed and unlisted bonds suggests that process-based trust generated by prior investment experience in the bonds continued to influence mini-bond investors over time.

Table 6.11: Mean Investment Amount and Investor Distance Pre and Post Listing G5 Bonds

	16 Unlisted Bond Issues (1998 - 2004)		First Listed Bond Issue (July 2005)	
	First-time investors	Repeat Investors	First-time investors	Repeat Investors
Mean number of investments per bond	266	117	1,022	520
Mean issuer-investor distance (kms)	224.6	204.7	245.4	216.3
Mean amount invested in bond (€)	11,578.4	13,604.3	12,559.7	16,600.0

The UK regulatory requirements for issuing a mini-bond are even less onerous than the German prospectus requirement. While an issuer wishing to sell securities in the UK to the public is also required to make an approved prospectus available to prospective investors, mini-bond offerings could qualify for an exemption from the prospectus requirement by satisfying a few basic conditions. The most material condition was prohibiting the sale, exchange or redemption of the mini-bond instrument prior to the repayment date. Providing

the terms of the offering met these conditions, then the marketing documentation for the offering was treated as a 'financial promotion', with its 'Invitation Document' simply reviewed and approved by a corporate finance advisor authorized by the UK financial services regulator (the FCA) using the same standards regarding misleading claims that are applied for the marketing of any financial product to UK consumers. As a result, the UK mini-bond offering documentation provided relatively little information to potential investors versus a typical offering prospectus<sup>104</sup>. In effect, the prospectus exemption meant that UK mini-bond issuers did not acquire any regulatory authorisations. The sole financial exchange in the UK, the London Stock Exchange, has stringent listing criteria for listed bond issuers that could potentially have been a source of institutional-based trust for mini-bond issuers in the UK. However, the exchange did not create a dedicated mini-bond trading segment, and so mini-bonds were never listed in the UK. The prospectus exemption combined with the absence of a listed bond market in the UK indicates that there was little, if any, institutional-based trust influencing UK mini-bond investors.

### **6.1.2 Forms of Trust Present in P2P Lending**

The analysis of data for P2B lending uses the same indicators for the presence of the three trust forms that were used in the analysis of mini-bond lending. Individuals rather than institutional investors remain the object of analysis, however, there are two material differences in the approach to the analysis of P2B lending. First, only UK data is used in the analysis of trust forms because the low volume of P2B lending activity in Germany relative to the UK in the 2010- 2015 period made it difficult to access P2B investors or obtain transaction data from the P2B platforms operating in Germany. Second, because P2B lending involves an online platform as an intermediary in the lending process, there are *two* objects of trust (rather than one) that need to be analysed since forms of trust produced by either the borrower or the intermediary influence an individual's decision to invest.

Three sources of data were analysed to identify the forms of trust present in P2B lending in the UK: (i) individual investment level transaction data provided by the P2B lending platforms; (ii) online questionnaires completed by 405 P2B investors; and (ii) interviews conducted with 20 P2B investors.

#### **6.1.2.1 Presence of Process-based Trust**

The presence of process-based trust in P2B lending, based on information about the trustee acquired either from direct experience or via the experience of a 3<sup>rd</sup> party, is indicated by the responses provided by P2B investors completing the online questionnaire and investors participating in interviews. The variables indicating the presence of process-based trust for

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<sup>104</sup> The Invitation Document for Ecotricity's first 'EcoBond', which raised £10 million in late 2010, consisted of a power-point style document of 28 pages.

P2B lending are the same as those used for the analysis of mini-bond lending: (i) *product usage*, the investors' use of the product or service produced by the borrower prior to the investment; and (ii) *reputation*, the second-hand information about the borrower that a borrower obtained from a 3<sup>rd</sup> party with knowledge of the borrower. The analysis of these variables is undertaken at both the level of the borrower and the P2B platform intermediary as objects of trust.

### **Product Usage as a Trust Indicator**

The interview participants were asked if they had any affinities with any of the companies in which they have invested, which could include personal relationships with a person connected to that company, familiarity with brand, or usage of the product/service<sup>105</sup>. One of twenty P2B investors interviewed had used the product/service of any company they had funded, and stated they selected the loan for investment in part because of their knowledge of the borrower. However, the investment in the borrower known to the investor represented less than 10% of the investor's portfolio of P2B investments.

The findings from analysis of the P2B investors survey data provides support for the low level of product usage amongst the P2B investors. Forty-eight percent of the 405 survey respondents indicated they use an 'auto-select' feature<sup>106</sup> for selecting at least some of their P2B loan investments. This is an automated tool available on many P2B platforms which uses an algorithm to select investors' loan investments based on their expressed preferences regarding risk and financial return expectations. As one P2B investor with a time-consuming professional career expressed:

*I'm not really an active investor, I'm a passive investor - if I had money in the stock market it would be in index trackers. I'm looking for a sort of minimal effort investment. My idea is that you should sit there and have an auto-reinvest function on it and it should just be checking in once a year or something like that.*

*UK P2B investor*

Several of the interviewees described their approach for trialling the use of a new P2B *platform*. Initially, they invested only small amounts in a new platform and did not increase their investment level until they had sufficient time to observe whether their own experience matched the claims made by the platform, particularly regarding investment performance and customer service. The relatively high importance these investors place on personal experience with a platform indicates that process-based trust *where the object of trust is the platform intermediary* is a relatively influential form of trust for P2B lenders. However, it is not produced

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<sup>105</sup> See question 2.5 in Appendix 4: Semi-Structured Interview Question List \*UK P2B Investors.

<sup>106</sup> Also referred to as an 'auto-bidding tool' on some platforms.

until *after* the investor has made the first investment on the platform so is not a consequential form of trust at the time of the initial investment.

The very low level of product usage by investors indicates process-based trust is not present in UK P2B lending activity. Furthermore, investors who have started investing more recently are more likely to use automated tools for selecting P2B loan investments. For example, more than 70% of new investors on the largest lending platform elect to use the automated tool which will further reduce the likelihood that investors use the products of the firms they are lending to (Hurst, 2017).

### Reputation as a Trust Indicator

The P2B online survey asked investors about the factors that were important in deciding to invest in a P2B lending platform<sup>107</sup>: *‘When choosing a [P2B] business lending platform, how important are the following factors in influencing your decision to use the platform?’* These included reputation-related factors such as the reputation of the firms and management, media articles, the opinions of financial advisors, and others they know who have used the platform. Respondents indicated the relative importance of each factor using a Lickert 5-level scale ranging from 1 for ‘Very Unimportant’ to 5 for ‘Very Important’, with the importance of in ‘word-of-mouth’ as a factor summarised in Table 6.12. In the analysis, ‘word-of-mouth’ is a proxy for *reputation* as an indicator of process-based trust. Only 2% of the respondents to the survey felt word-of-mouth was a ‘very important’ factor along with 20% indicating it was ‘important’ in selecting a platform. On a relative basis, however, ‘word-of-mouth’ is an unimportant factor for investors, with ‘media/news coverage’ as a factor considered to be slightly more important.

Figure 6.12: Factors Influencing Investors’ Decision to Use a P2B Platform

	Frequency	Valid Percent	Cumulative Percent
<b>Rely on word-of-mouth</b>			
Very Important	8	2%	2%
Important	70	20%	23%
Neutral	137	40%	62%
Unimportant	66	19%	81%
Very Unimportant	65	19%	100%
Total	346	100%	
Missing	59		
Total	405		

Overall, the analysis of survey and interview data associated with the two variables used identify the presence of process-based trust suggests it does not have a strong presence in P2B lending largely because of the intermediation of the P2B lending platforms. While P2B investors place some value on ‘word-of-mouth’ as a proxy for reputation, they do not place greater importance on it relative to other channels of information.

<sup>107</sup> See question 16 Appendix 4: Semi-Structured Interview Question List \*UK P2B Investors.

### 6.1.2.2 Presence of Characteristic-Based Trust

The presence of characteristic-based trust in P2B lending is indicated by the same variables used in the analysis of mini bond lending to reflect the social distance between borrowers and their lenders: (i) an investor's social relations with a borrower prior to investing in the loan, reflected in either a lender's *direct* social relationship as a stakeholder (as an employee, supplier or customer) with the borrower, or in a lender's *indirect* social relationship via a 3<sup>rd</sup> party connected to the borrower; and (ii) the proximity of borrowers and their investors, where the geographic distance between borrowers and their lenders is a proxy for shared community values reflecting low social distance.

#### Social Relations as a Trust Indicator

Information about P2B investors' direct and indirect social relationships with either borrowers or platforms was gathered from responses to questions about investors' personal relationships during the interviews with P2B investors<sup>108</sup>. While none of the interviewees had a prior direct or indirect social relationship with any of the borrowers, one investor was a retiree who had been working in commercial banking and had established a personal relationship with the management of a platform prior to investing that reflected their shared familiarity with commercial lending:

*...they were like real people when I spoke to [founder] and he told me what they were trying to do...We were at a meeting in London and we told him what we thought as group of us about 10 or so...it gave me confidence because I knew that they'd already worked for [a financial services company] ...and they just seemed they knew what they were talking about and I knew what they were talking about. And it just all made sense.*

P2B Investor Interviewee

While this interaction indicates the characteristic-based trust is present in the relationship between this investor and the platform operator, the analysis of survey and interview data suggests that this type of interaction was highly unusual.

Analysis of data collected from the online survey of P2B investors does not indicate that characteristic-based trust is present in P2B lending. P2B investors were asked about the relative importance of 14 considerations in making the decision to generally invest in P2B loans as a category of investment<sup>109</sup>. Table 6.13 presents the analysis of '*lending to local businesses I know/care about*'. This did not appear to be important to P2B investors, with only 5% stating it was 'very important'. While 22% of the investors surveyed described it as an 'important'

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<sup>108</sup> See question 2.5 in Appendix 5: Semi-Structured Interview Question List (UK P2B Investors).

<sup>109</sup> See question 8 in Appendix 3: UK P2B Investor Survey Questions.

factor, these same investors overwhelmingly considered ‘make a financial return’ and ‘available interest rate’ to be much more important considerations.

Table 6.13: Relative Importance of Lending to Local Companies (P2B Investors)

	Frequency	Valid Percent	Cumulative Percent
<b>Lend to local industries I know/care about</b>			
Very important	17	5%	5%
Important	77	22%	26%
Neutral	129	36%	63%
Unimportant	79	22%	85%
Very unimportant	54	15%	100%
Total	356	100%	
Missing	49		
Total	405		

This suggests P2B investors consider investing in companies with which they share values is more of a ‘nice to have’ rather than a ‘need to have’ in electing to invest in P2B loans. The approach to selecting loans described by one P2B investor supports this finding:

*I would say it's 80 percent financial decision and it's 20 percent I'm interested in the individual companies. If I see a little company, you know, struggling... and it looks like it's a good idea or something like that, then I'll lend the money. But just on a whim if I fancied it as a thing, it's not always a calculated decision. Sometimes it can just be, 'I like the look of that'.*

P2B Investor Interviewee

In summary, the analysis suggests there is relatively little evidence of characteristic-based trust production in P2B lending relationships.

### Proximity as a Trust Indicator

The second variable indicating the presence of characteristic-based trust is (again) *proximity* using the transaction data provided by the P2B lending platforms. Given the number of individual P2B investments in the data set totalled more than 8 million, the analysis clustered the distance pairs for the investments of both one-time and repeat investor in the loans of repeat borrowers from 2009 to 2015 into 16 distance brackets. A comparison of means test compared the ‘number of investments’ means and the ‘invested amount’ means for the 16 distance bracket. Figure 6.14 shows the results of the comparison of means analysis for P2B investments in the loans of repeat borrowers. The analysis does not indicate that the amount invested or number of P2B investments decreases with distance. The analysis also compared the means for the amount invested and number of investments for one-time investments in P2B loans of borrowers and also found no evidence of local bias.

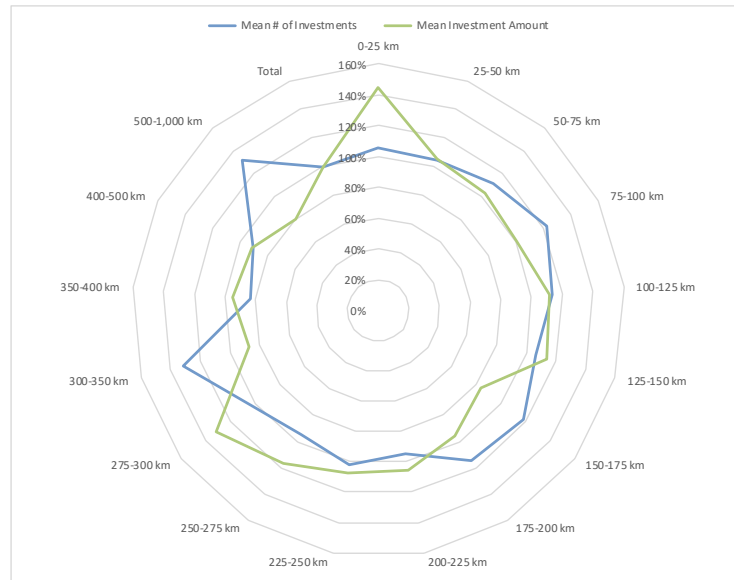


Figure 6.14: P2B Investments versus Distance to Borrower

The analysis of both the pre-existing social relations and the proximity of P2B investors to P2B borrowers finds little evidence of either, which indicates that characteristic-based trust has a weak presence in P2B lending in the UK. This is a result of the intermediating role played by the P2B platform which severs the connection between the investors and borrower, and in many cases randomly assigns loan investments to investor portfolios using algorithms aimed at avoiding bias in allocating investments to portfolios.

### 6.1.2.3 Presence of Institutional-based Trust

Section 6.1.1.3 earlier in this chapter considered the presence of institutional-based trust in mini-bond lending with a focus on firm-specific credentialisation in the form of regulatory authorisations obtained by mini-bond issuers through prospectus authorisation and, in the case of listed mini-bonds, the approval of the regulated exchange listing its bonds. In the case of P2B lending, firms as borrowers do not need regulatory approval because the solicitation of prospective borrowers is undertaken by P2B platforms which must be authorised as financial intermediaries.

The analysis of institutional-based trust in P2B lending examines whether the following three policy actions specific to P2B lending were influential signals of trustworthiness to P2B lenders in the UK market: (i) the decision by the British Business Bank, the UK government's domestic development bank created in 2011, to co-invest alongside individual investors in the P2B loans offered by selected platforms; (ii) the introduction of bespoke regulation covering the P2B lending in 2013; and (iii) the creation of the Innovate Finance tax-free Individual Savings Account (ISA) for investments in P2B loans. The data used in the analysis was collected from responses by the P2B investor interviewee responses to the following question: *How important have the following actions been in establishing the level of trust needed by you to invest in*



[crowdfunded investments]? (on a scale of 1 -5 with 1 being 'of no importance' and 5 being 'very important' for the above-mentioned policy actions).

The interviewees' overall awareness of the policy actions was high, with only one or two investors unaware of any of the three policy actions. There was significant variation in the influence of the policies on the level of interviewees' trust in P2B investments. The strongest source of trust was the bespoke regulation covering P2B lending, with 61% of interviewees indicating it increased trust and the remainder indicating it was neutral. Thirty-five percent of the interviewees stated the co-investment in P2B loans by the government-owned British Business Bank negatively-impacted trust because its investments were competing with funding from individual investors and risked creating distortion in the P2B lending market.

Data collected from the survey of P2B investors was also analysed to assess the relevance of factors seen to avoid or reduce investors' risk in P2B lending. The responses are summarised in Table 6.13 below. The importance of regulatory intervention and access to the Financial Ombudsman were perceived to be important or very important for reducing risk by 56% and 48% of the investors respectively. Only 14% of investors disagreed or strongly disagreed that these were factors for avoiding/reducing risk.

Table 6.14: Importance of Regulation and Statutory Recourse to UK P2B Investors

	Frequency	Valid Percent	Cumulative Percent
Regulatory Intervention (e.g. by FCA or government)			
Strongly Agree	79	23%	23%
Agree	117	34%	56%
Neutral	108	31%	87%
Disagree	28	8%	95%
Strongly disagree	17	5%	100%
Total	349	100%	
Missing	56		
Total	405		
Access to the Financial Ombudsman			
Strongly Agree	70	20%	20%
Agree	98	28%	48%
Neutral	131	38%	86%
Disagree	31	9%	95%
Strongly disagree	18	5%	100%
Total	348	100%	
Missing	57		
Total	405		

In summary, the analysis of both interview and survey data suggests that a significant proportion of P2B investors consider policy and regulation to be important considerations in their willingness to invest in P2B loans. These considerations are perceived to reduce the risks associated with P2B lending, particularly the regulated status of the platforms, indicating the presence of institutional-based trust produced by the platforms as intermediary mechanisms.

## 6.2 Variation in Forms of Trust Between Germany and the UK

The analysis of indicators of trust discussed in section 6.1 revealed variation in the forms of trust present in the mini-bond and P2B lending channels, which is summarised in Table 6.14. In the mini-bond lending channel, there are different trust forms present in each market. The analysis focused on the unlisted segment of the mini-bond market to enable a direct comparison of trust forms between the two economies. Characteristic-based trust appeared to have a stronger presence in the German market while process-based trust was more dominant in the UK market. The development of the listed mini-bond market, unique to Germany, appears to have benefited from institutional-based trust which investors relied on. There was little evidence of either process-based or characteristic-based trust forms present in the P2B lending channel in the UK. However, institutional-based trust produced by intermediary mechanisms such as regulation of the P2B lending platforms was relied on by investors. These differences are discussed in more detail in the following sections.

Table 6.15: Trust Forms Present in P2B and Mini-bond Lending

Forms of Trust	Indicators	P2B Lending	Mini-bond Lending		
		UK	UK	Germany	
				Unlisted	Listed
<b>Process-based</b>	Product usage	Weak	Strong	Weak	Weak
	Reputation	Weak	Weak	Strong	Unknown
<b>Characteristic-based</b>	Social relations	Weak	Weak	Weak	Weak
	Proximity	Weak	Weak	Strong	Unknown
<b>Institutional-based</b>					
<b>Firm-specific</b>	Regulatory authorisations	Weak	Weak	Weak	Strong
	Categorical membership	Weak	Weak	Strong	Strong
<b>Intermediary mechanism</b>	Regulatory authorisation	Strong	Weak	Weak	Strong

### 6.2.1 Comparison of Process-Based Trust

There are distinct differences in the types of firms that had issued mini-bonds in the UK versus Germany. A summary of the UK mini-bond issues completed since 2009 is contained in Appendix 10, and all of the UK issuers are either a consumer-facing business or in the business of producing renewable energy. Twenty of the twenty-eight UK issuers were engaged in consumer-facing business activities, and seventeen of them offered a 'coupon bonus' designed to provide an additional reward to investors that were also customers of the issuers' products and services. As such, there was a very high proportion of investors that were also customers of these issuers as was illustrated by the analysis of the UK3 data. Possibly the

most-cited example of this UK trend was the 'Burrito Bond' issued by Chilango, a UK chain of Mexican restaurants, which gave its 700 mini-bond investors the right to redeem a coupon for a 'free' burrito every month during the lifetime of the bond.

In contrast, the vast majority of both listed and unlisted mini-bonds issued in the German market were not consumer-facing business. Most were producers of industrial products in traditional industry sectors<sup>110</sup>, followed by renewable energy companies seeking funds for projects taking advantage of the generous feed-in tariffs designed to increase the production of renewable energy. As a result, few German investors had direct or indirect experience consuming the products or services of the mini-bond issuers. However, in the case of the G5 issuer the analysis revealed that there was a relatively large proportion of investors that relied on referrals and recommendations about the bonds provided by prior investors in the bonds. This suggests that the reputation effect accumulating over the 35 bonds issued by G5 produced process-based trust relied on by investors.

### **6.2.2 Comparison of Characteristic-Based Trust**

The analysis of pre-existing social relations did not indicate the presence of characteristic-based trust in the mini-bond or P2B lending channel in either country. There was local bias evident in the analysis of investor-borrower proximity in the German mini-bond channel but not in either the mini-bond or P2B lending channel in the UK market. Local bias could be an indicator of two potential sources of trust<sup>111</sup> that could help investors overcome the information asymmetry they face in purchasing mini-bonds issued by a particular firm. As mentioned previously, the presence of local bias suggests that investors in close proximity to an issuer could rely on the shared values and beliefs producing characteristic-based trust. An alternative explanation is that investors in close proximity to the issuer have access to soft information about the firm and the informational advantage over investors living further away that is relied on, which is closer in association to process-based trust. The analysis of the geocoded address data for the German investors finds that the degree of bias is related to both the size and type of firm, with the largest bias for bonds issued by smaller Mittelstand firms that do not produce consumer products. Only a very small proportion of the German investors responding to the survey indicated they had a direct or indirect connection to the issuer, which suggests that the local bias is more likely to be associated with characteristic-based trust rather than process-based trust produced by direct or indirect experience transacting with the issuer.

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<sup>110</sup> While a higher proportion of German firms are in traditional industry sectors relative to UK firms, the proportion of mini-bond issuers was larger than the broader industry composition.

<sup>111</sup> This follows Zaheer et al. (1998) in using the term organizational trust to describe the extent to which individuals trust an organization, and which depend, in part, on an expectation about the future behaviour of relevant actors within the relevant organisation.

### 6.2.3 Comparison of Institutional-Based Trust

The comparative analysis of P2B lending data indicates the regulatory environment for P2B lending in the UK is a relatively strong source of institutional-based trust. It is trust produced by the regulation of the P2B platforms as intermediaries, rather than by the borrowers, that the investors relied on in making investments. As mentioned previously, the P2B platforms in the UK play an important role in selecting the investments on behalf of a growing number of P2B investors using automated investment allocation tools which de-couple the relationship between investors and borrowers. The analysis of mini-bond data did not identify sources of institutional-based trust for mini-bond lending.

The indicators of institutional-based trust in Germany appear to be present in mini-bond lending and not P2B lending and firm-specific rather than intermediary related. The analysis of survey data indicates that German investors have greater trust in Mittelstand firms relative to other types of organisations. The UK investors' relative trust levels for SMEs is quite different, with lower trust in SMEs than coop banks and no statistically significant difference in the level of trust in SMEs relative to other types of organisations.

In the context of Zucker's conceptualisation of institutional-based firm-specific trust, the analysis suggests that a firm categorised as a 'Mittelstand firm' benefits from a form of trust credentialisation produced by shared cognition amongst Germans regarding the trustworthy attributes of Mittelstand firms. The following section investigates the foundations of this trust production.

### 6.3 Micro-Foundations of Trust Production

Chapter 5 concluded by suggesting that while the trajectories of mini-bond and P2B lending are broadly consistent with the Varieties of Capitalism framework, the framework lacks *explanatory* power because it fails to explain variation in the behavior of investors as a factor in the growth trajectories of each channel. This limitation does not detract from the *predictive* power of the VoC model, but rather reveals an opportunity to complement institutional analysis undertaken at the macro level with analysis of activity occurring at the micro level (Meyer & Jepperson, 2011; W. W. Powell & Rerup, 2013). This dissertation investigates the link between institutional arrangements at the macro level and individual behaviour at the micro level using a two-step process. First, the earlier part of this chapter discussed the dominant forms of trust present in each lending channel and how the relative strength of these forms varies between the two countries. This section analyses the social relations that underlie the institutional structure in addressing the third research question of this dissertation: *How do the social and institutional arrangements in the UK and Germany produce the forms of trust influencing the development of alternative lending channels?* The third hypothesis asserts that particular social arrangements underlie the institutional structure of each country, and these are micro-

foundations for the production of the different trust forms relied on by investors in the two countries.

### **6.3.1 Social Arrangements as Micro-Foundations for Institutional-Based trust**

According to Zucker, the production of institutional-based trust involves the 'reconstruction' of locally-produced trust into a form of trust that is exterior to any given exchange and made repeatable by common understanding (Zucker, 1986:63). She describes firm-specific institutional trust as '...[resting] on membership in a sub-culture within which carefully delineated specific expectations are expected to hold, at least in some cases based on detailed prior socialization ((Parsons, 1951)'. Zucker describes a for-profit private hospital as an example of an organization having a societal role with a high level of 'constitutive expectation' producing institutional trust: in other words, there are commonly understood expectations within society about the behaviour and actions associated with 'for-profit hospitals' that are attributed to any organization with characteristics perceived to be sufficiently similar to the set of characteristics associated with a 'for-profit hospital'.

This dissertation argues that there are similar high levels of 'constitutive expectation' attributed to 'the Mittelstand' that produce a form of institutional-based trust relied on by German investors. The third research question explores the construction of this constitutive expectation by analyzing the 'prior socialisation' upon which this the commonly-shared expectation of Mittelstand firm behaviour is based. Chapter 2 discussed the difficulties associated with solely defining the Mittelstand in quantitative terms, and the relevance of defining it as a set of common values and operating principles. The reputation of the Mittelstand as a distinct sub-culture of firms differentiated by *Mittelstand values* has been propagated globally. An internet search for 'Mittelstand' returns more than 4 million results, many from non-German sources. British commentators seem particularly obsessed about the Mittelstand, with calls for the creation of a 'British Mittelstand' regularly appearing during periods of weak economic performance in the UK (Hutton, 1996). In 2011, even the Chancellor of the Exchequer called on UK businesses 'to learn the lessons of the successful Mittelstand model' (Dakers, 2017). The Chancellor failed to appreciate, however, that the Mittelstand model is embedded in a social context in Germany that is quite different from the UK, and therefore grafting the Mittelstand model from Germany onto UK social and institutional arrangements is unlikely to produce the economic benefits he expects. German Mittelstand firms are much more integrated into the national education and training system than UK firms, and therefore the German Mittelstand model is unlikely to take root in the UK without a radical change to the UK education and training system.

A radical change to education and training in the UK, however, is a necessary but not yet sufficient condition for enabling a 'British Mittelstand' to flourish. There are other structural differences between the German and UK economies which impact on how firms behave, and

it is the interaction between firm behaviour and the observation of this behaviour that provides a micro-foundation for the production of trust in the German Mittelstand.

### **6.3.1.1 Inter-firm Collaboration and Reputation**

Business systems scholars have argued that firms located in Germany need to engage in cooperative behaviour with other firms and institutions to solve their coordination problems. Inter-firm cooperation is high because German firms tend to be more reliant on sub-contracting, and therefore need to participate in collaborative technical development (Lane & Bachmann, 1997). Collaboration is particularly critical to Mittelstand firms as a source of innovation. Prior research has found that the higher the family firm intensity in a particular region, the greater the innovation activity in that region as measured by patent filings. (Block & Spiegel, 2011). German firms support apprenticeships without poaching apprentices in order to ensure that the training system can support the future needs of all firms within an industry sector. Hence firms are motivated to act trustworthy in these networks of relationships because the cost of malfeasance is high:

Reputation is a key factor: where membership in a network is of continuing value, the participants will be deterred from providing false information lest their reputation in the network and access to it suffer. CMEs usually have extensive systems for what might be termed 'network reputational monitoring'...

(Hall & Soskice, 2001:23)

### **6.3.1.2 Spatial Distribution and Mobility**

A larger proportion of British workers than German workers move to take another job (Dustmann & Pereira, 2008). The German mini-bond investors surveyed have reported living in their current place of residence for 28 years on average, which is consistent with other data regarding the relative immobility of Germans, and despite the comparatively lower level of home ownership in Germany. By comparison, the UK mini-bond investors surveyed, similar in age to the German survey respondents, had lived in their current place of residence for an average of 20 years.

The spatial distribution of economic activity in Germany has reinforced disincentives for both workers and firms to relocate. Also, the federal education system is organised and governed at the level of the 16 regional states, and there are significant differences between the curriculums that can be a disincentive for families with school-age children to move between regions.

The low concentration of economic activity may be partly attributed to the process of new business formation in Germany. Prior researchers studying the Mittelstand have found that family owners were more likely to grow up in the region in which their firm is located, and therefore to have stronger ties to their local communities than other types of owners (Block &

Spiegel, 2011). The institutional arrangements in Germany at the political level also reinforce the broad distribution of economic activity. Germany has a more decentralised federal system of government than the UK, with 16 federal regions having a high level of autonomy in politically governing and determining economic policy. The six regional financial exchanges in Germany are as good illustration of this autonomous governance, with each region separately responsible for the regulatory oversight of the exchange located in its region. By contrast, the UK has struggled for decades with a north-south divide in economic activity levels, which has resulted in a steady migration of the population from the north to the south east of England where economic activity is concentrated in search of employment opportunities (Gardiner, Martin, Sunley, & Tyler, 2013).

This level of immobility combined with more distributed economic activity influence the strength of social sanctions within local communities that punish malfeasance by Mittelstand owners. Local investors aware of these social sanctions are more confident that Mittelstand owners are likely to act in ways that avoid these sanctions, including defaulting on a repayment obligation to local bonds investors. As Portes (1994, p. 430) argues, "Trust in informal exchanges is generated by both shared identities and feelings and by the expectation that fraudulent actions will be penalized by the exclusion of the violator from key social networks."

A conceptual model of the structural process described above is illustrated in Figure 6.15. The central tenets of this model are: (i) normative Mittelstand behaviour is trustworthy because these firms are highly dependent on accessing inter-firm collaborations to function and not face exclusionary sanctions for malfeasance; (ii) social sanctions are strong as a result of labour and firm immobility produced by deep divisions of labor and specialization; (iii) the vocational education and training (VET) system is a platform which enables 'prior socialisation' through observation of trustworthy behaviour at close proximity for an extended period of time. It is this combination of elements which forms the 'constitutive expectation' of Mittelstand behaviour commonly shared by Germans. The VET systems of Germany and the UK were described in Section 2.2.2.1 of Chapter 2, and the *socialisation* role it plays in the German economy is discussed in the following section. This is then followed by a discussion of the role that categorisation processes have played as a micro-foundation of trust production.

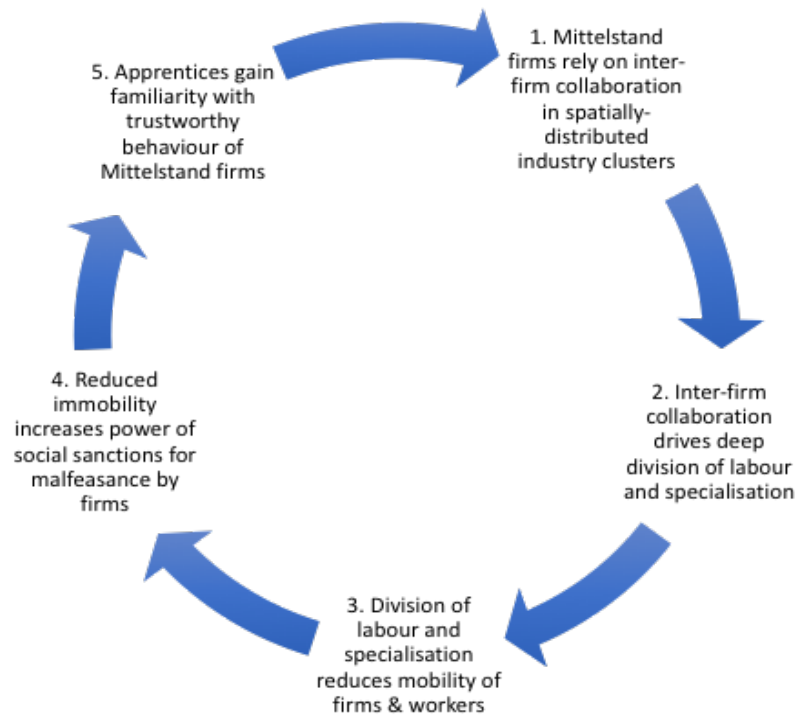


Figure 6.15: Structure Supporting Mittelstand Trust Production

### 6.3.1.3 Socialisation via Vocational Education and Training

The much higher level of participation in and length of apprenticeships in Germany produces a high level of familiarity with the culture and business practices of Mittelstand firms amongst a large proportion of the German population. The German VET system has also been a factor in Germany causing lower internal migration levels relative to the UK. German workers have not been incentivised to change employers in order to advance their careers and increase earning because the most rapid advancement opportunities have historically been with the current employer where tenure and experience with the same firm is highly valued (Dustmann & Pereira, 2008)

The analysis of the German mini-bond survey and interview data supports the argument that the education and training system has been a socialisation platform reinforcing the constitutive expectation for the behaviour of Mittelstand firms. First, the education profile of German versus UK investors reflects the broad role played by the apprenticeship system in the German economy: 63% of the G5 investors and 87% of UK3 investors had a university qualification, suggesting a higher proportion of the former received apprenticeship training in a small firm. Second, more than 80% of the German interviewees stated they had been directly engaged with Mittelstand firms during their training or working life as either apprenticeship trainees, workers, owners of Mittelstand firms, or as suppliers, customers, consultants or bankers. Of those investors having engaged with Mittelstand firms, 4 out of 5 stated that the interaction had



left them with a positive impression of Mittelstand firms generally, and felt this was a factor in their decision to invest in mini-bonds.

### 6.3.2 Categorisation as a Micro-Foundation of Trust Production

This dissertation argues that the education and training system combined with the structure of economic activity in Germany produces a form of institutional-based trust that results in the Mittelstand being perceived by German mini-bond investors as a trustworthy *category* of firms. A similar structure for trust production associated with a category is not present in the UK. While UK mini-bond investors believed the mini-bonds they invested in were issued by firms they perceived to be trustworthy, the analysis indicates the dominant trust form influencing UK mini-bond lending is either process-based or characteristic-based trust rather than institutional-based trust.

Prior research undertaken by Ezra Zuckerman has highlighted the important role played by categorisation as a social factor influencing the behaviour of investors regarding the valuation and trading of financial instruments (Zuckerman, 1999, 2004, 2012). Zuckerman argues that firms are social objects subject to a classification process that confers legitimacy via a classification system. The concept of the *categorical imperative* in institutional analysis describes the tendency of organisations to converge in their behaviour and form to fit within categorisations viewed as legitimate (DiMaggio & Powell, 1983). Zuckerman's contribution was to empirically test this conceptualisation in capital markets, where he concluded that the stock price of firms that could not be clearly associated within a defined category within an accepted taxonomy produced a discount relative to its theoretical value (the *illegitimacy discount*) (Zuckerman, 1999). Zuckerman points out that allocating firms to categories, typically undertaken by stock analysts in case of listed stocks, is also a social process because the characteristics of all firms classed as belonging to a given category will not match the ideal type attribute set of that category (Zuckerman, 2004:413). Once classified however, the attribute set associated with a category are generalised to all firms seen as belonging to that category.

This dissertation builds on the theoretical work of Zuckerman to suggest that mini-bond issuers considered to be part of the 'Mittelstand' enjoy a *legitimacy premium* because the trustworthy attributes associated with the Mittelstand as a category are attributed to all of its member regardless of whether this accurately reflects the actual trustworthiness of each firm. The analysis of German mini-bond investors data supports this view. When asked about the criteria used to define a Mittelstand company, most of the interviewees cited a broad range of positive values-based criteria that including 'responsibility', 'long-term orientation', 'innovation', or 'family ownership' and explicitly excluded quantitative criteria such as 'turnover' or 'number of employees'. Despite the varied criteria for defining a Mittelstand firm, 14 of the 17 respondents classified PCCSE, the firm issuing the bonds they had invested in, as a Mittelstand firm.

The legitimacy premium associated with Mittelstand result is that the price paid for mini-bonds issued by a Mittelstand firm is *on average* greater than the price which accurately reflects risk of non-repayment. This is not to say that the legitimacy premium is unwarranted in all cases, but rather that the bonds issued by a majority of mini-bond issuer are likely to be priced higher than they should be because these firms undeservedly benefit from an attribution of characteristics that are more positive than the actual attributes of the firms. This does not mean that the firms will not repay their loans, rather that a larger-than-anticipated number of these borrowers can be expected to default on repayment.

### **6.3.3 Miscategorisation and the Dark Side of Trust**

The legitimacy premium is a plausible explanation for the unexpectedly high default rate of bonds listed on the Mittelstand bond segments of the regional financial exchanges discussed in Chapter 2. The wave of defaults had exceeded 20% of all listed Mittelstand bonds by mid-2014, which was two to three times the default rate an investor would reasonably expect given the average interest coupon of about 7% on the defaulting bonds. Upon closer examination, however, many of the defaulting listed bond issuers were either real estate investment companies or alternative energy companies which had few, if any, of the attributes defining a Mittelstand firm as stated by the mini-bond investors interviewed for this research project. The regional exchanges were quick to establish mini-bond listing segments with titles evoking a connection to Mittelstand companies, such as the *Mittelstandsmarkt* on the Dusseldorf exchange, Bond-M on the Stuttgart exchange and Hamburg launching the *Mittelstandboerse*. The listing criteria developed by the exchange operators, however, consisted entirely of quantitative criteria that were completely unrelated to the qualitative criteria cited as attributes of a Mittelstand firm by the interviewees for this research project.

Zuckerman discusses the role played by intermediaries, such as stock analysts, as causal agents in placing issuing firms into industry categories and thereby influencing the classification of that firm by investors (Zuckerman, 2004:415). The regional exchanges in Germany may have played a similar role in legitimising the association of the firms listed in their Mittelstand bond segments with the attributes of Mittelstand firms more generally. The lack of coherence between Mittelstand values and listing criteria also introduced a moral hazard problem because the advisors, rating agencies and other actors standing to benefit from a successful listing were financially incentivised to reinforce the misattribution of 'Mittelstand values'.

The misattribution of trust-producing values to listed mini-bond issuers is an example of the detrimental outcomes produced by excessive trust, which Gargiulo and Ertung describe as 'the dark side of trust' (Gargiulo & Gokhan, 2006). They argue that trust is a double-edged sword; while it can bring benefits by reducing the need for information gathering and monitoring, or even blind faith in the extreme, a reduction in monitoring also increases the risk of

malfeasance. In the case of the listed mini-bonds in Germany, the profile data for mini-bond survey respondents indicates that most mini-bond investors are private individuals with a relatively limited level of financial sophistication who could have been expected to assume that the acceptance of the mini-bond listing into the Mittelstand segment served to substitute for much of the due diligence that would have been undertaken by a prudent investor.

This chapter investigated trust as a factor influencing development of mini-bond and P2B lending channels in the Germany and the UK following the financial crisis. The analysis followed Lynne Zucker's framework for identifying different sources of trust production using variables contained in the primary data set. The analysis revealed different forms of trust relied on by investors in each of the two channels, with the forms of trust varying between the two countries. The analysis found that mini-bond investors in the UK relied on a form of process-based trust influenced by their consumption of the issuer's product or service, while German mini-bond investors were more reliant on characteristic-based and institutional forms of trust produced by identification with issuers associated with 'Mittelstand firms' as a trusted type of firm. In the UK P2B lending channel, the analysis indicates that the intermediation of P2B platforms de-couples the relationship between investors and borrowers with the result that the primary object of trust is the P2B platform rather than borrowers. Therefore, UK P2B investors appear to rely on the regulatory framework governing the activities of the platforms as an important source of trust. The final section of the chapter concluded with an examination of the variation of social and institutional arrangements that are foundations for the different forms of trust production observed in the prior analysis. It compared the vocational education and training (VET) systems of Germany and the UK, and highlighted how unique aspects of the German VET system have contributed to establishing Mittelstand firms as a trusted type of organisation that is unique to Germany<sup>112</sup>. The concluding chapter follows with a summary of the research findings and contribution of the research to academic literature, policy-making and industry practice.

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<sup>112</sup> There are firms similar to German Mittelstand firms in Austria and some pockets of Northern Italy.

## **Chapter 7: Conclusion**

This dissertation set out to investigate the role of trust in the development of alternative lending practices in Germany and the UK following the global financial crisis of 2008. It comparatively analyses two non-bank lending channels that small and medium-sized firms (SMEs) in the two economies turned to in response to traditional bank lenders reducing their lending activities as a result of the crisis. The two forms of lending, mini-bonds and Peer-to-Business (P2B) lending, are an intriguing case study of lending practices because the funding for the loans made to the firms is provided by individuals rather than institutional investors. The project incorporated a nested mixed methods research design to comparatively examine factors influencing the development of the channels in each economy at both the macro institutional level and the micro level of groups of individual investors providing the funding for the loans. Analysing the investments of individuals in non-traditional forms of financing provided a rare opportunity to examine the relationship between firms and individuals in the communities in which these firms are embedded, and was made possible by the collection of large data sets of primary transaction, survey and interview data.

This concluding chapter summarises the findings answering the three research questions aimed at understanding how and why these channels developed in the two economies and highlights the contribution and implication of the findings for the academy, policy-makers and industry practitioners. It also discusses the limitations of the analysis and proposes directions for future research regarding cross-national finance practices and the financing of firms.

### **7.1 Summary of Findings**

Finding 1: The development of mini-bond and P2B lending has evolved very differently in Germany and the UK following the global financial crisis.

The first research question sought to identify the patterns of development of the two alternative lending channels in the UK and Germany following the financial crisis. The analysis tested the validity of the hypothesis that the trajectories of development for the two channels varied between the two countries.

The analysis examined the data collected from mini-bond issuers and P2B lending platforms to identify the lending volume characteristics of each channel from 2009 to 2015. Overall, mini-bond lending totalled approximately €8.2 billion, which was 3.5 times greater than P2B lending volume of €2.35 billion during the same time period. These volumes are arguably inconsequential when compared to lending by banks given the combined volume of mini-bond and P2B lending represents less than 1% of lending by banks to SMEs between 2009 and 2015. However, there was significant variation in their trajectories of development, with each channel being the dominant form lending in one of the two economies. Mini-bond lending was dominant in Germany with more than 97% of the total mini-bond lending volume, or about 30

times greater than the mini-bond lending volume in the UK. P2B lending was the mirror image of mini-bond lending, with more than 98% of P2B lending volume taking place in the UK, or about 40 times greater than the P2B lending volume in Germany. While mini-bond lending in Germany and P2B lending in the UK was used by firms in a wide range of industry sectors to obtain funding, mini-bond issuers in the UK were disproportionately issued by firms engaged in consumer-facing activities. Many of the UK mini-bond issuers used the bonds as a form of consumer promotion and offered 'coupon bonuses' to investors in the form of discounts on the issuer's products and services.

The analysis also revealed significant variation in the rate of growth for each channel in the 2009 to 2015 period. Mini-bond lending volume grew much faster than P2B lending volume until 2014 when the pattern reversed and P2B lending overtook mini-bond lending as the rate of P2B volume growth in the UK accelerated while the German mini-bond market collapsed. By 2015, annual P2B lending volume in the UK was estimated to represent approximately 12% of bank lending to SMEs for loans of less than £1 million.

Finding 2: The trajectories of development for the two lending channels are congruent with the Varieties of Capitalism thesis.

The first hypothesis proposed that the variation in the development of the channels between the two economies fit the propositions of the Varieties of Capitalism model. The VoC model was selected for macro-level comparative analysis because the Germany and UK economies are considered by VoC scholars to be highly representative of the ideal type coordinated market economy (CME) and liberal market economy (LME) depicting variation in the institutional arrangements across national economies.

The analysis found the development trajectories of the channels was consistent with the fundamental propositions of the VoC thesis. First, there was evidence of that the institutional arrangements in each economy offered greater institutional support for mini-bond lending in Germany and P2B lending in the UK. The policies introduced by Germany to stimulate SME growth following the crisis channelled the stimulus funding through the incumbent banking system. In contrast, the UK elected to reconfigure the 'plumbing' of SME lending flows by creating a new national development bank focused on supporting SME via financing schemes independent of the incumbent bank lenders. The addition of 'promoting competition in financial services' to the UK regulator's mandate in 2013 provided explicit support for the introduction of a regulatory framework for P2B lending with a compliance burden much below that of full-service bank lenders. In Germany, the insistence that the P2B lending be shoehorned into the existing regulatory framework, with the result that P2B platforms were forced to adopt business

models that used a 'regulated credit institution' to make the loan to a borrower<sup>113</sup>. As a result, UK P2B lending has a single level of intermediation while Germany is a two-level intermediation model with both the platform and an incumbent bank performing intermediation functions.

Second, the analysis suggests that mini-bond lending, at least in the German market, is a source of patient capital to non-financial firms<sup>114</sup>. The supply of patient capital to firms located in CMEs is a core tenant of VoC proposition that distinguishes the dominance of relationship-oriented bank lending in CMEs versus more transaction-oriented market-based lending in LMEs. Patient capital facilitates long-term investment by firms and therefore the tenor of the capital also needs to be long term. In effect, evidence of the long-term supply of funding by a lending channel is a litmus test of fit within a CME financial system. While the average duration of the loan facility is not significantly different for German SMEs versus UK SMEs versus, the duration of the relationship between German SMEs and their Hausbank is longer. This facilitates repeat lending by the Hausbank, and thus SME borrowers in Germany make long term investments that are reliant on the continual renewal of their loan facilities. The data set provided by the G5 mini-bond issuer contained the details of investments made by individuals in 35 bonds issues over an eleven-year period. The analysis found strong evidence of repeat lending behaviour with repeat investors funding accounting for 84% % of the €342.6 million raised via mini-bond issuance by G5 during the period. A characteristic defining patient capital is its continued availability independent of short-term market and firm-specific events that typically reduce the availability of capital from market-based funders. In the case of G5, repeat investors supplied more than 95% of the funding it obtained from its two mini-bonds issued in 2008 and 2009.

In contrast, the analysis revealed a low level of repeat lending by P2B investors in the UK market, and finding consistent with the market-based supply of funding to firms in LMEs. The intermediating role of P2B lending platforms increases the social distance between investors and borrowers, and over time an increasingly large proportion of P2B investors opted to use auto-selection tools designed to randomly allocate loan investments to their portfolios. The P2B platforms have thus evolved to control the P2B lending to firms. The revenue of the platforms is dependent on lending volume, and the analysis revealed that the financial performance of the platforms' loans is a critically important factor in attracting and retaining investors. The incentive structure and investor motivations in P2B lending are not conducive

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<sup>113</sup> Similar 'fronting bank' structures for P2B lending are required in other markets, including the US. The impact on German platforms has been more significant, however, as they have had greater difficulty than US platforms in getting to scale and thereby reducing the additional cost introduced by the intermediation of a fronting bank.

<sup>114</sup> As distinguished from financial firms which are typically regulated entities operating in the banking and capital markets system of economies. The types and uses of financing by financial versus non-financial firms is quite different.

to suppling patient capital, which suggests that P2B is a market-based form of lending and its dominance relative to mini-bond lending is consistent with the VoC thesis.

Finding 3: The prospect of institutional change to SME lending practices is uncertain in both economies, but is likely to be more significant in the UK than in Germany.

The financial crisis that occurred in 2008 was a shock of the type and magnitude that leads to institutional change accordingly to the institutional change literature. While there have arguably<sup>115</sup> been a number of changes to institutions in national financial systems since the crisis, this dissertation is only interested in change to the financing practices of SMEs, particularly with respect to the lending practices of incumbent bank lenders. This is a more gradual process of change that is reflected Streeck and Thelen's (2005) conceptualization of institutional change and their categorisations of the change process were used in the analysis. In this context, there has been relatively little change observed in the lending practices of German banks and the analysis suggests that the status quo is likely to continue. P2B lending volumes in Germany have been inconsequential for the banks, and the decline of the listed mini-bond market in Germany effectively eliminated the potential threat of the regional stock exchanges becoming a significant source of SME funding. The impact of P2B lending as a catalyst for SME lending practices in the UK market has been more substantial. The institutional arrangements in the UK supporting P2B lending have played an important role in signaling to the banks that these platforms, despite having relatively insignificant lending volumes at the outset, are not going to disappear. The platforms are institutional entrepreneurs playing the role of change agents, unencumbered by the structural impediments to change because they emerged from outside the incumbent system. The more fundamental question is how the platforms will challenge institutional practices over time if they become large businesses and list their shares or seek regulatory authorisation to engage in broader asset management or banking services. The findings suggest that this is likely to be a process that involves more than one type of institutional change occurring, both contemporaneously and sequentially, over the course of time.

Finding 4: The modes of trust production relied on by investors vary between the economies.

The second research question considered whether variation in the types of trust relied on by investors could explain the observed variation in the development of alternative lending channel development in each country. The hypothesis proposed that the investors providing the funding for loans rely on their perceptions of trustworthiness to avoid funding loans that will not be repaid, and the forms of trust underpinning these perceptions are different for investors

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<sup>115</sup> Whether institutional change in financial systems has really occurred is debatable. While policy and regulatory changes caused actors in the system to change behaviours, it can be argued that there has been little structural change to the financial system as a result of the crisis that has been sustained over time. To the extent that change is occurring it a result of other factors such as technological change.

in each channel. Furthermore, the hypothesis states that these forms are produced by different sources in Germany and the UK.

The analysis followed Lynn Zucker's approach of indirectly identifying the presence of trust production using a set of proxy variables contained in the primary data sets collected for the project. The production of process-based trust was indicated by investors' experience consuming the borrowers' product or services, or communication with a third party with consumption experience, prior to investing. Process-based trust was present in mini-bond lending as a result of direct experience in the UK and indirect experience in Germany, with the latter limited to the reputation of the G5 issuer communicated to investors in its previously issued bonds. The production of characteristic-based trust was indicated by the presence of proxies representing investors' familiarity with the values of borrowers. Social homophily was the theoretical context adopted for selecting the pre-existing social relations between investors and borrowers and the geographic proximity of investors to borrowers as proxies for familiarity. The analysis of investor-borrower proximity data indicated that characteristic-based trust was only present in mini-bond lending in Germany, and there was a relatively strong relationship between investor-borrower proximity with closer investor-borrower proximity for smaller firms producing industrial products. The analysis of characteristic-based trust also extended the prior analysis of repeat lending behaviour by investors to reveal a relationship between investor-borrower proximity and repeat lending behaviour of the G5 investors, with the G5 investors making more repeat investments the closer they live to G5.

The presence of the third mode of trust production, institutional-based trust, involved analysing the credentials in the form of regulatory authorisations for both the borrowers and the intermediaries in each lending channel. Regulatory authorisation as a form of credentialisation appeared to be a relatively strong form of trust production for the regulated intermediaries in the mini-bond channel in Germany (the regional financial exchanges) and the P2B lending platforms in the UK. Regulatory credentialisation of the borrowers themselves did not appear to produce trust, as P2B lenders required no such authorisation and regulatory authorisation obtained by mini-bond lenders in both countries was largely disregarded as a factor in the decision to invest in a bond. However, the analysis suggests that the qualification of German mini-bond issuers as being a member of the 'Mittelstand' category of firms is important to investors because this category of firm unique to German-speaking Europe is more trusted than other types of firms.

**Finding 5: Variation in social arrangements support different forms of trust production in each economy**

The third research question investigated the social and institutional arrangements specific to the two economies that are foundations for the production of the trust forms relied on by investors in the alternative lending channels. The analysis tested the hypothesis that different



sets of arrangements produce different forms of trust, and the variation in these arrangements in Germany versus the UK is a factor explaining the variance in the presence of trust form between the two countries. The analysis examined the social arrangements associated with the Vocational Education and Training System (VET) of each economy. The findings suggest that the arrangements in Germany, in combinations with other structural differences between the two economies, contributed to the production of institutional-based trust in the Mittelstand as a category of firms unique to Germany. The German VET system appears to facilitate a socialisation process that embeds Mittelstand firm more deeply in German society than SMEs in UK society. However, the analysis also revealed a high level of listed mini-bond defaults in Germany, which indicates that the Mittelstand as a category may be over-valued by Germans, with the result that listed mini-bond investors over-relied on this form of institutional-based trust in assessing listed mini-bond issuers.

## **7.2 Contribution of the Research Project**

This dissertation's research project makes several methodological, empirical and theoretical contributions to the academic literature, and the empirical findings also have implications for both policy-making and industry practice. These contributions are discussed in the following section.

### **7.2.1 Contribution to Academic Literature**

#### **7.2.1.1 Methodological Contribution**

The research design used in this empirical research project makes three inter-related methodological contributions to the academic literature. First, the project collected sets of primary data that are larger and more comprehensive than the primary data sets used in previous empirical studies of cross-national finance practices in the comparative institutionalism or sociology of finance literatures. Prior studies of cross-national finance practices have undertaken analysis at *either* the macro or the micro level using either secondary source aggregated macro-level data or primary data collected from relatively small-scale surveys or interviews. The collection of larger, more granular data sets provides a level of statistical significance for the findings which allows for generalisation of findings beyond the scope of studies using smaller samples of primary data.

Second, the methodological approach is empirical at both the macro and micro level of analysis using a research design that incorporated a nested mixed methods approach for the collection and analysis of the data sets. The 70 interviews with investors were nested within 1,311 survey respondents which were nested within transaction data sets containing more than 9 million investments made by individual investors in almost 30,000 loans to SMEs in the UK and Germany. The analysis of multiple data at multiple levels of analysis offers the opportunity for deeper insights than can be easily observed otherwise and thereby strengthens the validity of

the findings. A tangible example of this insight is the relationship between word-of-mouth communication amongst the G5 mini-bond investors and their investing behaviour. Analysis of the transaction data revealed a high proportion of repeat investments during the sample period, and the surveys revealed a high level of G5 investor recommendations directly related to the amount of time they owned the bond. The interviews revealed that investors waited until they had gained experience as mini-bond holders before recommending the investment to avoid damaging their personal relationships. Assessing the scale and relative strength of word-of-mouth recommendations as an indicator of process-based trust would have been more speculative with only one of these three levels of data analysis.

Third, the '2 x 2' research design comparing two finance channels across two economies is novel in studying finance practices. First, it recognises that alternative forms of financing for firms can emerge in response to dysfunction in the financial systems of *developed* economies, which extends the prior literature focused on investigating alternative finance in the context of *developing* economies<sup>116</sup>. Second, it examines *individuals* as lenders to small firms, versus prior research focusing on *corporate* actors such as banks or other corporate actors as small business lenders. Third, it comparatively analyses lending practices between *channel types* (direct versus intermediated) across two national economies (the UK versus Germany). These differentiating features of the research design provides a more granular view than prior literature comparing the financing practices of firms in the context of the 'bank-based' or 'market-based' funding channels for firms in the comparative capitalism literature.

### **7.2.1.2 Empirical Contribution**

The more granular analysis enabled by the methodological approach has yielded empirical finding that contribute to both the sociology of finance (SoF) and the comparative capitalism literatures. Examining the finance practices of groups of individuals *acting for their own account* is novel in the context of the literature. Sociology of finance scholars have studied the practices of individuals acting either in a professional capacity engaged in capital markets activities (e.g. derivatives trading) or as individual consumer of financial products and services (e.g. credit card usage). Examining individuals investing making loans to SMEs is an important contribution to the SoF literature because it provides unique insight into how the social embeddedness of firms can influence firms' access to finance. Ultimately, the willingness of individuals to provide funding is a litmus test of the perceived trustworthiness of firms within their communities.

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<sup>116</sup> A few studies of individual investors in one non-bank channel in one have been previously undertaken for the listed mini-bond market in Germany (see Lin & Viswanathan, 2013) and P2P lending in the US market (see Mietzner, Proelss, & Schweizer, 2017).

There is a growing body of comparative capitalism literature, including the Varieties of Capitalism (VoC) literature, which investigates the variation in the supply and form of patient capital across economies. Patient capital has emerged as a contested topic among scholars debating both its definition and its merits (Deeg et al., 2016) This research project informs the understanding of patient capital in several respects. First, it contributes greater understanding regarding the *forms* of patient capital. The finding clearly demonstrated that loan-based patient capital is a form of long-term financing for firms, with G5 investors in Germany supplying debt to the firm for an average of 12 years. Second, no prior research investigating the supply of patient capital has considered individual investors as a source. This is somewhat ironic given it is the funds deposited by individuals in bank accounts in the local Sparkassen and Volksbanken which are used to supply loan-based patient capital to Mittelstand firms in Germany.

Third, much of the literature referencing patient capital until relatively recently has viewed the supply of patient capital through the bank-based versus market-based economy lens, working on the assumption that it is present in the former but not in the latter. The findings of this research suggest that the supply of patient capital is available to firms in *both* types of economies, with the necessary condition being a direct (non-intermediated) relationship between the funders and recipient firms. This finding is consistent with the observation made by the editors of a Special Issue of *Socio-Economic Review* in 2016, who argued that scholars engaged in research exploring patient capital need to avoid assuming the simple bank-based versus market-based dichotomy regarding the supply of patient capital. However, the findings of this research project also highlight the influence of the institutional environment and the role played by intermediation influences the relative amount of patient capital supplied in each type of economy. While the mini-bond investors in both markets appeared to be sources of patient capital, the institutional environment was more conducive to the mini-bond channel in Germany. intermediation structures like the P2B lending platforms studied in this project are a source of institutional trust relied on by investors, they also have incentive structures that encourage transactional lending rather than relational lending.

The research findings also make an empirical contribution to the understanding of comparative advantage of national economies in the comparative capitalism literature. In the context of this research project, the findings suggest that trust can be a comparative advantage for firms in both types of economies. The obvious case for comparative advantage is the Mittelstand firms in Germany, where the higher level of perceived trustworthiness appears to provide these firms with greater access to patient capital than is available to UK firms. My findings are congruent with the argument of Barney and Hansen that the transaction cost efficiencies gained by strong trust relations are as economically valuable to a firm as any other asset that produces a costs advantage (Barney and Hansen, 1994). In Barney and Hansen's conceptualisation of trust

forms, strong trust provides sustainable advantage because it is very difficult to duplicate. They describe it as 'exogenous to a particular exchange structure...but rather, reflects the values, principles, and standards that...may reflect an exchange partner's unique history, its culture, or the personal beliefs of critical individuals associated with it' (Barney & Hansen, 1994:179). The findings of this thesis lend support to their conclusions.

While conceptually appealing, Barney and Hansen's paper is theoretical, and they provide no empirical evidence supporting their proposition. The findings of this dissertation research make an empirical contribution supporting Barney and Hansen's claim: the institutional and social arrangements contributing to the production of trust in Mittelstand firms are unique to Germany and difficult for other economies to duplicate, thereby providing Mittelstand firms with a sustainable comparative advantage relative to firms located in other economies. In contrast to Germany, SMEs in the UK have greater access to P2B lending which potentially also provides these firms with comparative advantage. The research findings reveal that P2B lending is growing rapidly partly as a result of institutional arrangements that are particular to the UK. The growing proportion of P2B loan funding provided by institutional investors introduces the possibility that it could become large enough to become a viable alternative to the incumbent bank lending system and be a catalyst for institutional change in the UK banking system for the benefit of SME borrowers.

#### **7.2.1.3 Theoretical Contribution**

In the period immediately following the 2008 financial crisis, many developed economies experienced a confluence of developments that tested the strength of their institutions. In effect, the crisis stress-tested the relationships between actors in the financial system and created a fertile environment supporting the emergence of alternative channels of finance. The heightened uncertainty produced by this institutional stress in combination with the emergence of digital transformation provides a rich context for the study of both trust and socio-economic institutions in the economy. As such, the analysis of investors behaviour and the alternative lending channels that emerged during this unique period offers a number of theoretical insights relevant to both the Varieties of Capitalism and trust literatures.

##### Theoretical Contribution to the Trust Literature

This dissertation makes three fundamental contributions to the theoretical discussions in the trust literature. First, it informs the conceptualisation of trust by shedding light on the relationship between categorisation, legitimacy and trust. Second, it contributes new insight regarding the context of trust antecedents, particularly under conditions of uncertainty. Third, it highlights the increasing influence of intermediaries in trust relations as the digitalisation of the economy enables new business models and organisational forms.

## Categorisation, Legitimacy and Trust

Contemporary trust scholars recognise there are a number of issues regarding the conceptualisation of trust and related concepts that need further elaboration (Six & Verhoest, 2017). While there is a relatively large body of literature discussing categorisation, legitimacy, and trust as separate and distinct concepts, some scholars have built on this work to clarify the distinction between pairs of trust-related concepts like legitimacy and reputation (Deepphouse & Carter, 2005). However there remains an insufficient understanding regarding the relationship of these concepts to the conceptualisation of trust, in particular the relationship between legitimacy and trust.

One outcome of this gap in the literature is the conflation of trust-related concepts like legitimacy with trustworthiness, particularly in the sociological literature (e.g. Fedina et al. 2019). The research findings in this dissertation suggest that these concepts, while inter-related, are conceptually distinct. The analysis suggests that trustors engage in a classification process to determine whether a potential counterparty belongs to a category associated with trustworthy attributes and, if so, this association confers legitimacy regarding trustworthy attributes onto the counterparty.

This distinction between classification as a *process* and the resulting legitimacy as an *antecedent* of trust is clearly illustrated in the case of the behaviour of the German mini-bond investors prior to investing. These investors assigned a set of normative attributes to *the Mittelstand* as a category which they believed were shared by all firms deemed to belong to that category. At the same time, normative Mittelstand behaviour is perceived as trustworthy, and therefore a firm classified by investors as a *Mittelstand firm* benefits from the legitimacy of that association since investors assume it will likely act in the same in the same trustworthy manner. In the context of finance, this can be conceptualised as a *legitimacy premium* given it is a tangible benefit to Mittelstand firms in the form of better access of financing than enjoyed by non Mittelstand firms.

## Temporal Context of Trust Antecedents

Within the trust literature there is a limited understanding of how context influences the functioning of trust, particularly the antecedents present in specific situations (Searle, Nienaber, & Sitkin, 2018). Some developments occurring during the period studied in this dissertation were idiosyncratic responses to the severity of the economic shock, including policy actions and regulatory reform that provided an opening for alternative channel development, particularly in the UK market. At the same time, there was an erosion in the level of perceived trustworthiness of the actors in the traditional financial system. These developments in combination created a high level of uncertainty in the economy for both investors and firms seeking financing.

The findings suggest that it is unlikely that individuals in either the UK or Germany would have been willing to risk investing their funds in alternative lending channels if either the actors in these channels were unregulated or the actors in the traditional system were highly trusted. The findings of this dissertation suggest that there is an inter-relationship between trust antecedents which can be temporal in nature, thereby facilitating trust relationships that may not have been established otherwise. The findings also suggest that the *relative level of trustworthiness* of substitutes is an important antecedent for trust.

#### Intermediary Trust Relations in the Digital Economy

In addition to the introduction of regulatory reforms and the erosion of trust in the period following the financial crisis, there occurred technological developments with the potential to create long term structural change in the financial system. These developments are effectively digitalising economic activity with the *potential* to enable more distributed and decentralised infrastructure for the transfer of value in the financial system. Technologies facilitating decentralised and distributed value exchange, such as blockchain systems, have been heralded by some scholars as ‘trustless’ systems which eliminate the need for trusted 3<sup>rd</sup> party intermediaries (Pilkington, 2016).

The impact on trust relations associated with the digitalisation of the economy has important implications for the organisation of economic activity yet remains relatively understudied by trust scholars. The P2B lending platforms analysed in this dissertation are one example of the digital platform business models and organisational forms emerging in the economy. The analysis in this dissertation indicates that the P2B platforms have significant mediating influence in their relationship between investors and borrowers despite these being referred to as a ‘peer’ relationship implying a dyadic trust relationship. While the ‘P2B’ phenomenon has been described as a ‘distributed’ form of finance contributing to the ‘democratisation’ of the financial system, the findings of this dissertation suggest that the opposite has occurred: platform business models are contributing to the centralisation of the financial system as a result of increasing influence in their trust relations with counter-parties on each side of the platform who have no direct relationship with each other. In the context of Zucker’s taxonomy, these emergent digital platforms represent powerful new forms of institutional-based trust.

#### Theoretical Contribution to the Varieties of Capitalism Framework

The findings of this dissertation make two theoretical contributions to the Varieties of Capitalism literature. First, it extends our understanding of both the *sources* and *forms* of patient capital, the presence of which is a litmus test for determining whether a given economy is an LME or a CME. Second, it informs a gap in the VoC literature regarding the financing of small firms versus large firms in the economy, with implications for the CME to LME convergence debate. Each of these contributions is discussed in more detail below.

## Sources and Forms of Patient Capital

Patient capital has emerged as a contested topic among scholars debating its definition, sources, and merits (Deeg et al., 2016) and this research project informs the conceptualisation of patient capital in several respects. First, the findings of this dissertation provide evidence that non-bank sources of patient capital, in this case individuals investing in mini-bonds, are available to firms in *both* CMEs and LMEs. However, there is extreme variation in the availability of mini bond patient capital between the two economies, with issuance volume in Germany of approximately €8.2 billion versus only €0.3 billion in the UK during the same period.

This finding provides a contrary perspective to recent literature challenging the VoC premise that the availability of patient capital is a defining characteristic of a financial system embodied in the ideal-type CME. Contributions by Deeg and Hardie to a special Issue of *Socio-Economic Review* in late 2016, for example, examined several non-bank sources of patient capital and found several forms that were similarly available to firms in both CMEs and LMEs (Deeg et al., 2016). The analysis in this dissertation clearly reveals mini bonds as a source of patient capital particular to Germany. Furthermore, the analysis suggests it acts as a compliment to rather than a substitute for bank financing, suggesting it potentially reinforces rather than undermines traditional bank financing as a source of patient capital for SMEs in CMEs like Germany.

This dissertation's findings contribute a fuller understanding of patient capital as a *social relation*. In studying sources of patient capital, researchers are confronted with the challenge of isolating the influence of relationships at the personal versus organisational level between providers and recipients of patient capital. The theoretical conceptualisations of patient capital proposed by scholars have been problematic, particularly in explaining the source of investor patience<sup>117</sup>. On the one hand, these models seek to explain patient capital in a relational context, yet on the other hand they often assume calculative investor behaviour aimed at maximising investment returns that is arguably more transactional than relational. This may reflect a bias towards assuming that the non-bank sources of patient capital are institutional rather than individual investors like those studied in this dissertation.

## Small Firms and the VoC Convergence Thesis

The propositions of the VoC model have been the subject of vigorous debate amongst scholars since Hall and Soskice's for almost 20 years since the publication of the book by Hall and Soskice, with the criticisms being more prominent than well-supported confirmations. One of the most contested VoC propositions is the claim that the institutional arrangements of CMEs and LMEs are resistant to converging, with many critics arguing financialisation in the global

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<sup>117</sup> An example is the three-step process proposed by (Deeg & Hardie, 2016) for determining the level of patience of investors.

economy leading to the encroachment of the bank-based financing of firms in CMEs by market-based forms of financing more prevalent in LMEs.

Section 2.2.1 of this dissertation highlighted the greater importance of SMEs relative to large firms in the German economy, with SMEs represent 99.5% of enterprises, 62.5% of employment and 53% of gross value production in the economy. Given that, despite their considerable weight in the economy, small and medium-sized small firms have received relatively little attention as an object of study by VoC scholars, the findings of this research project broaden the perspective of the convergence debate. While there may be some merit in this argument in relation to large firms, the analysis of financing for small firms in this research project suggests there are social and institutional arrangements particular to CMEs like Germany that are incompatible with market-based forms of financing which are additional sources of resistance to convergence.

### **7.2.2 Contribution to Policy-Making and Regulation**

The empirical findings regarding the impact of the policy and regulatory environment on the development of the alternative finance channels in the UK and Germany makes a valuable contribution to the development of evidence-based policy-making and regulation in financial services. The rapid pace of innovation in financial services has presented policy-makers and regulators with a dilemma. On the one hand, disruptive financial innovation offers the opportunity to produce positive policy outcomes, such as inclusive and sustainable development, that are less likely to be delivered by incumbent providers seeking to maintain the status quo. On the other hand, these innovations introduce new risk into the financial system, and the resource-constrained regulators in many countries are struggling to understand the consequences of these innovations.

### **7.2.3 Contribution to Industry Practice**

The empirical findings produced by the research project are relevant to the practice of several actors involved in lending to SMEs. The research findings regarding the role of credentialisation in the production of institutional trust in the UK P2B market has already influenced the market practices of some P2B platform operators in other areas of the world. For example, in April 2018 five of the largest P2B lending platforms in Singapore created an industry association at the initiative of one of the platform founders after he had been presented with some of the empirical finding of the research by the dissertation author (Singapore Fintech Association, 2018). More broadly, the research can inform start-ups introducing novel financial services products about the benefits of seeking regulation given it is potential source of trust production relied on by trustors.

Finally, the high level of defaults in the listed mini-bond market in Germany suggest that individual investors need to be aware that the process of categorisation can produce excessive



trust and thus underestimate the likelihood of negative outcomes for the trustor. The regional financial exchanges promoted these bonds as 'Mittelstand bonds' in the knowledge that investors would therefore assume the issuers were trustworthy Mittelstand companies when, in fact, many did not have the attributes of Mittelstand firms.

### **7.3 Limitations of the Analysis**

There are two limitations of the analysis that need to be highlighted. First, the ambitious scale of the primary data collection introduced some practical limitations in the amount of data that could be collected. The logistical challenges of collecting large sets of transaction, survey and interview data for two lending channels across two economies (with different languages), Individuals and SMEs are very reluctant to share data, particularly in Germany, and this was a factor in not being able to obtain either transaction data, investor survey data or interview data from P2B investors in the German market. The survey data collected from P2B platforms in Germany provided an accurate sizing of the market, however more detailed analysis of P2B investor behaviour in Germany was not possible.

Second, the scope of the analysis included the investors in the mini-bond and P2B channels but excluded an analysis of the borrowers in each channel. An analysis of the SMEs using these channels and the outcomes of the loans made could determine whether the economic impact of these loans is accretive to the loan activity in the incumbent bank lending channel. This is an important question for policy-makers in determining the level of policy support for innovation challenging incumbent practices and one that remains to be addressed.

### **7.4 Directions for Future Research**

The findings of this research project raise a number of new questions which deserve the attention of scholars in the fields of the sociology of finance and comparative institutionalism and suggest directions for future research. New forms of data are emerging that provide scholars with an unprecedented opportunity to investigate the influence of social variables on the finance practices of actors in the economy. According to IBM, 90% of the world's data has been produced in the past 24 months, and much of that data is unstructured social data (IBM, 2018). For example, this research project revealed the influential role played by word-of-mouth communication amongst investors in producing process-based trust. Additional analysis outside the scope of this dissertation suggests that certain investors may be particularly influential in propagating contagion effects resulting in clustering of new investors, and potentially offering new insight into the social mechanisms in investment decision-making. Gaining a fuller understanding of the importance of social movements in generating values as a form of characteristic-based trust also merits research.

The increasing use of advanced technology in financial intermediation raises a number of questions about the nature of trust in finance relationships. In 1994, Bill Gates made the

prescient statement that ‘banking is necessary, banks are not’<sup>118</sup>. Gates was challenging the prevailing institutional logic that *banks* were physical ‘bricks and mortar’ premises where one went to obtain the services of *banking*, such as payments, loans and deposits. Gates argued that technological advances in data communications and computer processing would enable the decoupling of banking services from bricks and mortar premises. This new logic potentially encompasses a second order effect: the fractionalisation of the activities that currently constitute *banking* operated and delivered by a broad array of actors on decentralized market infrastructure. Such an evolution of the financial system would have a profound impact on the workings of the financial system at the local, national and international level and present social scientists with a rich terrain for investigating the consequences for society of what may be a period of profound institutional change in the financial systems of economies.

There are many potential manifestations of this change deserving of research focus. The data collected for this project included information about gender participation in P2B lending, which indicates that the proportion of female business owners obtaining P2B loans may be higher than women business owners obtaining loans from banks lenders. Zucker refers to characteristic-based trust as a ‘free’ form of trust (Zucker, 1986:61). While this may be true from a trustee’s perspective, it is not true from a broader societal perspective if the source of trust relied on by lenders is characteristic-based and the lender and potential borrower are not part of the same value-sharing community. In contrast, financial innovation can also act as an inequality wedge. For example, demutualization is one potential outcome of using machine learning and artificial intelligence to more granularly define the risk categories used in the risk-based pricing of insuring or lending to individuals and firms. While these new analytics could improve access for some, they could further marginalise others.

This dissertation has drawn on the conceptualization of trust production used by Lynne Zucker in her investigation of the development of the US economy in the late nineteenth and early twentieth century. In her study, Zucker argues that institutional-based forms of trust emerged in substitution for intra-locally produced forms of trust that had lost their legitimacy as the economy underwent structural change. The empirical findings of this research project indicate the reverse can also occur. The global financial crisis was a shock that eroded institutional trust, and so many of the individual investors in this study expressing distrust in the incumbent financial system and societal institutions retrenched to making investments that relied on intra-local forms of trust. While there is some evidence that institutional-based sources of trust have recovered since the crisis, there is also evidence that distrust of institutions and retrenchment

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<sup>118</sup> This quote has been widely attributed to Gates but the dissertation author has been unable to find the original source.

to the familiar remains a powerful global phenomenon which is deserving of study across the social sciences.

## References

- ACCA. (2018). WHAT IS A FINANCIAL INSTRUMENT? Retrieved June 10, 2018, from <http://www.accaglobal.com/uk/en/student/exam-support-resources/fundamentals-exams-study-resources/f7/technical-articles/what-financial-instrument.html>
- Adam, N. (2013, July 14). Bioenergy efforts empower German villages. *Wall Street Journal*. Retrieved from <https://www.wsj.com/articles/SB10001424127887324867904578590944127144244>
- Akerlof, G. (1970). The Market for "Lemons": Quality Uncertainty and the Market Mechanism. *The Quarterly Journal of Economics*, 488–501. Retrieved from <http://www.jstor.org/stable/1879431>
- Akerlof, G. A., & Shiller, R. J. (2009). *Animal spirits : how human psychology drives the economy, and why it matters for global capitalism*. Princeton University Press. Retrieved from [https://books.google.co.uk/books?hl=en&lr=&id=2Rz\\_cuu88DwC&oi=fnd&pg=PR7&dq=animal+spirits+akerlof&ots=HvzU3N8byy&sig=xOav4fwajfnOuAN6siiv5qQHj44#v=onepage&q=animal+spirits+akerlof&f=false](https://books.google.co.uk/books?hl=en&lr=&id=2Rz_cuu88DwC&oi=fnd&pg=PR7&dq=animal+spirits+akerlof&ots=HvzU3N8byy&sig=xOav4fwajfnOuAN6siiv5qQHj44#v=onepage&q=animal+spirits+akerlof&f=false)
- Andrews, G. (2014). Zopa: Born in a barn. In *LendIt Europe* (p. 4). London (UK). Retrieved from <http://blog.lendit.com/wp-content/uploads/2014/11/Giles-Andrews-Zopa-Born-in-a-Barn.pdf>
- Arias, A., & Wen, Y. (2015). *Recovery from the Great Recession Has Varied around the World*. St. Louis.
- Arnott, S. (2011, March 31). Dale Vince : Tilting at windmills : how to turn the UK green. *The Independent*, pp. 1–2.
- Arrow, K. J. (1972). Economic Welfare and the Allocation of Resources for Invention. *Readings in Industrial Economics*, 219–236. [https://doi.org/10.1007/978-1-349-15486-9\\_13](https://doi.org/10.1007/978-1-349-15486-9_13)
- Aspara, J., & Tikkanen, H. (2010). The Role of Company Affect in Stock Investments: Towards Blind, Undemanding, Non-Comparative, and Committed Love. *Journal of Behavioral Finance*. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=epref&AN=IIFIABBA&site=ehost-live&scope=site>
- Aspara, Jaakko. (2013). The role of product and brand perceptions in stock investing: effects on investment considerations, optimism and confidence. *The Journal of Behavioral Finance*, 14(3), 195–212. Retrieved from [http://cam.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwTV29CsJADD7EJxAUX75A4dJc29wsFgd1qoNjepeMff\\_Rr-LgGLJkCN9PIHwhNOwQ8VrYebuxJTgw0GwumZMxLd8HsXnq76\\_8fvTPPzSfDmFn6zHM03W-3NpfGEBRwLrWYvKmrpaWDnWmoVGAf6KCkQBsULHqLI4heeiwZhLGTGgirUrkukU9vDTdg6NK2rpFt-Cdw3NsV\\_A03ASZIRo-AC2Wi5I](http://cam.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwTV29CsJADD7EJxAUX75A4dJc29wsFgd1qoNjepeMff_Rr-LgGLJkCN9PIHwhNOwQ8VrYebuxJTgw0GwumZMxLd8HsXnq76_8fvTPPzSfDmFn6zHM03W-3NpfGEBRwLrWYvKmrpaWDnWmoVGAf6KCkQBsULHqLI4heeiwZhLGTGgirUrkukU9vDTdg6NK2rpFt-Cdw3NsV_A03ASZIRo-AC2Wi5I)
- Atkinson, D. (2013). Lending to small businesses is unprofitable despite cheap funding to help, banks claim. Retrieved July 14, 2018, from <http://www.thisismoney.co.uk/money/news/article-2283847/Lending-small-businesses-unprofitable-banks-claim.html>
- Bacharach, M., & Gambetta, D. (2001). Trust in Signs. In K. S. Cook (Ed.), *Trust in Society* (pp. 148–184). New York, N.Y: Russel Sage Foundation.
- BaFin. (2017). BaFin Crowdlending Supervision. Retrieved December 30, 2017, from [https://www.bafin.de/EN/Aufsicht/FinTech/Crowdfunding/Crowdlending/crowdlending\\_node\\_en.html;jsessionid=D5EAB9EBDB6F4D3B88E4BADCA6F47EA5.2\\_cid381](https://www.bafin.de/EN/Aufsicht/FinTech/Crowdfunding/Crowdlending/crowdlending_node_en.html;jsessionid=D5EAB9EBDB6F4D3B88E4BADCA6F47EA5.2_cid381)
- Bagehot, W. (1873). *Lombard street: a description of the money market*. By Walter Bagehot.
- Ball, D. (2012). As Europe's Banks Stall, Companies Look Afar. *Wall Street Journal Europe*.
- Banerjee, S., Norman, B., & Carla, P. (2006). An ethical analysis of the trust relationship. In R. Bachmann & A. Zaheer (Eds.), *Handbook of Trust Research* (pp. 303–317). Cheltenham, UK: Edward Elgar Pub.
- Bank, D. (2013). *Made in Germany Special Report German SMEs : Investing in the sweet-spot of corporate Germany*.

- Barney, J. B., & Hansen, M. H. (1994). Trustworthiness as a Source of Competitive Advantage. *Strategic Management Journal*, 15(S1), 175–190. <https://doi.org/10.1002/smj.4250150912>
- Battilana, J. (2006). Agency and Institutions: The Enabling Role of Individuals' Social Position. *Organization*, 13(5), 653–676. <https://doi.org/10.1177/1350508406067008>
- Battilana, J., Leca, B., & Boxenbaum, E. (2009). How Actors Change Institutions: Towards a Theory of Institutional Entrepreneurship. *Academy of Management Annals*, 3(1), 65–107. <https://doi.org/10.5465/19416520903053598>
- Beckert, J. (2003, September 4). Economic Sociology and Embeddedness: How Shall We Conceptualize Economic Action? *Journal of Economic Issues*. Routledge. <https://doi.org/10.1080/00213624.2003.11506613>
- Beckert, J. (2005). *The Moral Embeddedness of Markets*. Cologne, Germany, Cologne. Retrieved from <http://search.proquest.com/docview/1002710799?accountid=9630>
- Behr, P., & Güttler, A. (2007). Credit Risk Assessment and Relationship Lending: An Empirical Analysis of German Small and Medium-Sized Enterprises\*. *Journal of Small Business Management*, 45(2), 194–213. <https://doi.org/10.1111/j.1540-627X.2007.00209.x>
- Behr, P., & Schmidt, R. H. (2015). *The German Banking System: Characteristics and Challenges* (Sustainable Architecture for Finance in Europe No. 32). *The Palgrave Handbook of European Banking*. Frankfurt am Main. [https://doi.org/10.1057/978-1-137-52144-6\\_21](https://doi.org/10.1057/978-1-137-52144-6_21)
- Belleflamme, P., Lambert, T., & Schwienbacher, A. (2012). *Crowdfunding: Tapping the Right Crowd*. SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.1578175>
- Bellucci, A., Borisov, A., & Zazzaro, A. (2013). Do banks price discriminate spatially? Evidence from small business lending in local credit markets. *Journal of Banking and Finance*, 37(11), 4183–4197. <https://doi.org/10.1016/j.jbankfin.2013.06.009>
- Bennett, R., & Ramsden, M. (2007). The contribution of business associations to SMEs: Strategy, bundling or reassurance? *International Small Business Journal*, 25(1), 49–76. <https://doi.org/10.1177/0266242607071781>
- Betti, M., & Gherardini, A. (2013). The spatial clustering of Crowdsourcing. In *SASE 2013*. Milan.
- Billington, I. (2013, May 24). U.K. Programs to Boost Credit Have Little Impact. *Wall Street Journal Europe*. Retrieved from <http://online.wsj.com/article/SB10001424127887324659404578502713349495582.html?KEYWORDS=uk+programs+to+boost>
- Block, J., & Spiegel, F. (2011). *Family Firms and Regional Innovation Activity: Evidence from the German Mittelstand* (MPRA No. 28604).
- Bluhm, K., & Schmidt, R. (2008). Change in SMEs: towards a new European capitalism? Basingstoke: Palgrave Macmillan. Retrieved from [http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQAEZ5YqpZorGhsWFacqpBUqJpmpIzIqVRqkmaaWoKeFggxM3UJ9Qy0tfUD6k0dxNiYErNE2VQdXMNcfcQTU7MjYeOYcSDjz1ISU9NSYo3MTOzNDOyNBRjYAF2kFPFGVjTgBEFpIGFpzjQIHEGjghLZ59I\\_yAoVwjG1SsGb2TSKywRB5bV4HjWNdQzAADoAyuS](http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQAEZ5YqpZorGhsWFacqpBUqJpmpIzIqVRqkmaaWoKeFggxM3UJ9Qy0tfUD6k0dxNiYErNE2VQdXMNcfcQTU7MjYeOYcSDjz1ISU9NSYo3MTOzNDOyNBRjYAF2kFPFGVjTgBEFpIGFpzjQIHEGjghLZ59I_yAoVwjG1SsGb2TSKywRB5bV4HjWNdQzAADoAyuS)
- BMW. (2013). *German Mittelstand: Engine of the German economy*. Berlin. Retrieved from [www.bmw.de/go/EN/german-mittelstand](http://www.bmw.de/go/EN/german-mittelstand)
- Boerse Stuttgart. (2018). Boerse Stuttgart: Bondm. Retrieved April 15, 2018, from <https://www.boerse-stuttgart.de/en/stock-exchange/segments-and-initiatives/>
- Brinkmann, J., & Hertz, T. (2010). *Das Ende verbrieftter Mezzanine-Programme*. Dusseldorf.
- Bromiley, P., & Cummings, L. L. (1995). Transactions Costs in Organizations with Trust. *Research on Negotiations in Organizations*, 5, 219–247.
- Brors, P. (2003, November 17). Eine Anleihe, bei der es um die Wurst geht (A bond, which is about the sausage). Retrieved December 18, 2017, from <http://www.handelsblatt.com/finanzen/maerkte/anleihen/grossmetzger-zimbo-verspricht-sieben-prozent-zinsen-eine-anleihe-bei-der-es-um-die-wurst-geht/2286504.html>
- Burt, R. S. (1992). *Structural Holes: The Social Structure of Competition*. Harvard University Press.

- Campbell, J. L. (2004). *Institutional change and globalization*. Princeton University Press. Retrieved from <https://books.google.co.uk/books?hl=en&lr=&id=KX718Sm2-nYC&oi=fnd&pg=PR9&dq=campbell+Institutions+and+globalization&ots=th6VMSnwY5&sig=0OBrFkawVxXFbK-fdjm2QT0O2B8#v=onepage&q=campbell+Institutions+and+globalization&f=false>
- Capita. (2013). Mini-bonds go mainstream.
- Carruthers, B. G. (2011). Sociology of Finance. *Annual Review of Sociology*, 37(1), 239. <https://doi.org/10.1146/annurev-soc-081309-150129>
- CBI. (2011). *Future Champions: Unlocking growth in the UK 's medium-sized businesses*. Retrieved from [www.cbi.org.uk](http://www.cbi.org.uk)
- CBI. (2012). *Financing for growth*.
- Chakrabarty, S., & Bass, a. E. (2014). Corporate Governance in Microfinance Institutions: Board Composition and the Ability to Face Institutional Voids. *Corporate Governance: An International Review*, 22(5), 367–386. <https://doi.org/10.1111/corg.12071>
- Chiles, T. H., & McMackin, J. F. (1996). Integrating variable risk preferences, trust, and transaction cost economics. *Academy of Management Review*, 21(1), 73–99. <https://doi.org/10.5465/AMR.1996.9602161566>
- Coleman, J. S. 1926-(James S. (1990). *Foundations of social theory*. Belknap Press of Harvard University Press. Retrieved from [http://cam.summon.serialssolutions.com/search?s.q=foundations+of+social+theory&s.f\[\]=](http://cam.summon.serialssolutions.com/search?s.q=foundations+of+social+theory&s.f[]=)
- Commerzbank. (2016). Commerzbank launches digital financing marketplace Main Funders. Retrieved December 30, 2017, from [https://www.commerzbank.com/en/hauptnavigation/presse/pressemitteilungen/archiv1/2016/quartal\\_16\\_02/presse\\_archiv\\_detail\\_16\\_02\\_59210.html](https://www.commerzbank.com/en/hauptnavigation/presse/pressemitteilungen/archiv1/2016/quartal_16_02/presse_archiv_detail_16_02_59210.html)
- Coval, J. D., & Moskowitz, T. J. (2001). The Geography of Investment: Informed Trading and Asset Prices. *The Journal of Political Economy*, 109(4), 811–841. <https://doi.org/10.1086/322088>
- Crouch, C. (2005). *Capitalist diversity and change: recombinant governance and institutional entrepreneurs*. Oxford: Oxford University Press. Retrieved from [http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQMDW1SEo2MjBNNTN NMzFIMTSzSEwzSupLTU0C1m5G4GsTQtxMfUItl31N\\_ZBKczchBqbUPFEGFTfXEGcP3eTE3HjoGEZ8SmpBWmJyWm5KUrwJaO7IzFCMgQXYP04VZ2ApKSoFUsCiUxxojDgDR4SIs0-kfxCUKwTj6hWDtzHpFZaIA0tqcCzrGuoZAABT1yqs](http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQMDW1SEo2MjBNNTN NMzFIMTSzSEwzSupLTU0C1m5G4GsTQtxMfUItl31N_ZBKczchBqbUPFEGFTfXEGcP3eTE3HjoGEZ8SmpBWmJyWm5KUrwJaO7IzFCMgQXYP04VZ2ApKSoFUsCiUxxojDgDR4SIs0-kfxCUKwTj6hWDtzHpFZaIA0tqcCzrGuoZAABT1yqs)
- Crouch, C. (2010). Complementarity. In *The Oxford Handbook of Comparative Institutional Analysis* (pp. 117–137). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199233762.003.0006>
- Crouch, C., Finegold, D., & Sako, M. (1999). The State and Skill Creation: Inevitable Failure? In C. Crouch, D. Finegold, & M. Sako (Eds.), *Are skills the answer? : the political economy of skill creation in advanced industrial countries* (pp. 109–134). Oxford UK ; Oxford University Press. Retrieved from [https://books.google.co.uk/books?hl=en&lr=&id=iIXwAwAAQBAJ&oi=fnd&pg=PP1&dq=are+skills+the+answer%3F+&ots=-XZGWX0\\_cm&sig=zPXGDtQOoloRO42WE2uNogzce2E#v=onepage&q=are+skills+the+answer%3F&f=false](https://books.google.co.uk/books?hl=en&lr=&id=iIXwAwAAQBAJ&oi=fnd&pg=PP1&dq=are+skills+the+answer%3F+&ots=-XZGWX0_cm&sig=zPXGDtQOoloRO42WE2uNogzce2E#v=onepage&q=are+skills+the+answer%3F&f=false)
- Crowdfund Insider. (2018). Crowdcube Unveils Record-Breaking 2015. Retrieved from <https://www.crowdfundinsider.com/2016/01/79869-crowdcube-unveils-record-breaking-2015-highlights/>
- Dacin, T., Goodstein, J., & Scott, R. W. (2002). Institutional Theory and Institutional Change: Introduction to the Special Research Forum. *Academy of Management Journal*, 45(1), 45–56. <https://doi.org/10.5465/amj.2002.6283388>
- Dakers, M. (2017, May 11). Telegraph Connect Small business Secrets of growth : the power of Germany ' s Mittelstand. Retrieved May 6, 2018, from <https://www.telegraph.co.uk/connect/small-business/driving-growth/secrets-growth-power-of-germany-mittelstand/>
- Damasio, A. R. (2006). *Descartes' error: emotion, reason and the human brain*. London: Vintage. Retrieved from

<http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQMabW8SZJhpapKebACs3C0jTRyCipKdUQdPSVkvkKaHNziJupT6hlpK-pH1Jp7ibEwJSaJ8qg5OYa4uyhm5yYGw8dw4gHBUpBeUpSPLC9DaykDcUYWIC941RxBtY0YcWbaWDJKQ40RZyBI8LS2SfSPwjKFYJx9YrBu5j0CkvEgQU1OJJ1DfUMAMQLKcA>

- Davis, G. F. (2012). Politics and Financial Markets. In K. Knorr Cetina & A. Preda (Eds.), *The Oxford Handbook of Sociology of the Sociology of Finance* (pp. 33–51). Oxford UK: Oxford University Press.
- Davis, G. F., & Greve, H. R. (1997). Corporate Elite Networks and Governance Changes in the 1980s. *American Journal of Sociology* 1997, 1(1), 1–37.
- de Bakker, F. G. A., den Hond, F., King, B., & Weber, K. (2013). Social Movements, Civil Society and Corporations: Taking Stock and Looking Ahead. *Organization Studies*, 34(5–6), 573–593. <https://doi.org/10.1177/0170840613479222>
- De Jong, B., Kroon, D. P., & Schilke, O. (2017). THE FUTURE OF ORGANIZATIONAL TRUST RESEARCH: A CONTENT- ANALYTIC SYNTHESIS OF SCHOLARLY RECOMMENDATIONS AND REVIEW OF RECENT DEVELOPMENTS. <https://doi.org/10.1016/j.tvj.2008.08.004>
- Deeg, R. (2005). Change from Within: German and Italian Finance in the 1990's. In W. Streeck & K. A. Thelen (Eds.), *Beyond continuity : institutional change in advanced political economies* (pp. 169–202). Oxford: Oxford University Press. Retrieved from <https://books.google.co.uk/books?hl=en&lr=&id=c84SDAAAQBAJ&oi=fnd&pg=PR9&dq=beyond+continuity+institutional+change&ots=UFKtSIWpWG&sig=F25hL-BQutCQq0ZnSgubz2lxaHl#v=onepage&q=beyond+continuity+institutional+change&f=false>
- Deeg, R. (2010). Institutional Change in Financial Systems. In G. Morgan, J. L. Campbell, C. Crouch, O. K. Pedersen, & R. Whitley (Eds.), *The Oxford Handbook of Comparative Institutional Analysis* (pp. 309–334). Oxford UK: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199233762.003.0012>
- Deeg, R. (2012). Financialisation and models of Capitalism: a comparison of the UK and Germany. In C. Lane & G. T. Wood (Eds.), *Capitalist Diversity and Diversity within Capitalism*. ABINGDON: Routledge.
- Deeg, R. (2014). Financialization and Institutional Comparison of the US and Germany Change in Capitalisms : *The Journal of Comparative Economic Studies*, 9, 47–68.
- Deeg, R., & Hardie, I. (2016). “What is patient capital and who supplies it?” *Socio-Economic Review*, 14(4), 627–645. <https://doi.org/10.1093/ser/mww025>
- Deeg, R., Hardie, I., & Maxfield, S. (2016). What is patient capital, and where does it exist? *Socio-Economic Review*, 14(4), 615–625. <https://doi.org/10.1093/ser/mww030>
- Deephouse, D. L., & Carter, S. M. (2005). An examination of differences between organizational legitimacy and organizational reputation. *Journal of Management Studies*, 42(2), 329–360. <https://doi.org/10.1111/j.1467-6486.2005.00499.x>
- Deutsche Bank. (2013). *Pricing in retail banking*. Frankfurt am Main.
- Deutsche Bundesbank. (2009). Bank Lending Survey : an interim assessment and current developments, (January), 15–30.
- DiMaggio, P. J., & Powell, W. W. (1983). The Iron Cage Revisited : Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2), 147–160.
- DiMaggio, P. J., & Powell, W. W. (1991). Introduction. In P. J. DiMaggio & W. W. Powell (Eds.), *The New Institutionalism in Organizational Analysis* (pp. 1–40). Chicago, IL: University of Chicago Press. <https://doi.org/10.2307/258726>
- Dodd, N., Aspers, P., & Anderberg, E. (2015). Introduction. In N. Dodd & P. Aspers (Eds.), *Re-Imagining Economic Sociology*. Oxford UK: Oxford University Press.
- Douhan, R., & Henrekson, M. (2010). Entrepreneurship and second-best institutions: going beyond Baumol's typology. *Journal of Evolutionary Economics*, 20(4), 629–643. <https://doi.org/10.1007/s00191-010-0174-4>
- Dunkley, E., & Evans, J. (2015). Retail investors at risk as big business enters P2P lending. Retrieved July 8, 2018, from <https://www.ft.com/content/f294fd78-007a-11e5-a908-00144feabdc0>

- Dustmann, C., & Pereira, S. S. C. (2008). Wage growth and job mobility in the United Kingdom and Germany. *Industrial and Labor Relations Review*, 3(3), 374–393. Retrieved from <http://www.jstor.org/stable/25249153>
- E&Y. (2016). *UK FinTech On the cutting edge*.
- Edelman. (2012). *Edelman Trust Barometer 2012*. New York, NY. Retrieved from <http://www.slideshare.net/EdelmanInsights/2012-edelman-trust-barometer-global-deck>
- Epstein, G. (2005). *Financialization and the world economy*. (G. Epstein, Ed.). Cheltenham: Edgar Elgar. Retrieved from <https://books.google.co.uk/books?hl=en&lr=&id=fZnQf2IBO4YC&oi=fnd&pg=PR7&dq=Financialization+and+the+World+Economy+Edited+by+Gerald+A.+Epstein&ots=4dxP0EpmKH&sig=nVn8ITIEaCF5AxmR43xmlVBIt6U>
- Eurobarometer. (2010). Eurobarometer 74.2: Europe 2020, the Financial and Economic Crisis, and Information on European Political Matters. Brussels: Inter-university Consortium for Political and Social Research (ICPSR) [distributor]. <https://doi.org/10.3886/ICPSR34242.v3>
- European Commission. (2013). *2013 SMEs ' Access to Finance survey Analytical Report*.
- European Commission. (2016). What is an SME? Retrieved January 10, 2018, from [http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition\\_de](http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_de)
- Eurostat. (2018). Statistics on small and medium-sized enterprises. Retrieved February 5, 2018, from [http://ec.europa.eu/eurostat/statistics-explained/index.php/Statistics\\_on\\_small\\_and\\_medium-sized\\_enterprises](http://ec.europa.eu/eurostat/statistics-explained/index.php/Statistics_on_small_and_medium-sized_enterprises)
- Federation of German Industries. (2018). About the BDI. Retrieved June 11, 2018, from <https://english.bdi.eu/bdi/about-us/#/article/news/our-mandate-our-mission-statement-our-assignments/>
- Fedina, L., Backes, B. L., Jun, H.-J., DeVylder, J., & Barth, R. P. (2019). Police legitimacy, trustworthiness, and associations with intimate partner violence. *POLICING-AN INTERNATIONAL JOURNAL OF POLICE STRATEGIES & MANAGEMENT*, 42(5), 901–916. <https://doi.org/10.1108/PIJPSM-04-2019-0046>
- Fink, M. (2010). Trust-based cooperation relationships between SMEs – are family firms any different? *International Journal of Entrepreneurial Venturing*, 1(4), 382–397. <https://doi.org/10.1504/IJEV.2010.032539>
- Fligstein, N. (2001). Social Skill and the Theory of Fields. *Sociological Theory*, 19(2), 105–125. <https://doi.org/10.1111/0735-2751.00132>
- Fligstein, Neil. (2015). What Kind of Re-Imagining Does Economic Sociology Need? In P. Aspers & N. Dodd (Eds.), *Re-imagining Economic Sociology* (pp. 301–316). Oxford University Press. Retrieved from [https://books.google.co.uk/books?id=gokSDAAAQBAJ&printsec=frontcover&dq=fligstein+2015&hl=en&sa=X&ved=0ahUKEwj7mpvd\\_Y\\_cAhXRY8AKHfwJD3cQ6AEIRzAF#v=onepage&q=fligstein+2015&f=false](https://books.google.co.uk/books?id=gokSDAAAQBAJ&printsec=frontcover&dq=fligstein+2015&hl=en&sa=X&ved=0ahUKEwj7mpvd_Y_cAhXRY8AKHfwJD3cQ6AEIRzAF#v=onepage&q=fligstein+2015&f=false)
- Fligstein, Neil, & Roehrkasse, A. F. (2016). The Causes of Fraud in the Financial Crisis of 2007 to 2009. *American Sociological Review*, 81(4), 617–643. <https://doi.org/10.1177/0003122416645594>
- Fombrun, C., & Shanley, M. (1990). What's in a Name? Reputation Building and Corporate Strategy. *Academy of Management Journal*, 33(2).
- Forsa. (2014). *The trust of citizens in their Sparkasse*. Berlin.
- Frankfurter Allgemeine. (2004). Privat plazierte Wertpapiere kritisch betrachten. Retrieved December 19, 2017, from <http://www.faz.net/aktuell/finanzen/anleihen-zinsen/anleihen-privat-plazierte-wertpapiere-kritisch-betrachten-1117489.html>
- Fraser, S. (2012). *The impact of the financial crisis on bank lending to SMEs*. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/34739/12-949-impact-financial-crisis-on-bank-lending-to-smes.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/34739/12-949-impact-financial-crisis-on-bank-lending-to-smes.pdf)
- Frieder, L., & Subrahmanyam, A. (2005). Brand Perceptions and the Market for Common Stock. *The Journal of Financial and Quantitative Analysis*, 40(1), 57–85. <https://doi.org/10.1017/S0022109000001745>
- Frietsch, R. (2003). *Intensivierung von Bildungsabschlüssen zwischen 1970 - 2000*. Berlin.
- Fukuyama, F. (1995). *Trust: The Social Virtues and the Creation of Prosperity*. *eweb:148571*. New York: Free Press. Retrieved from



- <https://repository.library.georgetown.edu/handle/10822/879473>
- Gardiner, B., Martin, R., Sunley, P., & Tyler, P. (2013). Spatially Unbalanced Growth in the British Economy. *Journal of Economic Geography*.
- Gargiulo, M., & Gokhan, E. (2006). The dark side of trust. In Reinhard Bachmann & A. Zaheer (Eds.), *Handbook of Trust Research* (pp. 165–186). Cheltenham, UK: Edward Elgar Pub.
- Georgarakos, D., & Pasini, G. (2011). Trust, Sociability, and Stock Market Participation\*. *Review of Finance*, 15(4), 693–725. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=66502041&site=ehost-live&scope=site>
- Giannetti, M. (2010). *Investor Protection , Equity Returns, and Financial Globalization* (Vol. 45). <https://doi.org/10.1017/S0022109009990524>
- Goldstein, A., & Fligstein, N. (2017). Financial markets as production markets: the industrial roots of the mortgage meltdown. *Socio-Economic Review*, 0(0), 1–28. <https://doi.org/10.1093/cercor/bhw393>
- Goyer, M. (2012). *Contingent Capital: Short-term Investors and the Evolution of Corporate Governance in France and Germany*. *Contingent Capital: Short-term Investors and the Evolution of Corporate Governance in France and Germany*. <https://doi.org/10.1093/acprof:oso/9780199578085.001.0001>
- Graf, L. (2018). Combined modes of gradual change: the case of academic upgrading and declining collectivism in German skill formation. *Socio-Economic Review*, 16(1), 185–205. <https://doi.org/10.1093/ser/mww044>
- Granovetter, M. (1985). Economic Action and Social Structure: The Problem of Embeddedness. *The American Journal of Sociology*, 91(3), 481–510. <https://doi.org/10.1086/228311>
- Granovetter, M. (2005). The Impact of Social Structure on Economic Outcomes. *Journal of Economic Perspectives*, 19(1), 33–50.
- Granovetter, M., & Swedberg, R. (2011). Introduction to the Third Edition. In M. Granovetter & R. Swedberg (Eds.), *The Sociology of Economic Life* (Third, p. 588). New York: Routledge. Retrieved from [https://books.google.co.uk/books?hl=en&lr=&id=\\_xZWDwAAQBAJ&oi=fnd&pg=PT9&dq=The+Sociology+of+Economic+Life&ots=mIFxSZK9m5&sig=Hr0Fn-Ee5z5SNJFTW7Zqc7Ltcww#v=onepage&q=The+Sociology+of+Economic+Life&f=false](https://books.google.co.uk/books?hl=en&lr=&id=_xZWDwAAQBAJ&oi=fnd&pg=PT9&dq=The+Sociology+of+Economic+Life&ots=mIFxSZK9m5&sig=Hr0Fn-Ee5z5SNJFTW7Zqc7Ltcww#v=onepage&q=The+Sociology+of+Economic+Life&f=false)
- Greenwood, R., & Suddaby, R. (2006). Institutional Entrepreneurship In Mature Fields: The Big Five Accounting Firms. *Academy of Management Journal*, 49(1), 27–48. <https://doi.org/10.5465/amj.2006.20785498>
- Grinblatt, M., & Keloharju, M. (2000). The investment behavior and performance of various investor types: a study of Finland's unique data set. *Journal of Financial Economics*, 55(1), 43–67. [https://doi.org/10.1016/S0304-405X\(99\)00044-6](https://doi.org/10.1016/S0304-405X(99)00044-6)
- Grinblatt, M., & Keloharju, M. (2001). How Distance, Language, and Culture Influence Stockholdings and Trades. *Journal of Finance*, 56(3), 1053–1073. <https://doi.org/10.1111/0022-1082.00355>
- Grossl, I., & Arnold, E. (2013). Depositor Behavior in Germany during the Financial Crisis - Implications of Bank Governance Models. In *SASE 2013*. Milan.
- Guiso, L., Sapienza, P., & Zingales, L. (2007). TRUSTING THE STOCK MARKET \*. *The Journal of Finance*, 63(6), 2557–2600. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1540-6261.2008.01408.x/full>
- Guseva, A. and Rona-tas, A. (2001). Uncertainty , Risk , and Trust : Russian and American Credit Card Markets Compared Author ( s ) : Alya Guseva and Akos Rona-Tas Source : American Sociological Review , Vol . 66 , No . 5 ( Oct . , 2001 ) , pp . 623-646 Published by : American Sociological Ass, 66(5), 623–646.
- Hall, P. A., & Gingerich, D. W. (2009). Varieties of Capitalism and Institutional Complementarities in the Political Economy: An Empirical Analysis. *British Journal of Political Science*, 39(03), 449. <https://doi.org/10.1017/S0007123409000672>
- Hall, P. A., & Soskice, D. (2003). Varieties of Capitalism and Institutional Change: A Response to Three Critics. *Comparative European Politics*, 1(2), 241–250. <https://doi.org/10.1057/palgrave.cep.6110010>

- Hall, P. A., & Soskice, D. W. (2001). An Introduction to Varieties of Capitalism. In P. A. Hall & D. Soskice (Eds.), *Varieties of Capitalism: the Institutional Foundations of Comparative Advantage* (pp. 1-). Oxford U6 - ctx\_ver=Z39.88-2004&ctx\_enc=info%3Aofi%2Fenc%3AUTF-8&rft\_id=info:sid/summon.serialssolutions.com&rft\_val\_fmt=info:ofi/fmt:kev:mtx:book&rft.genre=book&rft.title=Varieties+of+capitalism&rft.au=Hall%2C+Peter+A.%2C+1950&rft.au=Soskice%2C+David+W.%. Oxford University Press. Retrieved from [http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQADczkpKN05LN0yxAYwxJZkmJpomgqifR0MIctEk4xM3UJ9Qy0tfUD6k0dxNIUHFzDXH20E1Ozl2HDI\\_Ep6QWpAELh6qUpHjQddjADoQYA28iaPI3Xgl4m1gKACleHkl](http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQADczkpKN05LN0yxAYwxJZkmJpomgqifR0MIctEk4xM3UJ9Qy0tfUD6k0dxNIUHFzDXH20E1Ozl2HDI_Ep6QWpAELh6qUpHjQddjADoQYA28iaPI3Xgl4m1gKACleHkl)
- Hall, P. A., & Thelen, K. (2009). Institutional change in varieties of capitalism. *Socio-Economic Review*, 7(1), 7–34. <https://doi.org/10.1093/ser/mwn020>
- Handelsblatt. (2017). How Germany 's three-tiered banking system works. Retrieved February 2, 2018, from <https://global.handelsblatt.com/finance/how-germanys-three-tiered-banking-system-works-779275>
- Hardie, I., & Howarth, D. (2013a). Framing Market-Based Banking and the Financial Crisis. In *Market-Based Banking and the International Financial Crisis* (pp. 23–55). <https://doi.org/10.1093/acprof:oso/9780199662289.003.0002>
- Hardie, I., & Howarth, D. (2013b). Introduction: Towards a Political Economy of Banking. In I. Hardie & D. Horwath (Eds.), *Market-based banking and the international financial crisis* (p. 262). Oxford U6 - ctx\_ver=Z39.88-2004&ctx\_enc=info%3Aofi%2Fenc%3AUTF-8&rft\_id=info:sid/summon.serialssolutions.com&rft\_val\_fmt=info:ofi/fmt:kev:mtx:book&rft.genre=book&rft.title=Varieties+of+capitalism&rft.au=Hall%2C+Peter+A.%2C+1950&rft.au=Soskice%2C+David+W.%. Oxford University Press. Retrieved from <https://books.google.co.uk/books?id=Vcg4AAAAQBAJ&printsec=frontcover&dq=market-based+banking+and+the+international+financial+crisis&hl=en&sa=X&ved=0ahUKEWjt2MTPqfXWAhUjL8AKHcn-CowQ6AEIKDAA#v=onepage&q=market-based banking and the international financial c>
- Hardie, I., Howarth, D., Maxfield, S., & Verdun, A. (2013). Banks and the False Dichotomy in the Comparative Political Economy of Finance. *World Politics*, 65(4), 691–728. <https://doi.org/10.1017/S0043887113000221>
- Hardin, R. (2002). *Trust and Trustworthiness*. New York, N.Y: Russel Sage Foundation.
- Harhoff, D., & Körting, T. (1998). Lending relationships in Germany – Empirical evidence from survey data. *Journal of Banking and Finance*, 22(10), 1317–1353. [https://doi.org/10.1016/S0378-4266\(98\)00061-2](https://doi.org/10.1016/S0378-4266(98)00061-2)
- Hauswald, H., & Hack, A. (2013). Impact of Family Control/Influence on Stakeholders' Perceptions of Benevolence. *Family Business Review*, 26(4), 356–373. <https://doi.org/10.1177/0894486513477453>
- Hennecke, P., Neugerger, D., & Ulbricht, D. (2017). *The Economic and Fiscal Value of Banks* (Thunen-Series of Applied Economic Theory, No. 152 No. 152).
- Herrigel, G., & Zeitlin, J. (2010). Alternatives to varieties of capitalism. *Business History Review*. Business History Review. Retrieved from <http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQMDRJTUkzMDGxNEoG1I7AzGRikgyMi6RkS2APNy0RfIOcm6IPqGWkr6kfUmnuJsog6-Ya4uyhCyoc4wsgxy3EAzslcNdlEwMxRh4E0HrvvNKwPvDUgAeTBqw>
- Hinrikus, T. (2017). This shows just how much the banks are ripping off customers. Retrieved July 8, 2018, from <https://medium.com/transferwise-ideas/this-shows-just-how-much-the-banks-ripping-off-customers-ddd877df1b4d>
- Holliday, A. (2012). Going large on medium. Retrieved from <http://economia.icaew.com/business/going-large-on-medium>
- Hotel Chocolat. (2014). CHOCOLATE BONDS Invitation Document.
- Hotho, J., & Saka-Helmhout, A. (2016). In and Between Societies: Reconnecting Comparative Institutionalism and Organization Theory. *Organization Studies*, 017084061665583. <https://doi.org/10.1177/0170840616655832>
- Howorth, C., & Moro, A. (2012). Trustworthiness and interest rates: an empirical study of Italian SMEs. *Small Business Economics*, 39(1), 161–177.
- Huberman, G. (2001). Familiarity Breeds Investment. *The Review of Financial Studies*, 14(3),

- 659–680. <https://doi.org/10.1093/rfs/14.3.659>
- Hurley, J. (2010, July 13). Hotel Chocolat closes chocolate bond with £3.7m fundraising. *The Telegraph*. Retrieved from <http://computer.howstuffworks.com/heatsink.html>
- Hurst, S. (2017). Funding Circle to Launch New Version of Autobid & Autosell Lending , Investors Will No Longer Be Able to Choose Single Loans. Retrieved June 24, 2018, from <https://www.crowdfundinsider.com/2017/08/120862-funding-circle-set-launch-upgraded-version-existing-autobid-autosell-lending-tools/>
- Hutton, W. (1996). *The state we're in*. London (UK): Vintage.
- IBM. (2018). 90% of the worlds data has been created in the last two years. Retrieved July 11, 2018, from [https://twitter.com/JoJari\\_/status/976544080594321408/photo/1?ref\\_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E976544080594321408&ref\\_url=http%3A%2F%2Fnewsroom.ibm.com%2F2018-THINK-live-blog](https://twitter.com/JoJari_/status/976544080594321408/photo/1?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E976544080594321408&ref_url=http%3A%2F%2Fnewsroom.ibm.com%2F2018-THINK-live-blog)
- International Monetary Fund. (2011). *Germany: Technical Note on Banking Sector Structure (Financial Sector Assessment Program Update)*. Washington, D.C.
- Ivković, Z., & Weisbenner, S. (2005). Local Does as Local Is: Information Content of the Geography of Individual Investors' Common Stock Investments. *The Journal of Finance*, 60(1), 267–306. <https://doi.org/10.1111/j.1540-6261.2005.00730.x>
- Ivković, Z., & Weisbenner, S. (2007). Information Diffusion Effects in Individual Investors' Common Stock Purchases: Covet Thy Neighbors' Investment Choices. *The Review of Financial Studies*, 20(4), 1327–1357. <https://doi.org/10.1093/rfs/hhm009>
- Jackson, G., & Ram, A. (2016, May 10). Hotel Chocolat soars 28 % to sweeten London IPO market. *Financial Times*. Retrieved from <https://www.ft.com/content/736b4cac-16b1-11e6-b197-a4af20d5575e>
- Jarvenpaa, S. L., & Majchrzak, A. (2008). Knowledge Collaboration Among Professionals Protecting National Security: Role of Transactive Memories in Ego-Centered Knowledge Networks. *Organization Science*, 19(2), 260–276. <https://doi.org/10.1287/orsc.1070.0315>
- Jovanovic, F. (2012). Finance in Modern Economic Thought. In K. Knorr Cetina & A. Preda (Eds.), *The Oxford Handbook of Sociology of Finance* (pp. 546–566). Oxford UK: OUP Oxford.
- Kaserer, C., Fey, G., & Kuhn, N. (2011). *Kapitalmarktorientierung und Finanzierung mittelständischer Unternehmen*. Frankfurt am Main. Retrieved from [https://www.dai.de/files/dai\\_usercontent/dokumente/studien/2011-11 Studie Kapitalmarktorientierung Mittelstand.pdf](https://www.dai.de/files/dai_usercontent/dokumente/studien/2011-11%20Studie%20Kapitalmarktorientierung%20Mittelstand.pdf)
- Keynes, J. M. (1936). *The General Theory of Employment, Interest and Money*. Harcourt Brace.
- Kisfalvi, V., & Maguire, S. (2011). On the Nature of Institutional Entrepreneurs: Insights From the Life of Rachel Carson. *Journal of Management Inquiry*, 20(2), 152–177. <https://doi.org/10.1177/1056492610375987>
- Klagge, B., & Martin, R. (2005). Decentralized versus centralized financial systems: is there a case for local capital markets? *Journal of Economic Geography*, 5(4), 387–421. <https://doi.org/10.1093/jeg/lbh071>
- Knack, S., & Keefer, P. (1997). Does Social Capital Have an Economic Payoff? A Cross-Country Investigation. *The Quarterly Journal of Economics*, 112(4), 1251–1288.
- Knetter, B. M. M. (1989). Price Discrimination by U.S. and German Exporters. *The American Economic Review*, 79(1), 198–210.
- Knorr-Cetina, K., & Preda, A. (2005). The sociology of financial markets (p. 319). Oxford University Press.
- Knorr Cetina, K. (2012). What is a Financial Market? Global Markets as Microinstitutional and Post-Traditional Social Forms. In K. Knorr Cetina & A. Preda (Eds.), *The Oxford Handbook of the Sociology of Finance* (pp. 115–133). Oxford UK: OUP Oxford.
- Knorr Cetina, K., & Preda, A. (2012). Introduction. In *The Oxford Handbook of Sociology of Finance* (pp. 1–10). <https://doi.org/10.1093/oxfordhb/9780199590162.013.0001>
- Koch, P., Flötotto, M., Weigl, U., Ignatowski, M., Berndt, J., & Schröck, G. (2016). The road ahead - Perspectives on German banking. *McKinsey&Company*, (March), 66.
- Krippner, G. R., & Alvarez, A. S. (2007). Embeddedness and the Intellectual Projects of

- Economic Sociology. *Annual Review of Sociology*, 33(1), 219–240.  
<https://doi.org/10.1146/annurev.soc.33.040406.131647>
- Lane, C. (1998). Introduction: Theories and Issues in the Study of Trust. In C. Lane & R. Bachmann (Eds.), *Trust within and between organizations: conceptual issues and empirical applications*. Oxford: Oxford University Press. Retrieved from [http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQSE0yMTc1SjQ1T040NUm1NEpNNTI2TQHWPYmWickG4OM1QtxMfUItl31N\\_ZBKczdRBIU31xBnD93kxNx46PBFPpjEg5T01JSkeNB5eRaWJoZiDCzAvnEqAFRjGu4](http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQSE0yMTc1SjQ1T040NUm1NEpNNTI2TQHWPYmWickG4OM1QtxMfUItl31N_ZBKczdRBIU31xBnD93kxNx46PBFPpjEg5T01JSkeNB5eRaWJoZiDCzAvnEqAFRjGu4)
- Lane, C., & Bachmann, R. (1996). The Social Constitution of Trust: Supplier Relations in Britain and Germany. *Organization Studies*, 17(3), 365–395.  
<https://doi.org/10.1177/017084069601700302>
- Lane, C., & Bachmann, R. (1997). Co-operation in Inter-Firm Relations in Britain and Germany : The Role of Social Institutions. *The British Journal of Sociology*, 48(2), 226–254.
- Lane, C., & Quack, S. (2001). *How banks construct and manage risk: a sociological study of small firm lending in Britain and Germany* (Vol. no. 217.). Cambridge U6 -  
 ctx\_ver=Z39.88-2004&ctx\_enc=info%3Aofi%2Fenc%3AUTF-8&rft\_id=info:sid/summon.serialssolutions.com&rft\_val\_fmt=info:ofi/fmt:kev:mtx:book&rft.genre=book&rft.title=How+banks+construct+and+manage+risk&rft.au=Lane%2C+Christel&rft.au=Quack%2C+Sig: ESRC Centre for Business Research, University of Cambridge. Retrieved from [http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQSEtJNE80TkxLtQQV\\_pYp5mkmZkYmwIRsmZZimgy-FzDEzdQn1DLS19QPqTR3E2JgSs0TZVB1cw1x9tBNTsyNh45hxlOPPUhJT01JigdV4aAL0sUYWIA5FRxBtY0YEQBaWDhKQ40SJyBI8LS2SfSPwjKFYJx9YrBG5n0CkvEgWU1OJ51DfUMALyXKzA](http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQSEtJNE80TkxLtQQV_pYp5mkmZkYmwIRsmZZimgy-FzDEzdQn1DLS19QPqTR3E2JgSs0TZVB1cw1x9tBNTsyNh45hxlOPPUhJT01JigdV4aAL0sUYWIA5FRxBtY0YEQBaWDhKQ40SJyBI8LS2SfSPwjKFYJx9YrBG5n0CkvEgWU1OJ51DfUMALyXKzA)
- Lane, C., & Wood, G. (2012). *Capitalist diversity and diversity within capitalism* (Vol. 151). London: Routledge. Retrieved from <http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQSAOmXOPkFENjYO2aZA4a6E9KSrJINQL2NdKMU1NAG5ND3Ex9Qi0jFJ39kEpzN1EGFTfXEGcP3eTE3Hjo8EV8SmpBGrBwqEpJijcxszABVnhiDLyJoOXfeSXgbWlpADS8HoQ>
- LaPorta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1997). *Trust in Large Organizations* (NBER Working Paper Series No. 5864). *Nber Working Paper Series*. Cambridge, MA. <https://doi.org/10.1111/eoj.12267/abstract>
- Lawrence, D. Y., Pazzaglia, F., Sonpar, K., Lawrence, D. Y., & Sonpar, K. (2011). The Introduction of a Non-Traditional and Aggressive Approach to Banking : The Risks of Hubris. *Journal of Business Ethics*, 102(3), 401–420.
- Lawton, C. (2012, August 30). Germany's Mittelstand Turn to Bond Market. *Wall Street Journal*, p. 5. Retrieved from <http://online.wsj.com/article/SB40000872396390444327204577617840318215870.html?KEYWORDS=mittelstand>
- Lawton, C., & Stevens, L. (2014). German Thriftiness Vexes Banks. *Wall Street Journal (Online)*, pp. 1–2.
- Levine, R., Lin, C., & Xie, W. (2016). Corporate resilience to banking crisis the roles of trust and trade credit. *Working Paper*, (March). <https://doi.org/DOI:>
- Lin, M., & Viswanathan, S. (2013). Home Bias in Online Investments: An Empirical Study of an Online Crowd Funding Market. *SSRN Electronic Journal*, (June 2018). <https://doi.org/10.2139/ssrn.2219546>
- Luhmann, N. (1979). *Trust & power*. New York: John Wiley & Sons, Ltd. Retrieved from <http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQME8zSjVPTDRNMTNI MrEwSzFLNDBLAzaPjAxM0wzNwNexhLiZ-oRaRvqa-iGV5m5CDEypealMSm6ulc4eusmJufHQMMyx4cKDkpSTFA6tzIzMjQzEGFmDvOFWcgTUNGEtAGlhyigNNEWfgiLB09on0D4JyhWBcvWLwLia9whJxYEENjmRdQz0DAP-uKgQ>
- Luhmann, Nikolas. (1988). Familiarity, Confidence, Trust: Problems and Alternatives. In D. Gambetta (Ed.), *Trust: Making and Breaking Cooperative Relations* (pp. 94–107). New York, N.Y: Basil Blackwell.
- Manibog, C., & Foley, S. (2017, August 10). The long and winding road to economic

- recovery. *Financial Times Online*. Retrieved from <https://www.ft.com/content/c8d1d150-7869-11e7-a3e8-60495fe6ca71>
- Maurer, B. (2012). The Disunity of Finance: Alternative Practices to Western Finance. In K. (Karin) Knorr Cetina & A. Preda (Eds.), *The Oxford Handbook of Sociology of Finance* (pp. 413–430). Oxford U6 - ctx\_ver=Z39.88-2004&ctx\_enc=info%3Aofi%2Fenc%3AUTF-8&rft\_id=info:sid/summon.serialssolutions.com&rft\_val\_fmt=info:ofi/fmt:kev:mtx:book&rft.genre=book&rft.title=Varieties+of+capitalism&rft.au=Hall%2C+Peter+A.%2C+1950&rft.au=Soskice%2C+David+W.%. OUP Oxford.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An Integrative Model of Organizational Trust. *The Academy of Management Review*, 20(3), 709–734.
- McEvily, B., & Tortoriello, M. (2011). Measuring trust in organisational research: Review and recommendations. *Journal of Trust Research*, 1(1), 23–63. <https://doi.org/10.1080/21515581.2011.552424>
- McKnight, D. H., & Chervany, N. L. (2001). What trust means in e-commerce customer relationships: An interdisciplinary conceptual typology. *International Journal of Electronic Commerce*, 6(2), 35–59. <https://doi.org/10.1080/10864415.2001.11044235>
- McKnight, D. H., & Chervany, N. L. (2006). Reflections on an Initial Trust-Building Model. In *Handbook of Trust Research* (pp. 29–51). <https://doi.org/10.4337/9781847202819.00008>
- Mcknight, D. H., Cummings, L. L., & Chervany, N. L. (1998). Trust formation in new organizational relationships. *Academy of Management Review*, 23(3), 473–490. <https://doi.org/10.5465/AMR.1998.926622>
- Merrey, D. J., & Cook, S. (2012). Fostering Institutional Creativity at Multiple Levels: Towards Facilitated Institutional Bricolage. *Water Alternatives*, 5(1), 1–19. Retrieved from <http://www.water-alternatives.org/index.php/volume5/v5issue1/154-a5-1-1/file>
- Meyer, J. W., & Jepperson, R. (2011). Multiple Levels of Analysis and the Limitations of Methodological Individualisms. *Sociological Theory*, 29(1), 54–73.
- Meyer, J. W., & Rowan, B. (1977). Institutionalized Organizations : Formal Structure as Myth and Ceremony Author ( s ): John W . Meyer and Brian Rowan Source : American Journal of Sociology , Vol . 83 , No . 2 ( Sep . , 1977 ) , pp . 340-363 Published by : The University of Chicago Press St. *American Journal of Sociology*, 83(2), 340–363. <https://doi.org/10.1086/226550>
- Mietzner, M., Proelss, J., & Schweizer, D. (2017). Hidden champions or black sheep? The role of underpricing in the German mini-bond market. *Small Business Economics*, 1–21. <https://doi.org/10.1007/s11187-016-9833-7>
- Mitchell, R. K., Agle, B., & Wood, D. J. (2018). Toward a Theory of Stakeholder Identification and Salience : Defining the Principle of Who and What Really Counts. *ACADEMY OF MANAGEMENT REVIEW*, 22(4), 853–886.
- Morgan, G. (2010). Money and Markets. In *The Oxford Handbook of Comparative Institutional Analysis*. <https://doi.org/10.1093/oxfordhb/9780199233762.003.0009>
- Morgan, G., Campbell, J. L., Crouch, C., Pedersen, O. K., & Whitley, R. (2010). Introduction. *The Oxford Handbook of Comparative Institutional Analysis*. <https://doi.org/10.1093/oxfordhb/9780199233762.003.0001>
- Morgese, D. (2015). Lending and taking security in Italy : overview. Retrieved July 5, 2018, from [https://uk.practicallaw.thomsonreuters.com/5-501-1519?transitionType=Default&contextData=\(sc.Default\)&firstPage=true&comp=pluk&bh cp=1](https://uk.practicallaw.thomsonreuters.com/5-501-1519?transitionType=Default&contextData=(sc.Default)&firstPage=true&comp=pluk&bh cp=1)
- Muniesa, F., Millo, Y., & Callon, M. (2007). An introduction to market devices.(Author abstract)(Report). *The Sociological Review*, 55(s2), 1. Retrieved from [http://primo.lib.umn.edu/primo\\_library/libweb/action/PushToAction.do?indx=2&doc=TN\\_gale\\_ofa168543225&reclid=TN\\_gale\\_ofa168543225&docs=TN\\_gale\\_ofa168543225&pushToType=Mendeley&fromEshelf=false&vid=TWINCITIES&fromMendeley=true&fromSit emap=1](http://primo.lib.umn.edu/primo_library/libweb/action/PushToAction.do?indx=2&doc=TN_gale_ofa168543225&reclid=TN_gale_ofa168543225&docs=TN_gale_ofa168543225&pushToType=Mendeley&fromEshelf=false&vid=TWINCITIES&fromMendeley=true&fromSit emap=1)
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187–221. [https://doi.org/10.1016/0304-405X\(84\)90023-0](https://doi.org/10.1016/0304-405X(84)90023-0)

- Neu, D. (1991a). New stock issues and the institutional production of trust. *Accounting, Organizations and Society*, 16(2), 185–200. [https://doi.org/10.1016/0361-3682\(91\)90013-5](https://doi.org/10.1016/0361-3682(91)90013-5)
- Neu, D. (1991b). Trust, contracting and the prospectus process. *Accounting, Organizations and Society*, 16(3), 243–256. [https://doi.org/10.1016/0361-3682\(91\)90003-W](https://doi.org/10.1016/0361-3682(91)90003-W)
- Newton, K. (2001). Trust, Social Capital, Civil Society, and Democracy, 22(2), 201–214. <https://doi.org/10.2307/1601186>
- Nooteboom, B. (2011). The Dynamics of Trust: Communication, Action and Third Parties. *Comparative Sociology*, 10(2), 166–185. <https://doi.org/10.1163/156913311X566553>
- North, D. (1997). Douglass C. North - Prize Lecture: Economic Performance through Time. Retrieved October 10, 2017, from [https://www.nobelprize.org/nobel\\_prizes/economic-sciences/laureates/1993/north-lecture.html](https://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1993/north-lecture.html)
- OECD. (2017). Population with tertiary education. <https://doi.org/10.1787/0b8f90e9-en>
- OECD. (2018). OECD Saving rate (indicator). <https://doi.org/OECD> (2018), Saving rate (indicator). doi: 10.1787/ff2e64d4-en (Accessed on 05 February 2018)
- Oxford Economics. (2014). *The UK Family Business Sector*. IFB Research Foundation and Oxford Economics.
- Parsons, T. (1951). *The social system*. Glencoe, IL: Free Press.
- Paul, D., & McDaniel, R. (2004). A Field Study of the Effect of Interpersonal Trust on Virtual Collaborative Relationship Performance. *MIS Quarterly*, 28(2), 183–227.
- Pempel, T. (1998). *Regime shift: Comparative dynamics of the Japanese political economy*. Ithica: Cornell University Press. Retrieved from <https://books.google.co.uk/books?hl=en&lr=&id=5zVDnMkSL9QC&oi=fnd&pg=PR9&dq=pempel+1998+regime+shift&ots=ybkZmvCoHV&sig=KpL4bqmnXIV1pa3KypJARztrAG8>
- Pilkington, M. (2016). Blockchain technology: Principles and applications. In *Research Handbooks on Digital Transformations* (pp. 225–253). Cheltenham, UK: Edgar Elgar. <https://doi.org/10.4337/9781784717766.00019>
- Pirson, M., & Malhotra, D. (2011). Foundations of Organizational Trust: What Matters to Different Stakeholders? *Organization Science*, 22(4), 1087–1104. <https://doi.org/10.1287/orsc.1100.0581>
- Pitluck, A. Z. (2008). Moral behavior in stock markets: Islamic finances and socially responsible investment. In K. E. Browne & B. L. Milgram (Eds.), *Economics and Morality: Anthropological Approaches* (pp. 233–255). AltaMira Press, Rowan & Littlefield Publishers. Retrieved from <http://publications.ceu.hu/sites/default/files/publications/pitluck-2008-moral-behavior-in-stock-markets.pdf>
- Polanyi, K. (1945). *Origins of our time : the great transformation*. London: V. Gollancz.
- Polanyi, K., Arensberg, C., & Pearson, H. (Eds.). (1957). *Trade and market in the early empires : Economies in history and theory*. New York: Free Press.
- Portes, A., & Sensenbrenner, J. (1993). Embeddedness and Immigration: Notes on the Social Determinants of Economic Action. *American Journal of Sociology*, 98(6), 1320–1350. <https://doi.org/10.1086/230191>
- Powell, A. (2018). *Apprenticeship statistics: England*. House of Commons Briefing Paper.
- Powell, W. W., & Rerup, C. (2013). Opening the Black Box: The Microfoundations of Institutions. *The Sage Handbook of Organizational Institutionalism*, 848.
- Preda, A. (2007). The Sociological Approach to Financial Markets. *Journal of Economic Surveys*, 21(3), 506–533. <https://doi.org/10.1111/j.1467-6419.2007.00512.x>
- Putnam, R. D., Leonardi, R., & Nanetti, R. (1993). *Making democracy work : civic traditions in modern Italy*. Princeton University Press. Retrieved from [https://books.google.co.uk/books?hl=en&lr=&id=gKZP8\\_Tp27UC&oi=fnd&pg=PP1&dq=putnam+italy+making+democracy+work&ots=5p7BmEfKZO&sig=B0H0n7CBBnEbpE-GpEKBI8Zd74g#v=onepage&q=putnam+italy+making+democracy+work&f=false](https://books.google.co.uk/books?hl=en&lr=&id=gKZP8_Tp27UC&oi=fnd&pg=PP1&dq=putnam+italy+making+democracy+work&ots=5p7BmEfKZO&sig=B0H0n7CBBnEbpE-GpEKBI8Zd74g#v=onepage&q=putnam+italy+making+democracy+work&f=false)
- Qureshi, I., Kistruck, G. M., & Bhatt, B. (2016). The Enabling and Constraining Effects of Social Ties in the Process of Institutional Entrepreneurship. *Organization Studies*, 37(3), 425–447. <https://doi.org/10.1177/0170840615613372>
- Rao, H., Monin, P., & Durand, R. (2005). Border Crossing: Bricolage and the Erosion of

- Categorical Boundaries in French Gastronomy. *American Sociological Review*, 70(6), 968–991. <https://doi.org/10.1177/000312240507000605>
- Rivera, M. T., Soderstrom, S. B., & Uzzi, B. (2010). Dynamics of Dyads in Social Networks: Assortative, Relational, and Proximity Mechanisms. *Annual Review of Sociology*, 36(1), 91–115. <https://doi.org/10.1146/annurev.soc.34.040507.134743>
- Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *ACADEMY OF MANAGEMENT REVIEW*, 23(3), 393–404. Retrieved from [http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQSDIFVRoWZhYpRilGSUmJaYmmwEauWYolMG0lmoPPmA1xM\\_UJtYz0NfVDKs3dRBIC3FxDnD10ofcA6BYAGxO6pqlGqUkGicCmhLFRooVlomlqqnEiEEAaCxagDp6hIWj6KgWYAA0TDcyS0hLNQIUw6HQ5wyQTQzEG3kTQcvG8EvC2shQA10YnjA](http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQSDIFVRoWZhYpRilGSUmJaYmmwEauWYolMG0lmoPPmA1xM_UJtYz0NfVDKs3dRBIC3FxDnD10ofcA6BYAGxO6pqlGqUkGicCmhLFRooVlomlqqnEiEEAaCxagDp6hIWj6KgWYAA0TDcyS0hLNQIUw6HQ5wyQTQzEG3kTQcvG8EvC2shQA10YnjA)
- Ryan, R. M., O’Toole, C. M., & McCann, F. (2014). Does bank market power affect SME financing constraints? *Journal of Banking and Finance*, 49, 495–505. <https://doi.org/10.1016/j.jbankfin.2013.12.024>
- Sageder, M., Mitter, C., & Feldbauer-Durstmüller, B. (2016). Image and reputation of family firms: a systematic literature review of the state of research. *Review of Managerial Science*, 1–43. <https://doi.org/10.1007/s11846-016-0216-x>
- Sako, M. (1998). Does Trust Improve Business Performance? In C. Lane & R. Bachmann (Eds.), *Trust within and between organizations: conceptual issues and empirical applications* (pp. 89–109). Oxford: Oxford University Press.
- Santander Ventures. (2016). Online working capital solution to give UK SMEs access to same day funding. Retrieved June 24, 2018, from <http://santanderinnovations.com/online-working-capital-solution-to-give-uk-smes-access-to-same-day-funding/>
- Sapienza, P., Toldra, A., & Zingales, L. (2010). *Understanding Trust*.
- Sassen, S. (2012). Global Finance and It’s Institutional Spaces. In K. Knorr Cetina & A. Preda (Eds.), *The Oxford Handbook of the Sociology of Finance* (pp. 13–32). Oxford UK.
- Schilke, O., & Cook, K. S. (2015). Sources of alliance partner trustworthiness: Integrating calculative and relational perspectives. *Strategic Management Journal*, 36(2), 276–297. <https://doi.org/10.1002/smj.2208>
- Schilke, O., Wiedenfels, G., Brettel, M., & Zucker, L. G. (2016). Interorganizational trust production contingent on product and performance uncertainty. *Socio-Economic Review*, 1(2), mww003. <https://doi.org/10.1093/ser/mww003>
- Schwartz, H. M. (2009). *Subprime nation : American power, global capital, and the housing bubble*. Cornell University Press.
- Scope Ratings. (2018). About Scope Ratings & Research. Retrieved January 28, 2018, from a quantitative analysis of the past and current financial situation of the issuer and a qualitative forward-looking analysis of the risk drivers of the company’s business and management strategy
- Searle, R., Nienaber, A.-M., & Sitkin, S. B. (2018). Implications for future directions in trust research. In R. H. Searle, A.-M. Nienaber, & S. B. Sitkin (Eds.), *The Routledge Companion to Trust*. OXFORD: Routledge.
- Seasholes, M. S., & Zhu, N. (2010). Individual Investors and Local Bias. *The Journal of Finance*, 65(5), 1987–2010. <https://doi.org/10.1111/j.1540-6261.2010.01600.x>
- Shapiro, M. M. (1985). *Foundations of the market-price system*. University Press of America. Retrieved from <https://books.google.fr/books?id=1XjuAAAAMAAJ>
- Simon, H. (1996). You Don’t Have to be German to be a “Hidden Champion.” *Business Strategy Review*, 7(2), 1–13. <https://doi.org/10.1111/j.1467-8616.1996.tb00118.x>
- Singapore Fintech Association. (2018). Singapore Fintech Association Unifies Crowdfunding Platforms. Retrieved July 11, 2018, from <http://fintechnews.sg/19060/lending/singapore-fintech-association-unifies-crowdfunding-platforms/>
- Six, F., & Verhoest, K. (2017). Trust in Regulatory Regimes. In F. Six & K. Verhoest (Eds.), *Trust in Regulatory Regimes* (pp. 1–36). Cheltenham, UK: Edward Elgar. <https://doi.org/10.4337/9781785365577>
- Skreta, V., & Veldkamp, L. (2009). Ratings shopping and asset complexity: A theory of

- ratings inflation. *Journal of Monetary Economics*, 56(5), 678–695.  
<https://doi.org/10.1016/j.jmoneco.2009.04.006>
- Slovic, P., Finucane, M., Peters, E., & MacGregor, D. G. (2002). Rational actors or rational fools: implications of the affect heuristic for behavioral economics. *Journal of Socio-Economics*, 31(4), 329–342. [https://doi.org/10.1016/S1053-5357\(02\)00174-9](https://doi.org/10.1016/S1053-5357(02)00174-9)
- Smaghi, L. B. (2013, May 30). Bank Capital is Europe's Biggest Problem. *Financial Times Online*. Retrieved from <http://blogs.ft.com/the-a-list/2013/05/30/bank-capital-is-europes-big-problem/#axzz2VjaYNdkc>
- Sorge, A. (2018). Management in Germany, the Dynamo of Europe. In *The Influence of Business Cultures in Europe* (pp. 69–113). London: Palgrave Macmillan UK.  
[https://doi.org/10.1057/978-1-137-50929-1\\_3](https://doi.org/10.1057/978-1-137-50929-1_3)
- Spence, M. (1973). Job Market Signaling. *The Quarterly Journal of Economics*, 87(3), 355.  
<https://doi.org/10.2307/1882010>
- Statista. (2017). Online banking penetration in selected European markets in 2017. Retrieved June 10, 2018, from <https://www.statista.com/statistics/222286/online-banking-penetration-in-leading-european-countries/>
- Statman, M. (2004). What Do Investors Want? *The Journal of Portfolio Management*, 30(5), 153–161. <https://doi.org/10.3905/jpm.2004.442641>
- Statman, M., Fisher, K. L., & Anginer, D. (2008). Affect in a Behavioral Asset-Pricing Model. *Financial Analysts Journal*, 64(2), 20–29. <https://doi.org/10.2469/faj.v64.n2.8>
- Steier, L. P. (2001). Family firm, plural forms of governance, and the evolving role of trust. *Family Business Review*, 14(1), 353–368. <https://doi.org/10.1111/j.1741-6248.2001.00353.x>
- Stevens, L. (2011, November 17). Moody's Downgrades 10 German Lenders. *Wall Street Journal (Online)*. Retrieved from <http://online.wsj.com/article/SB10001424052970204517204577042364011240368.html#printMode>
- Stolowy, H., Messner, M., Jeanjean, T., & Richard Baker, C. (2014). The construction of a trustworthy investment opportunity: Insights from the Madoff Fraud. *Contemporary Accounting Research*, 31(2), 354–397. <https://doi.org/10.1111/1911-3846.12039>
- Streeck, W. (2009). *Re-forming capitalism: institutional change in the German political economy*. Oxford: Oxford University Press. Retrieved from [http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQMDW1SEo2MjBNNTN NMzFIMTSzSEwzSUPLTU0C1m5G4GsTQtXmFUItI31N\\_ZBKczchBqbUPFEGVTfXEGc P3eTE3HjoGEY8-NiDIPTUIKR40F25oOtlxRhYgB3kVHEGlpKiUiAFLDvFgealM3BEWDr7RPOHQbICMK5e MXgfk15hiTiwqAZHs66hngEAeuEq2g](http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQMDW1SEo2MjBNNTN NMzFIMTSzSEwzSUPLTU0C1m5G4GsTQtXmFUItI31N_ZBKczchBqbUPFEGVTfXEGc P3eTE3HjoGEY8-NiDIPTUIKR40F25oOtlxRhYgB3kVHEGlpKiUiAFLDvFgealM3BEWDr7RPOHQbICMK5e MXgfk15hiTiwqAZHs66hngEAeuEq2g)
- Streeck, W., & Thelen, K. (2005). Introduction: Institutional Change in Advanced Political Economies. In *Beyond continuity: institutional change in advanced political economies*. Oxford: Oxford University Press. Retrieved from <http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQAEZ5YqpZorGhsWFac qpBUqJpmpIzIqVRqkmaaWoKeFggxM3UJ9Qy0tfUD6k0dxNiYErNE2VQdXMNcfbQTU7 MjYeOYcSDjz1ISU9NSYoHVimmppsB6R4yBBdhBThVnYE0DRhSQBhae4kCDxBk4Iiydf SL9g6BclRhXrxI8kUmvsEQcWfaD41nXUM8AAOPHK4Q>
- Sui, L. L.-S. (2012). Geographies of Finance: The State-Enterprise Clusters of China. In K. (Karin) Knorr Cetina & A. Preda (Eds.), *The Oxford handbook of the sociology of finance* (pp. 450–470). Oxford UK ; Oxford University Press. Retrieved from <https://books.google.co.uk/books?hl=en&lr=&id=Xv1pgZA4xH8C&oi=fnd&pg=PP1&dq=siu+sociology+of+finance+2012&ots=Ipd3ZF9f7s&sig=VwGM3kQsfaKKUFd2Tjs-rYRUF8#v=onepage&q=siu sociology of finance 2012&f=false>
- Swedberg, R. (2010). *The Role of Confidence in Finance* (CES Working Paper Series Paper #54). Ithica.
- Swedberg, R. (2012). The financial crisis in the US 2008–2009: losing and restoring confidence. *Socio-Economic Review*. <https://doi.org/10.1093/ser/mws022>
- SyndicateRoom. (2017). Mini-bonds - what are they ? Retrieved December 24, 2017, from <https://www.syndicatoroom.com/crowd-investing/mini-bonds>
- Tabellini, G. (2010). Culture and Institutions: Economic Development in the Regions of



- Europe. *Journal of the European Economic Association*, 8(4), 677–716.
- The Department for Business Innovation & Skills. (2013). *SME Access To Finance Schemes*. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/192618/bis-13-p176b-sme-access-to-finance-measures.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/192618/bis-13-p176b-sme-access-to-finance-measures.pdf)
- The Economist. (2014). German lessons. *The Economist*, 19–20. Retrieved from <http://www.economist.com/news/business/21606834-many-countries-want-mittelstand-germanys-it-not-so-easy-copy-german-lessons>
- Thomson, A. (2018). How the Mittelstand grew to accept private debt. Retrieved June 22, 2018, from <https://www.privatedebtinvestor.com>
- Tracey, P., Phillips, N., & Jarvis, O. (2011). Bridging Institutional Entrepreneurship and the Creation of New Organizational Forms: A Multilevel Model. *Organization Science*, 22(1), 60–80. <https://doi.org/10.1287/orsc.1090.0522>
- Trends in Lending*. (2014). London (UK).
- Tyler, T., & Blader, S. (2000). *Cooperation in Groups*. Routledge. <https://doi.org/10.4324/9780203782842>
- Uslaner, E. M. (2008). Trust as a Moral Value. In D. Castiglione, J. W. van Deth, & G. Wolleb (Eds.), *The handbook of social capital*. Oxford: Oxford University Press. Retrieved from [http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQSLUA1sJwKovBVj7WpgZpFoCeUYWiZZmRpZJ5imgwfwQN1OfUMtIX1M\\_pNLcTZRB1c01xNIDNzkxNx46fBEPPvEgJT01JSkeNlcHrOEMxRh4E0Hrv\\_NKwPvEUvjUZMrkWee57Z3vbrvrQ9vXSwBHPyWI](http://cam.summon.serialssolutions.com/link/0/eLvHCXMwY2BQSLUA1sJwKovBVj7WpgZpFoCeUYWiZZmRpZJ5imgwfwQN1OfUMtIX1M_pNLcTZRB1c01xNIDNzkxNx46fBEPPvEgJT01JSkeNlcHrOEMxRh4E0Hrv_NKwPvEUvjUZMrkWee57Z3vbrvrQ9vXSwBHPyWI)
- Uzzi, B. (1999). Embeddedness in the Making of Financial Capital: How Social Relations and Networks Benefit Firms Seeking Financing. *American Sociological Review*, 64(4), 481–505. Retrieved from [http://lse.summon.serialssolutions.com/link/0/eLvHCXMwY2BQMDRMSkiOM7RMMTFN MUgyNU1OSbRIMUpLTTMyTk41B-\\_hjgo3cfc2dQ4y9kEqzd1EGULcXEOcPXSh9wDoZImYGeqmpZmbWKQapBkapBgbJKaImaYkAg0ySTZKM7BISTNLNTOyNEg0NrFIM01MSzQ0MTQ0N04xAx06mZiYbGmRmGwoxsAC7Eqn8u0Tn1eRfc3brl9E1](http://lse.summon.serialssolutions.com/link/0/eLvHCXMwY2BQMDRMSkiOM7RMMTFN MUgyNU1OSbRIMUpLTTMyTk41B-_hjgo3cfc2dQ4y9kEqzd1EGULcXEOcPXSh9wDoZImYGeqmpZmbWKQapBkapBgbJKaImaYkAg0ySTZKM7BISTNLNTOyNEg0NrFIM01MSzQ0MTQ0N04xAx06mZiYbGmRmGwoxsAC7Eqn8u0Tn1eRfc3brl9E1)
- Uzzi, B., & Lancaster, R. (2004). Embeddedness and Price Formation in the Corporate Law Market. *American Sociological Review*, 69(3), 319–344.
- VDMA. (2018). About the VDMA. Retrieved June 11, 2018, from <https://www.vdma.org/en/ueber-uns#10>
- Walters, A. (1992). Confidence. In *The New Palgrave Dictionary of Money and Finance* (Vol 1, pp. 423–425). London (UK): Macmillan Press Ltd.
- Weber, M. (1963). *The Sociology of Religion*. New York, N.Y: Beacon Press.
- Wehinger, G. (2014). SMEs and the credit crunch : Current financing difficulties , policy measures by. *OECD Journal: Financial Market Trends*, 2013, 115–149.
- Welter, F., & Smallbone, D. (2015). Creative Forces for Entrepreneurship: The Role of Institutional Change Agents. *Institut Für Mittelstandsforschung (IfM) Bonn, Working Pa(1/15)*, 31. <https://doi.org/10.1287/opre.1080.0628>
- Whitley, R. (1999). *Divergent capitalisms: The social structuring and change of business systems*. OUP Oxford.
- Williams-Grut, O. (2015). Here's exactly who owns the UK 's stock markets. Retrieved February 5, 2018, from <http://uk.businessinsider.com/ons-statistics-on-uk-share-ownership-2015-9>
- Williams, A. (2017, April 5). Security concerns take fizz out of frothy 'mini-bond' market. *Financial Times Online*. Retrieved from <https://www.ft.com/content/c86db6e2-f926-11e6-bd4e-68d53499ed71>
- Williamson, O. E. (1993). Calculativeness, Trust, and Economic Organization. *Journal of Law and Economics*, 36(1), 453–486. <https://doi.org/10.1086/467284>
- Wilson, B. J., Atkins, R., & Bryant, C. (2012). Germans enjoy credit glut. *Financial Times Online*. Retrieved from <http://www.ft.com/cms/s/0/39f6d720-5bc1-11e1-a447-00144feabdc0.html#axzz2ViFUSrGa>
- Winheller. (2018). Issuance of a Securities Prospectus in Germany. Retrieved April 15, 2018, from <https://www.winheller.com/en/banking-finance-and-insurance-law/securities->

- law/securities-prospectus-germany.html
- World Bank. (2018). Commercial Bank Branches (per 100,000 adults). Retrieved February 2, 2018, from <https://data.worldbank.org/data-catalog/Population-ranking-table>
- Yale SoM. (2017). Stock Market Confidence Indices. Retrieved September 18, 2017, from <http://som.yale.edu/faculty-research/centers-initiatives/international-center-for-finance/data/stock-market-confidence-indices/stock-market-confidence-indices>
- Yang, M.-L. (2010). The Impact of Controlling Families and Family CEOs on Earnings Management. *Family Business Review*, 23(3), 266–279. <https://doi.org/10.1177/0894486510374231>
- Zajonc, R. B. (1980). Feeling and thinking: Preferences need no inferences. *American Psychologist*, 35(2), 151–175. <https://doi.org/10.1037/0003-066X.35.2.151>
- Zak, P. J., & Knack, S. (2001). TRUST AND GROWTH \*. *The Economic Journal*, 111(470), 295–321.
- Zhang, B., Baeck, P., Ziegler, T., Bone, J., & Garvey, K. (2016). *Pushing Boundaries: The 2015 UK Alternative Finance Industry Report*.
- Zucker, L. G. (1986). Production of Trust: Institutional Sources of Economic Structure, 1840-1920. *Research in Organizational Behavior*, 8, 53–111.
- Zuckerman, E. W. (1999). The Categorical Imperative : Illegitimacy Discount 1. *American Journal of Sociology*, 104(5), 1398–1438.
- Zuckerman, E. W. (2004). Structural Incoherence and Stock Market Activity. *American Sociological Review*, 69(3), 405–432.
- Zuckerman, E. W. (2012). Construction, Concentration, and (Dis)Continuities in Social Valuations. *Annual Review of Sociology*, 38, 223–245. <https://doi.org/10.1146/annurev-soc-070210-075241>
- Zukin, S., & DiMaggio, P. (1990). *Structures of capital : the social organization of the economy*. Cambridge: Cambridge University Press.
- Zysman, J. (1983). *Governments, markets, and growth : financial systems and the politics of industrial change*. Cornell University Press. Retrieved from [https://books.google.co.uk/books?hl=en&lr=&id=ACP5JFFOWsUC&oi=fnd&pg=PA7&dq=governments,+markets,+and+growth:+Financial+Systems&ots=mibHTggfAG&sig=f4NurTEgNooK8mD1SIAi5X6PR0U#v=onepage&q=governments%2C markets%2C and growth%3A Financial Systems&f=false](https://books.google.co.uk/books?hl=en&lr=&id=ACP5JFFOWsUC&oi=fnd&pg=PA7&dq=governments,+markets,+and+growth:+Financial+Systems&ots=mibHTggfAG&sig=f4NurTEgNooK8mD1SIAi5X6PR0U#v=onepage&q=governments%2C%20markets%2C%20and%20growth%3A%20Financial%20Systems&f=false)

## Appendix 1: Survey Questionnaire Distributed to German and UK P2B Lending Platforms

Platform Name/Company:				
Country:				
City/Town:				
What year did your business incorporate:				
What year did your business begin trading:				
Which of the following best describes the alternative finance activity that your platform facilitates?	Peer-to-peer business lending	Peer-to-peer consumer lending	Equity crowdfunding	Reward-based crowd-funding
How much finance in total was successfully raised by entities (e.g. individuals, businesses and other organisations) through your platform?	2015 Q1	2015 Q2	2015 Q3	2015 Q4
How much finance was successfully raised only for UK businesses (this will exclude finance raised for individuals, not for profits and non-uk businesses) ?	2015 Q1	2015 Q2	2015 Q3	2015 Q4
How many UK entities (e.g. individuals, businesses and other organisations) in total have raised finance through your platform ?	2015 Q1	2015 Q2	2015 Q3	2015 Q4
How many investors/funders (retail and institutional) have actively provided funding via your platform in 2015?				
Total Number of Active Investors/Funders that are Institutions.				
Institutional Funding: If applicable, what percentage of your platform's total funding volume is funded by an institutional investor (e.g. Bank, VC, Fund)?	2015 Q1	2015 Q2	2015 Q3	2015 Q4
Institutional Funding Average %	2015 Q1	2015 Q2	2015 Q3	2015 Q4
Institutional Funding Volumes	2015 Q1	2015 Q2	2015 Q3	2015 Q4
Platform Acceptance Rate: Of the entities (businesses/individuals/organisations) that apply to your platform, what percentage are accepted?	Acceptance Rate			
Successful Funding Rate: Of those accepted to your platform, what percentage are successful at raising funding on your platform?	Number			
Repeat Funding Rate: What percentage of entities (business/individuals/organisations) have successfully raised funds more than once on your platform?	Number			
Balance Sheet Lending: If your platform facilitates balance sheet lending what percentage of your purchased loans are subsequently sold via a securitisation or other form of refinancing?	Number			
Business Failure Rate: what percentage of businesses that raised finance have since failed despite successfully raising finance through your platform?				
Female Fundraiser: What percentage of successfully funded entities are owned or run by women?				
Female Funder: What percentage of individual funders (investors, backers or lenders) are women?				
Funder Sophistication: Based upon platform activity from 2013 through present, what percentage of funders (investors, backers or lenders) are categorized as sophisticated or high-net worth individuals?				
Auto-selection/Auto-Bidding: Based upon platform activity from 2013 through present, please indicate the percentage of investors that use auto-selection/auto-bidding when providing funds?				
Innovative Finance ISA: If applicable to your platform activities, what % additional growth in volume do you expect from the introduction of the Innovative Finance ISA in 2016?				
Average Deal Size: What is the average loan size?				
Average Number of Investors: What is the average number of participating funder/investor per loan?				
Portfolio Diversification: What is the number of loans on average in the portfolios of non-institutional funders/investors on your platform?				
Default Rate: If your platform provides debt to businesses, please indicate the historical default rate to date.				
Overseas Funding Inflow: What % of funding raised through the platform for UK-based businesses came from investors/funders outside of the UK?				
Overseas Funding Outflow: What % of funding raised through the platform went to businesses that are NOT based in the United Kingdom?				
Based on the type of alternative finance your platform operates, what are your perceptions of the following regulation?				
Perception of existing national regulation	Excessive and too strict	Adequate and appropriate		
Perception of proposed national regulation	Excessive and too strict	Adequate and appropriate		
Perception of local/state/provincial regulation (if applicable)	Excessive and too strict	Adequate and appropriate		
Perception of regulatory approach to online and social media promotion	Excessive and too strict	Adequate and appropriate		
Any other comments				
To what extent do you see the following factors as a risk to the continued growth of the alternative finance sector?				
Risk to P2B market development: Changes to regulation (beyond what has already been specified by the FCA)	Very Low Risk	Low Risk	Medium Risk	High Risk
Risk to P2B market development: Cancellation/removal of tax incentives ( i.e. SEIS, EIS, SIFR, IF ISA)	Very Low Risk	Low Risk	Medium Risk	High Risk
Risk to P2B market development: Fraud involving one or more high-profile campaigns/deals/loans	Very Low Risk	Low Risk	Medium Risk	High Risk
Risk to P2B market development: Notable increase in default rates/business failure rates	Very Low Risk	Low Risk	Medium Risk	High Risk
Risk to P2B market development: The collapse of one or more well-known platforms due to malpractice	Very Low Risk	Low Risk	Medium Risk	High Risk
Risk to P2B market development: Cyber security breach	Very Low Risk	Low Risk	Medium Risk	High Risk
Risk to P2B market development: Potential 'crowding out' of retail investors as institutionalisation accelerates	Very Low Risk	Low Risk	Medium Risk	High Risk
Open-Ended Response				

## Appendix 2: Data Field Items for UK P2B Platform Loan Transactions

<b>Borrower Details Database</b>	
<b>Field</b>	<b>Description</b>
Borrower_ID	Unique borrower ID
Borrower_Type	e.g. retail, SME, institutional etc.
Date_Registered	Date borrower registered with platform
Borrower_Gender	M/F
Borrower_Age	
Postcode	First 4 digits
Marital_Status	e.g. single, married, widowed etc.
Residential_Status	e.g. Owner occupier, tenant etc.
Employment_Status	e.g. Employed, self-employed, retired etc.
Borrower_Income	[In salary bands]
Experian_Credit_Score (FCA request)	External credit score
Funds_Borrowed	Total funds borrowed to date
SME_Years_Trading	Company years trading
SME_Sector	Sector the company operates in
SME_Employees	Number of employees in the company
SME_Value	Value of the company
SME_Ann_Rev	Annual revenue of the company

<b>Lender Details Database</b>	
<b>Field</b>	<b>Description</b>
Lender_ID	Unique lender ID
Lender_Type	e.g. retail, institutional etc
Date_Registered	Date lender registered with platform
First_Loan_Date	Date lender funded first loan
Lender_Gender	
Lender_Age	
Postcode	First 4 digits
Lender_Income	Income band of the lender
Funds_Invested	Total funds deposited to date
Q&A_Forum_Questions	Number of Q&A threads participated

<b>Borrower Loan Details Database</b>	
<b>Field</b>	<b>Description</b>
Loan_ID	Unique loan ID
Borrower_ID	Borrower ID from "Borrower Details Database"
Loan_Request_Date	Date loan requested
Loan_Drawdown_Date	Date loan drawdown
Loan_Amount	Amount funded
Loan_Repayment_Type	Amortizing, Bullet, Interest only etc.
Loan_Maturity	Term length
Interest_Rate	Interest rate charged

Drawdown_Amount	<i>Funds drawn down</i>
Loan_Status	<i>Status of loan e.g. current, repaid etc.</i>
Risk_Band	<i>e.g. A-F</i>
Loan_Purpose	<i>e.g. Debt consolidation, SME loan</i>
Property_Loan_LTV	<i>If applicable, Loan to Value ratio</i>
Secured_Loan	<i>Y/N</i>
Collateral_Information	<i>Collateral value</i>
Principal_Repaid	<i>Amount of principal repaid</i>
Interest_Repaid	<i>Amount of interest paid</i>
Safeguard_Contribution	<i>Amount contributed to Safeguard/Provision fund</i>
Platform_Fees	<i>Fees paid to platform (interest/originating fees)</i>
Date_Repaid	<i>Date loan concluded</i>
Loan_Default	<i>Y/N</i>
Q&A_Forum_Info	<i>Number of Q&amp;A threads generated</i>

<b>Lender Loan Details Database</b>	
<b>Field</b>	<b>Description</b>
<i>Loan_ID</i>	<i>Loan ID from "Borrower Loan Details Database"</i>
<i>Lender_ID</i>	<i>Lender ID from "Lender Details Database"</i>
<i>Funded_Date</i>	<i>Date lender contributed to loan</i>
<i>Loan_Amount</i>	<i>Amount lent in loan by unique lender</i>
<i>Repaid_Amount</i>	<i>Total received by lender from loan</i>
<i>Date_Repaid</i>	<i>Date loan concluded</i>

### Appendix 3: UK P2B Investor Survey Questions

1. Please select the main peer-to-peer (P2P) business lending platform you use. Your main platform is the platform you have lent through the most in 2016.

- Assetz Capital
- Funding Circle
- ThinCats
- Crowd2Fund
- FundingKnight
- RateSetter
- Folk2Folk
- Saving Stream
- LendingCrowd
- I have lent funds through another P2P business lending platform (please specify)

2. In addition to the platform that you selected above, do you use or have you previously used, other types of alternative finance platforms?

- No, I only use one platform.
- Yes, I have used another P2P business lending platform.
- Yes, I have used a P2P consumer lending platform.
- Yes, I have used a P2P property lending platform.
- Yes, I have used an equity crowdfunding platform.
- Yes, I have used an equity real estate crowdfunding model.

If you would like to identify the platforms you have used, please do so here:

3. When did you begin lending on a P2P business lending platform?

- During the last three months
- During the last year
- During 2015
- During 2014
- During 2013
- Prior to 2013



Commissioned by



4. Before investing through a P2P business lending platform, had you previously been involved in any of the following activities? Tick all that apply:

- |  |  |
|--|--|
| <input type="checkbox"/> Having a bank account or building society account   | <input type="checkbox"/> Securing grants from the public sector or donor organisations |
| <input type="checkbox"/> Having a cash savings account   | <input type="checkbox"/> Credit brokering or other credit intermediation               |
| <input type="checkbox"/> Using a cash or investment ISA  | <input type="checkbox"/> Business valuation  |
| <input type="checkbox"/> Making decisions on consumer lending  | <input type="checkbox"/> Overseeing business turnaround, recovery or administration    |
| <input type="checkbox"/> Making decisions on corporate lending   | <input type="checkbox"/> Debt collection   |
| <input type="checkbox"/> Seed equity / Venture capital or other investment in unlisted companies (including as a Business Angel) | <input type="checkbox"/> Property development  |
| <input type="checkbox"/> Wealth management or activities of a Family Office  | <input type="checkbox"/> Property investment (residential)                             |
| <input type="checkbox"/> Directorship of a company with an annual turnover of at least £1m                                       | <input type="checkbox"/> Property investment (commercial)                              |
| <input type="checkbox"/> Investment / asset management   | <input type="checkbox"/> Buy-to-Let investment   |
| <input type="checkbox"/> Providing financial advice  | <input type="checkbox"/> None of the above   |

5. When you think of the funds you are putting through the P2P business lending platform, do you describe them to yourself as any of the following?

	Completely like this	Mostly like this	A little like this	Not at all like this
Free cash/disposable income - funds left over from my current income after expenses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Money I would use for charitable or social giving	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Money from my pension pot that I've reinvested for better returns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Money I would use for gambling / betting for fun	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instant-access cash, similar to money in a bank account	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speculative, high-risk investment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Money towards retirement savings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Money towards savings on a property deposit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Money as an alternative to fixed income investing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. How much do you estimate you have lent in total through P2P business lending platforms?

- |  |  |
|--|--|
| <input type="radio"/> £10              | <input type="radio"/> £20,001 - £50,000  |
| <input type="radio"/> £11 - £50        | <input type="radio"/> £50,001 - £100,000 |
| <input type="radio"/> £51 - £100       | <input type="radio"/> £100,001-£250,000  |
| <input type="radio"/> £101 – £500      | <input type="radio"/> £250,000-£500,000  |
| <input type="radio"/> £501 – £1,000    | <input type="radio"/> £500,000 - £1m     |
| <input type="radio"/> £1,001 - £5,000  | <input type="radio"/> Over £1m           |
| <input type="radio"/> £5,001 - £20,000 | <input type="radio"/> Not Applicable     |



7. How many loans do you estimate you have participated in since you began lending?

- |                             |                                     |
|-----------------------------|-------------------------------------|
| <input type="radio"/> 1     | <input type="radio"/> 51-100        |
| <input type="radio"/> 2-3   | <input type="radio"/> 100- 150      |
| <input type="radio"/> 4-5   | <input type="radio"/> 151-200       |
| <input type="radio"/> 6-10  | <input type="radio"/> 201+          |
| <input type="radio"/> 11-50 | <input type="radio"/> I do not know |

8. How important are the following factors when making decisions about lending through a P2P business lending platform instead of investing your money elsewhere?

	Very important	important	Neutral	Unimportant	Very unimportant
Make a financial return	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Available interest rates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diversify my investment portfolio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ease of lending process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability to a secondary market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Variety of loans available	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lend to local businesses/enterprises	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lend to industries I know/care about	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Support the SME Sector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do social or environmental good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Control where my money goes and for how long	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feel my money is making a difference	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Support an alternative to big banks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Curiosity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take a punt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Thinking of the P2P business lending platform you use, how much time do you typically spend picking potential investments on the platform?

- No time – I expect my funds to be allocated automatically
- Up to twenty minutes per week
- Between twenty minutes and an hour
- Between one and two hours per week
- More than two hours but less than a full working day per week
- Between a full working day and two working days per week
- More than two working days per week
- Don't know

10. The following two questions refer to the speed associated with deploying and retrieving funds used on a P2P business lending platform. Please provide an accurate estimate for each:

Once you have decided to fund a loan(s), how quickly do you expect your funds to be deployed in funding the loan(s)?

Assuming you would like to access your funds currently held on the platform (e.g. exit an existing loan contract), how quickly do you expect to retrieve your money (excluding fees)?

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11. When choosing between lending opportunities on a P2P business lending platform, how important are the following factors in influencing your lending decision?

	Very Important	Important	Neutral	Unimportant	Very Unimportant
Interest rate offered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Risk rating/credit score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Number of lending opportunities listed on platform	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loan term/maturity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loan purpose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loan security and/or guarantee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of a provision fund	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loan repayment information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Profile and nature of business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Location of business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tax relief (eg. ISA/SIPPS)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comments/responses in Q&A/forum	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Do you currently utilise a tax-wrapper and/or investment scheme when lending on a P2P business lending platform?

	Currently utilising	Not using but expect to	Not using and do not expect to	I am unfamiliar with this wrapper or scheme
Innovative Finance ISA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stocks & Shares ISA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal Saving Allowance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bonds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SIPPS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. How much do you expect to lend in the coming 12 months?

	Lend more	Lend about the same	Lend less	Not Applicable
In terms of total amount of money I expect to lend <i>without</i> a tax-scheme or tax-wrapper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In terms of total amount of money I expect to lend <i>with</i> a tax-scheme or tax-wrapper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. How do you use an automatic bidding tool (e.g. automated function) when lending on a P2P business lending platform. Tick all that apply.

- I use an automatic bidding tool for all of my lending
- On the same platform, I use an automatic bidding tool for some of my lending, but I also select some of my own loans
- I use an automatic bidding tool on some platforms but not on others
- I do not use an automatic bidding tool
- Don't know

Approximately what % of your lending do you estimate is funded through an automatic bidding tool

15. If your investments are linked to a provision fund or similar, are you aware of the following?

- My investments had losses which the provision fund covered in full.
- My investments had losses which the provision fund covered in part.
- My investments had losses which the provision fund did not cover at all.
- I am not aware of the provision fund being used for my investments, nor of any losses covered by it.
- I do not use a provision fund offered by my platform, so this is not applicable to me.
- My platform does not offer a provision fund, so this is not applicable to me.
- I do not know what a provision fund is.

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16. When choosing a P2P business lending platform, how important are the following factors in influencing your decision to use the platform?

	Very Important	Important	Neutral	Unimportant	Very Unimportant
Advice from an independent financial adviser	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rating on an online intermediary (eg. MoneySuperMarket)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comparing returns available on the platform to those available from traditional providers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Review or consult with current lenders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Review or consult with current borrowers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Platform FAQs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Review how platforms operate (eg. standard contracts used for lenders and borrowers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Review policy in case of platform failure or shutdown	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rely on word of mouth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rely on media/news coverage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Do you expect the P2P business lending platform to perform the following actions before you lend?

	Yes	No	Don't Know/Not Applicable
Obtain details of business's revenue and debts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obtain a credit score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confirm business's identity (including incorporation)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confirm identity of business principals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Verify business's financial history (including past defaults or bankruptcy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use a third party (e.g. audited accounts) to confirm business financials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Receive and verify the business's income statements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interview contacts (e.g. employers or business associates) to confirm claims and assess reputation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stress test non-property assets offered as security	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stress test the value of any real estate or property	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carry-out Anti-Money Laundering (AML) and Know Your Customer (KYC) checks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Question how the business intends to use borrowed funds (including review of business plan and cash flow forecasts)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Review Companies House records	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. Given that your capital is at risk, to what extent do you agree with the following actions for avoiding or

reducing risk?

	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
Only invest money I can definitely afford to lose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Perform my own due diligence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rely upon due diligence performed by other lenders (eg. questions asked on the platform)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rely upon the due diligence by the platform	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rely upon due diligence by a third party (e.g. rating agency, auditor)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek independent financial advice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to liquidate position (e.g. using a secondary market)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diversify <i>within</i> the platform (e.g. lending across a number of loans)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diversify <i>outside</i> the platform (e.g. maintain a diversified portfolio including other asset classes)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Invest in loans that fall within a provision fund	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Invest through platforms which have robust recovery process for loans that default	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mechanisms in place for recoveries from guarantors or non-property collateral	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mechanisms in place for recoveries on property or real estate assets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rely on platform to offer loans fairly between institutional and retail lenders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
Access the Financial Ombudsman Service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regulatory interventions (eg. by the FCA or government)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leave it to chance or luck	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. When thinking of other types of investments you might put your money in, how might this compare to your current P2P business lending activity in terms of risk?

UK government bonds	<input type="text"/>
Funds in a bank account with a high street bank or building society	<input type="text"/>
Funds in a bank account with an internet-only bank	<input type="text"/>
A fixed income investment (e.g. listed bond)	<input type="text"/>
Managed funds like a mutual fund or money market	<input type="text"/>
UK equities (listed shares only)	<input type="text"/>
UK Buy-to-Let property	<input type="text"/>
Foreign exchange (assume a widely traded sterling pair e.g. GBP/USD)	<input type="text"/>
Commodities (e.g. Oil or Copper)	<input type="text"/>
Bitcoin or other cryptocurrency	<input type="text"/>



20. To what extent do you agree with each of the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
In the event of platform failure, I am confident that I will recover my investment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My interests and the interests of the platform are complementary and aligned	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am made aware of any bad performance or problems with my existing portfolio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information presented to me on the platform is clear and transparent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The platform does sufficient due diligence to meet my expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The platform I use is more trustworthy than my bank	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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**21. Where do you live?**

- |  |  |
|--|--|
| <input type="radio"/> North East of England    | <input type="radio"/> London           |
| <input type="radio"/> North West               | <input type="radio"/> South East       |
| <input type="radio"/> Yorkshire and The Humber | <input type="radio"/> South West       |
| <input type="radio"/> East Midlands            | <input type="radio"/> Scotland         |
| <input type="radio"/> West Midlands            | <input type="radio"/> Wales            |
| <input type="radio"/> East of England          | <input type="radio"/> Northern Ireland |

Other (please specify)

**22. Gender**

- Male
- Female
- Other

**23. What age are you?**

- |                                       |                                       |
|---------------------------------------|---------------------------------------|
| <input type="radio"/> Under 18        | <input type="radio"/> 45-54 years old |
| <input type="radio"/> 18-24 years old | <input type="radio"/> 55-64 years old |
| <input type="radio"/> 25-34 years old | <input type="radio"/> Over 65         |
| <input type="radio"/> 35-44 years old |                                       |

**24. What is your annual income in pounds sterling?**

- Less than £15,000
- £15,001 - £25,000
- £25,001 - £35,000
- £35,001 - £50,000
- £50,001 - £100,000
- £100,001 - £150,000
- Over £150,000

25. Are you a:

- Retail investor who self-certifies that you will not invest more than 10% of your net investable portfolio.
- Retail investor who has received investment advice or utilises an investment management service.
- Professional investor with previous experience of early stage/venture capital investment.
- High-net-worth individual with an annual income to the value of £100,000 or more.
- A certified sophisticated investor
- A self-certified sophisticated investor
- None of these
- I am not sure/rather not say.

26. What is your highest level of education?

- GCSE or equivalent
- A-Level or equivalent
- Apprenticeship
- Diploma
- Undergraduate degree (Bachelor)
- Postgraduate degree (Master)
- PhD

27. If you wish to leave additional comments, please do so in the space provided below.

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**The information you have provided in this survey is anonymous.**

The University of Cambridge is also looking to conduct a short qualitative interview (20-30mins) with survey participants. If you are interested in participating in a one-on-one interview over the phone at your convenience, please provide us with your email address and name so that we may get in touch with you.

Please note, your contact details will remain private and will not be passed on to any third parties.

Name	<input type="text"/>
Email address	<input type="text"/>

**Thank you for participating in the 2016 UK P2P Business Lending *Investor* Survey.**

Please note, if you currently also participate in P2P property lending, we would be much obliged if you completed the corresponding survey, which can be found here: [https://www.surveymonkey.co.uk/r/P2P\\_Property\\_Lending\\_Investor](https://www.surveymonkey.co.uk/r/P2P_Property_Lending_Investor)

**Should you wish to contact the research team, please feel free to contact Tania Ziegler via email [ccaf@jbs.cam.ac.uk](mailto:ccaf@jbs.cam.ac.uk) or [crowdfundingcfi@fca.org.uk](mailto:crowdfundingcfi@fca.org.uk).**

## Appendix 4: Interview Invitation Letter to UK P2B Investors

Good afternoon,

Thank you for participating in the Peer-to-peer lending survey at the end of 2016, which was the first phase of the research project being jointly undertaken by The Financial Conduct Authority (FCA) and the Cambridge Centre for Alternative Finance (CCAF) to assist in the FCA's review of the UK alternative finance industry. You indicated in your survey response that you were willing to be interviewed to further explore some of the topics contained in the survey questionnaire. You have been selected to be interviewed (by telephone), and so I'm writing to inquire about your availability for an interview in the coming days.

I am the Executive Director of the CCAF and one of my research interests is the financing of small businesses. The information you provided in the survey questionnaire indicated that you are a P2P lender to small businesses, so I will be conducting your interview. Please note your availability using the following link to a 'doodle poll', by entering your full name and clicking on the interview slots when you are available (the poll is set up to protect your identity from other participants so that we may preserve your anonymity): [ ]

The interview will take approximately 40 minutes. We look forward to hearing from you regarding your preferred interview times.

Best regards,

Robert Wardrop  
Executive Director  
Cambridge Centre for Alternative Finance  
University of Cambridge Judge Business School  
Mobile: +44(0)7834867949  
<http://www.jbs.cam.ac.uk/ccaf>

## Appendix 5: Semi-Structured Interview Question List (UK P2B Lenders)

1. Investing Motivations:
  - 1.1. What drew you to the sector? What was the original purpose for investing (e.g. financial vs non-financial)? Has this changed over time?
  - 1.2. To what extent, if any, were your motivations for investing to reflect a moral commitment – either to supporting non-mainstream finance and/or a given project supported by the platform (environment, community, local SME)?
  - 1.3. In the last two years, do you think the platforms have tightened or relaxed their standards on who can raise funds? What information would you require in order to assess this?
  - 1.4. What would you be investing in if you weren't able to invest in crowdfunded investments?
2. Investing Behaviour:
  - 2.1. What factors determine how much you invest in crowdfunded investments as a proportion of your total investment portfolio? Was there a point in time when you shifted a significant amount of money into the sector? If so, why?
  - 2.2. Has the proportion of crowdfunding investments in your investment portfolio changed over time? (more, less, or about the same) Why?
  - 2.3. Has the proportion of your investments auto-selected by the platform changed over time? (more, less or about the same) If so, why?
  - 2.4. Are you looking for the platforms to provide a managed investment or do you spend time picking opportunities and allocating assets yourself? How much time do you devote to this?
    - 2.4.1. If you do select your own investments, does the amount of your investment influence the amount of time you spend considering whether to make the investment?
    - 2.4.2. What form of due diligence did you undertake to assess your selection of investment? Did you rely only on the information provided by the platform? What other information did you seek and could the platform have also provided this?
  - 2.5. Do you have any affinities with the businesses you have invested in? If yes, how important are these in your investment decision? (possible affinities include personal relationships with a person connected to the business, familiarity with brand or usage of the product/service, preference based on geographic proximity or type of business sector, moral affinity with a platform's objectives). Are there other non-financial returns that you feel are important?
  - 2.6. Do you think you are getting good value for money from these platforms? What does 'value for money' mean to you in this context?
  - 2.7. (If investing in multiple platforms) Do some platforms offer a better risk / return relationship than others? If so, what characterises a 'good' from a 'bad' platform in your opinion and what criteria do you use to assess that? Why?
3. Trust & Confidence:
  - 3.1. How do you view investments in this sector in terms of risk? How do you understand risk in this context?
  - 3.2. How important have the following actions been in establishing the level of trust needed by you to invest in [crowdfunded investments]? (on a scale of 1 -5 with 1 being 'of no importance' and 5 being 'very important'):
    - 3.2.1. Co-investment by the British Business Bank in the loans of selected P2P platforms
    - 3.2.2. Introduction of regulation by the Financial Conduct Authority covering crowdfunding platforms

- 3.2.3. Creation of the innovate finance ISA by HM Treasury to include crowdfunded loans
- 3.3. Are there any other factors that have been important in establishing the level of trust you needed before investing in [crowdfunded investments]?
- 3.4. How important have the following factors been in establishing the level of trust you needed before using a [crowdfunding] platform? (on a scale of 1 -5 with 1 being 'of no importance' and 5 being 'very important'):

  - 3.4.1. The reputation of the investors and senior management of the platform
  - 3.4.2. The information disclosed about total investment performance of the platform, e.g. returns available to investors / default rates
  - 3.4.3. The investment performance of your investments on the platform
  - 3.4.4. The data security and privacy policies of the platform
  - 3.4.5. Media articles written about the platform
  - 3.4.6. The opinion of financial advisors
  - 3.4.7. The opinion of people I know that have used the platform

- 3.5. Are there any other factors that have been important in establishing the level of trust you needed before using a [crowdfunding] platform?
- 3.6. Did you discuss crowdfunding investment with a friend or acquaintance living outside your household before making your first investment? If yes, how important was that discussion in your investment decision? (on a scale of 1 -5 with 1 being 'of no importance' and 5 being 'very important')
- 3.7. Did you recommend [crowdfunding] as a type of investment to a friend or acquaintance living outside your household after making your first investment? If yes, approximately how long after your first investment did you make the recommendation?
- 3.8. For each of the following types of organizations, please indicate how much trust you place in it on a scale of 1 to 5 (where '1' means you have 'absolutely no trust', and '5' means you have 'a great deal of trust'), and whether you trust that type of organisation more, less, or about the same today as you did before the financial crisis?
  - 3.8.1. High Street Banks (e.g. Barclay's, HSBC, Lloyds Bank, RBS, or Santander)
  - 3.8.2. Mutual Banks & Building Societies (e.g. Co-operative Bank, Coventry Building Society, Nationwide, or Yorkshire Building Society)
  - 3.8.3. Small & Medium-Sized Companies (also called SMEs)
  - 3.8.4. Large Multinational Corporations (e.g. BAE, Apple, Exxon Mobil or G.E.)
  - 3.8.5. Alternative Finance Platforms (e.g. P2P, P2B, P2C, Crowdfunding [equity / donation], Community Shares).
- 3.9. Finally, if you were the regulator, what information would you ask platforms to provide directly to you as an investor?

**Appendix 6: Summary Socio-Demographic Statistics for UK P2B Investor Survey Respondents**

	<b>Frequency</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
<b>Gender</b>			
Female	38	10.7	10.7
Male	316	89.0	99.7
Other	1	0.3	100.0
Total	355	100.0	
Missing	50		
Total			
<b>Age</b>			
18-24 years old	3	0.8	0.8
25-34 years old	16	4.5	5.3
35-44 years old	43	12.1	17.4
45-54 years old	65	18.3	35.7
55-64 years old	113	31.7	67.4
Over 65	116	32.6	100.0
Total	356	100.0	
Missing	49		
Total	405		
<b>Highest Education</b>			
GCSE or equivalent	25	7.2	7.2
A-Level or equivalent	27	7.8	14.9
Apprenticeship	9	2.6	17.5
Diploma	34	9.8	27.3
Undergraduate degree	150	43.1	70.4
Postgraduate degree (Master)	88	25.3	95.7
PhD	15	4.3	100.0
Total	348	100.0	
Missing	57		
Total	405		
<b>Annual income</b>			
Less than £15,000	26	7.5	7.5
£15,001 - £25,000	41	11.9	19.4
£25,001 - £35,000	41	11.9	31.3
£35,001 - £50,000	77	22.3	53.6
£50,001 - £100,000	82	23.8	77.4
£100,001 - £150,000	44	12.8	90.1
Over £150,000	34	9.9	100.0
Total	345	100.0	
Missing	60		
Total	405		



**Appendix 7: Historical Transaction Data Provided by G5 Mini-Bond Issuer (1998 – 2013)**

Bond Issues by Year	Number of Investments	Invested Amount (€)			
		Minimum	Maximum	Sum	Mean
2002	165	5,000	75,000	1,980,000	12,000
	801	1,000	104,000	8,660,000	10,811
2003	241	5,000	165,000	2,815,000	11,680
	232	2,000	153,000	2,860,000	12,328
	420	3,000	350,000	5,941,000	14,145
2004	584	1,000	400,000	8,317,000	14,241
	400	3,000	300,000	6,346,000	15,865
	371	2,000	250,000	3,884,000	10,469
	546	3,000	277,000	7,208,000	13,201
	718	1,000	140,000	8,526,000	11,875
	577	2,000	160,000	6,166,000	10,686
2005	1,542	3,000	580,000	21,468,000	13,922
2006	1,123	3,000	300,000	17,348,000	15,448
2007	483	3,000	201,000	6,850,000	14,182
	464	5,000	480,000	9,740,000	20,991
	1,021	3,000	300,000	15,232,000	14,919
2008	109	50,000	700,000	8,205,000	75,275
	497	3,000	110,000	5,950,000	11,972
2009	105	15,000	400,000	7,473,000	71,171
2010	1,653	3,000	580,000	28,128,000	17,016
	491	5,000	250,000	6,182,000	12,591
2011	99	5,000	120,000	1,285,000	12,980
	359	4,000	130,000	5,059,000	14,092
	1,257	4,000	387,000	22,635,000	18,007
	1,074	4,000	370,000	18,532,000	17,255
2012	528	4,000	150,000	6,938,000	13,140
	653	5,000	295,000	11,013,000	16,865
	1,447	5,000	300,000	24,732,000	17,092
	636	3,000	200,000	7,472,000	11,748
2013	509	5,000	100,000	5,786,000	11,367
	1,243	4,000	390,000	18,964,000	15,257
	741	4,000	150,000	9,991,000	13,483
	643	3,000	430,000	10,792,000	16,784
	368	5,000	150,000	4,277,000	11,622
	382	5,000	100,000	5,874,000	15,377
<b>Total</b>	<b>22,482</b>			<b>342,629,000</b>	
<b>Mean</b>	<b>642.34</b>			<b>9,789,400</b>	<b>17,425</b>

## Appendix 8: Questionnaire Distributed by Mail to German and UK mini-bond Investors

### Q1. Are you male or female?

- 1  Male
- 2  Female

### Q2. What is your year of birth?

|\_|\_|\_|\_|

### Q3. What vocational or professional training do you have? *Which of the following categories most closely applies to you?*

- 1  Completed trade, craft or agricultural traineeship
- 2  Vocational college certification
- 3  Licenced trade certification
- 4  Technical polytechnic degree
- 5  Undergraduate university degree
- 6  Post graduate university degree

### Q4. Regarding employment, which of the categories applies to you?

- 1  Full time employment
- 2  Part time employment
- 3  Retired
- 4  Not working at the present time

### Q5. Please classify your occupational status according to this list. *If retired or not working, then please classify your last occupational status.*

- 1  Skilled worker
- 2  Master tradesman or foreman
- 30  Company employee:
- 31  Clerical
- 32  Administrator
- 33  Manager

34  Executive management

40  Civil servant:

41  Clerical

42  Administrator

43  Manager

44  Executive management

5  Professional (e.g. solicitor, doctor or academic)

6  Freelance worker

7  Self-employed (e.g. company, farm)

**Q6. In what postal code district do you live?**

|\_|\_|\_|\_|\_|\_|\_|\_|\_|

**Q7. Approximately how long have you lived in this place?**

Since year: |\_|\_|\_|\_|\_|

2  Do not recall

**Q8. Do you own shares in listed companies?**

1  Yes

2  No

**Q9. Do you currently own mini-bonds issued by other companies?**

1  Yes

2  No

**Q10. How did you first become aware of the mini-bonds issued by the Company?**

1  Newspaper or magazine article

2  Radio, TV or press advertisement

3  Website of the company

4  Another website

5  Friend, relative or work colleague

6  Financial advisor

**Q11. Have you previously attended any information events for the Company?**

1  Yes

2  No

**Q12. Do you currently own mini-bonds issued by the Company?**

1  Yes

2  No

**If you do not own any of the Company's bonds then please go to Q23.**

**Q13. How did you place the order to buy the Company's bonds?**

1  Directly from the Company

2  Through a local bank

3  Through an online broker

4  Through a private bank

5  Through a financial advisor

**Q14. How long have you owned the Company's bonds?**

1  Less than one year

2  Between one and two years

3  Between two and three years

4  More than three years

**Q15. When you first purchased the Company's bonds, please indicate if you were:**

1  Employed by the Company

2  Formerly employed by the Company

- 3  Employed or formerly employed by an entity with a relationship with the Company, such as a supplier, distributor, customer or research institute
- 4  None of the above

**Q16. When you purchased the Company's bonds, please indicate if someone in your household was:**

- 1  Employed by the Company
- 2  Formerly employed by the Company
- 3  Employed or formerly employed by an entity with a relationship with the Company, such as a supplier, distributor, customer or research institute
- 4  An investor in the bonds issued by the Company
- 5  None of the above

**Q17. When you purchased the Company's bond, please indicate if someone known to you was:**

- 1  An employee of the Company
- 2  Formerly employed by the Company
- 3  Employed or formerly employed by an entity with a relationship with the Company, such as a supplier, distributor, customer or research institute
- 4  An investor in the bonds issued by the Company
- 5  None of the above

**Q18. If yes, did you communicate with any of the above persons not living in your household about the Company prior to purchasing the bond?**

- 1  Yes
- 2  No

**Q19. How far away from your home do these persons you communicated with live?**

- 2  In the immediate neighborhood
- 3  In the same town or city
- 4  In another place, about an hour away

5  Further away in the UK

6  Outside of the UK

Please provide the postal code for one of these persons if possible

2  Do not recall

**Q20. Since purchasing the Company's bond, have you talked to any persons not living in your household about the bonds as an investment?**

1  Yes

2  No

**Q21. If you did talk about the Company's bond with individuals not living in your household, then approximately how far away do these people live from your home?**

2  In the immediate neighborhood

3  In the same town or city

4  In another town or city about an hour away

5  Further away in the UK

6  Outside of the UK

Please provide the postal code for one of these persons if possible

2  Do not recall

**Q22. In thinking about the reasons why you decided to invest in the Company's mini-bond, please indicate how much do you agree with each of the following four statements on a scale of 1 to 5, where '1' indicates strong disagreement and '5' indicates strong agreement:**

1. *'I purchased the bond because considering all the investment opportunities I was aware of, I expected to obtain the best possible financial return relative to the risk.'*

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

2. *'I purchased the bond because the Company's values are similar to my values.'*

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

3. *'I purchased the bond because I like the Company's products.'*

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

4. *'I purchased the bond because the coupon rate is high.'*

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**Q23. If you own the Company's mini-bond or the mini-bonds of any other company, please describe the largest amount you have invested in any of these bonds, where '1' means the amount is a very small part of your total investments, and '5' means it is a very large part of your total investments.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5
A very small part	A small part	An average part	A large part	A very large part

**Q24. Are you a consumer of the Company's products or services?**

1  Yes  
2  No

**If you are not a consumer of the Company's products then please go to Q27**

**Q25. For how many years have you been a user of the Company's products or services?**

- 1  Less than one year
- 2  Between one year and two years
- 3  Between two years and five years
- 4  More than five years

**Q26. How often do you use the Company's products or services?**

- 1  Every day
- 2  Once or twice per week
- 3  Once or twice per month
- 4  Once or twice per year

**Q27. Please indicate for each type of organization how much trust you place in it on a scale of 1 to 5, where '1' means you have absolutely no trust, and '5' means you have a great deal of trust.**

**27.1 High Street Banks** (e.g. Barclay's, HSBC, Lloyds Bank, RBS, or Santander)

- |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1                        | 2                        | 3                        | 4                        | 5                        |
| Absolutely<br>no trust   | Some<br>distrust         | Neutral                  | Some<br>Trust            | A great deal<br>of trust |

Do you trust high street banks more, less, or about the same today as you did before the financial crisis?

- |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Less<br>11               | About the same<br>12     | More<br>13               |

**27.2 Mutual Banks & Building Societies** (e.g. Co-operative Bank, Coventry Building Society, Nationwide, Smile or Yorkshire Building Society)

- |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1                        | 2                        | 3                        | 4                        | 5                        |
| Absolutely<br>no trust   | Some<br>distrust         | Neutral                  | Some<br>Trust            | A great deal<br>of trust |

Do you trust mutual banks and building societies more, less, or about the same today as you did before the financial crisis?

- |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|--------------------------|



Less  
11

About the same  
12

More  
13

### 27.3 Small & Medium-Sized Companies

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5
Absolutely no trust	Some distrust	Neutral	Some Trust	A great deal of trust

Do you trust small & medium-sized companies more, less, or about the same today as you did before the financial crisis?

Less  
11

About the same  
12

More  
13

### 27.4 Large Multinational Corporations (e.g. BAE, Apple, Daimler, Exxon Mobil or G.E.)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5
Absolutely no trust	Some distrust	Neutral	Some Trust	A great deal of trust

Do you trust large multinational corporations more, less, or about the same today as you did before the financial crisis?

Less  
11

About the same  
12

More  
13

Thank you for completing the questionnaire.

---

Would you be willing to participate in a telephone interview with us to discuss your views about mini-bonds and trust in institutions at time convenient to you during March or April 2014?

If so, please indicate your consent to participate by providing the information requested below, including either an email address or a telephone number so we can contact you, and signing where indicated.

**Please tick box**

1. I understand that my participation is voluntary and that I am free to withdraw my participation at any time without giving any reason.
2. I understand that my responses will be anonymised and only used for academic research.

E-Mail Address: \_\_\_\_\_ Telephone number: \_\_\_\_\_

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

If you would like to receive more information about this project, then please contact the researcher (Robert Wardrop) via email at: [rhw40@cam.ac.uk](mailto:rhw40@cam.ac.uk).

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

## Appendix 9: Summary Socio-Demographic Statistics for Mini-Bond investor Survey Respondents

	Mini-Bond Issuer											
	G5 (Germany)				G4 (germany)				UK4 (UK)			
	N	Min	Max	Mean	N	Min	Max	Mean	N	Min	Max	Mean
Age	428	21	90	63.7	192	22	93	55.1	271	28	96	60.4
Years living at current address	428	1	85	31.5	188	0	74	25.1	273	0	70	20.5

	Mini-bond Issuer								
	G5-Germany			G4-Germany			UK3-UK		
	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent
<b>Gender</b>									
Male	368	85.6	85.6	155	79.9	79.9	230	83.6	83.6
Female	62	14.4	100.0	39	20.1	100.0	45	16.4	100.0
Total	430	100.0		194	100.0		275	100.0	
Missing	6			-			-		
Total	436	100.0		194			275		
<b>Highest Education</b>									
Did not attend university	159	37.1	37.1	59	30.4	30.4	33	13.3	13.3
Did attend university	270	62.9	100.0	133	68.6	99.0	215	86.7	100.0
Total	429			194			248		
Missing	7			-			-		
Total	436	100.0		194			248	100.0	
<b>Employment Status</b>									
Full time employment	156	36.1	36.1	101	52.1	52.1	99	36.1	36.1
Part time employment	18	4.2	40.3	23	11.9	63.9	33	12.0	48.2
Retired	242	56.0	96.3	61	31.4	95.4	135	49.3	97.4
Not working presently	16	3.7	100.0	9	4.6	100.0	7	2.6	100.0
Total	432	100.0		194	100.0		274		
Missing	4			-			2		
Total	436	200.0		194			276	1.0	
<b>Occupation</b>									
Skilled worker	5	1.2	1.2	3	1.6	1.6	20	7.4	7.4
Craftsman, tradesman or foreman	5	1.2	2.3	5	2.7	4.3	3	1.1	8.5
Freelance worker	28	6.5	8.8	11	5.9	10.1	21	7.8	16.3
Company: Administrator/clerical	88	20.5	29.3	69	36.7	46.8	22	8.1	24.4
Company: Manager/executive	187	43.5	72.8	50	26.6	73.4	113	41.9	66.3
Civil servant	59	13.7	86.5	34	18.1	91.5	29	10.7	77.0
Self-employed in SME	58	13.5	100.0	16	8.5	100.0	49	18.1	95.2
Self-employed in large firm (>250 employees)	-	-	100.0	-	-	100.0	12	4.4	100.0
Total	430	100.0		188	100.0		270	100.0	
Missing	6			6			6		
Total	436			194			276		

## Appendix 10: Hand-Collected Data for Mini-Bond Issues in the UK (2009 – 2015)

Name of Issuer	Industry sector	Issue Date	Term (Yrs)	Coupon Interest Rate	Coupon Bonus	Issue Size	Number of Investors	Avg Investment Amount
King of Shaves	Consumer product	Jan-09	3	6.0%	1.0%	£ 627,000	400	£ 1,568
Hotel Chocolat	Consumer F&B	Jan-10	3	7.0%	(note 1)	£ 4,000,000	1,800	£ 2,222
Ecotricity I	Consumer energy	Oct-10	4	7.0%	0.5%	£ 10,000,000	1,800	£ 5,556
Ecotricity II	Consumer energy	Nov-11	5	6.0%	0.5%	£ 10,000,000	1,800	£ 5,556
Canton FX: 1	Financial services	Oct-11	4	7.3%		£ 5,000,000	n/a	n/a
Wind Prospect	Renewable energy	May-11	4	8.0%		£ 2,272,000	324	£ 7,012
John Lewis	Consumer retail	Mar-11	5	4.5%	2.0%	£ 50,000,000	7,000	£ 7,143
Leon Restaurants	Consumer F&B	Jun-12	3	10.0%	5.0%	£ 1,500,000	n/a	n/a
Mr & Mrs Smith	Consumer travel service	Apr-12	4	7.5%	2.0%	£ 2,300,000	n/a	n/a
Frodo Financial	Financial services	Oct-12	3	7.5%		£ 250,000	n/a	n/a
Jockey Club	Sports & entertainment	May-13	5	4.8%	3.0%	£ 25,000,000	2,086	£ 11,985
Nufield Health	Consumer healthcare	May-13	5	6.1%		£ 18,600,000	1,300	£ 14,308
CBD Energy Bond 1	Renewable energy	Jun-13	4	7.5%		£ 7,536,000	n/a	n/a
Naked Wines	Consumer F&B	Sep-13	3	7.0%	3.0%	£ 5,000,000	2,221	£ 2,251
Good Energy	Renewable energy	Oct-13	4	7.3%	1.0%	£ 15,000,000	n/a	n/a
Warren Evans	Consumer durables	Oct-13	3	7.5%		£ 2,500,000	n/a	n/a
Smart Water	Security services	Nov-13	3	7.5%		£ 3,000,000	n/a	n/a
Chilango Restaurants	Consumer F&B	Jun-14	4	8.0%		£ 2,000,000	709	£ 2,821
Hotel Chocolat II	Consumer F&B	Jun-14	3	7.5%	(note 1)	£ 10,000,000	n/a	n/a
Belectric	Renewable energy	Aug-14	5	7.0%		£ 4,000,000	n/a	n/a
Lancashire County Cricket	Sports & entertainment	Sep-14	5	5.0%	2.0%	£ 3,000,000	n/a	n/a
Canton FX: 1	Financial services	Sep-14	4	7.3%		£ 5,000,000	n/a	n/a
River Cottage	Consumer F&B	Oct-14	4	8.0%	3.0%	£ 1,000,000	285	£ 3,509
Taylor Street Baristas	Consumer F&B	Jan-15	4	8.0%	4.0%	£ 1,805,500	493	£ 3,662
Providence Factoring	Financial services	Feb-15	4	8.3%		£ 8,150,000	825	£ 9,879
Hambledon vinyard	Consumer F&B	May-15	5	8.0%	(note 2)	£ 3,300,000	n/a	n/a
Brewdog	Consumer F&B	Oct-15	4	6.5%	(note 2)	£ 10,000,000	n/a	n/a
Ecotricity III	Consumer energy	Nov-15	5	4.5%	0.5%	£ 18,000,000	n/a	n/a

Note 1: Coupon interest rate paid entirely in chocolate product and subject to taxation as interest income earned by investors

Note 2: Investors are entitled to receive discounts on product purchases and/or free product

## Appendix 11: Excerpts of German Mini-Bond Investor Interviews

I = Interviewer

### ID: 003

I And with the person you spoke to after investing in the [ Company X ] bonds, why did you talk to them and what about? Did you advise them for or against them for example?

P I suggested it as one possibility since my acquaintance was looking for something performing above better than the rate of inflation and [ Company X ] bonds were one possibility I suggested but I'd be outraged if he'd have put all his money into it. I recommended spreading his options and that was just one possibility.

I You informed that you've held [ Company X ] bonds for over 3 years. Did you wait after purchasing [ Company X ] bonds or did you tell that person straight away?

P I can't exactly say but probably one or two months subsequent to the purchase.

### ID: 004

I You answered that subsequent to the purchase of the bonds that you spoke to someone else about it, why was that and what did you discuss with that person?

S Why? Out of interest so well in general as per how one invests well today when compared to today's interest levels. Yes and simply what possibilities or alternatives exist so that was why

I Do you regularly speak to that person about other investment opportunities as well?

S Yes, all the time, shares, property, anything which well, we freely swap tips yes.

I Do you hold the viewpoint then that you influenced that person to invest in the bonds or did it not influence them?

S Ahh. Let's say it was a driver to inform themselves more at least yes,

I Did that person you spoke to later invest in [ Company X ] bonds. Do you know?

S I think so.

### ID: 003

I And with the person you spoke to after investing in the [ Company X ] bonds, why did you talk to them and what about? Did you advise them for or against them for example?

P I suggested it as one possibility since my acquaintance was looking for something performing above better than the rate of inflation and [ Company X ] bonds were one possibility I suggested but I'd be outraged if he'd have put all his money into it. I recommended spreading his options and that was just one possibility.

I Yes, of course. You informed that you've held [ Company X ] bonds for over 3 years. Did you wait after purchasing [ Company X ] bonds or did you tell that person straight away?

P I can't exactly say but probably one or two months subsequent to the purchase.

- I During these conversations did you influence that person towards these investments or did they influence you?
- P Myself not but they were probably influenced by me since they hadn't done much of that really. I can say that the passing on of experience was from me and not to me.

ID: 005

- I You spoke to someone else both before and after buying [ Company X ] bonds?
- M Yes with an acquaintance that knew a bit more about securities.
- I Did you speak regularly with that person about other investment opportunities?
- M Regularly is probably an overstatement but now and then it's always good to know what investment possibilities exist.
- I And now to the people you've spoken to since the investment in the bonds about what did you discuss concerning [ Company X ] .
- M Well I spoke to a previous work colleague about [ Company X ] and recommended it as a serious company.
- I What arguments did you use in terms of it being serious in your opinion?
- M I'm from the Ruhr area actually. And I know [ Company X ] in [headquarters location] myself. The personal impression I had was surely a reason to purchase in my case.

ID: 007

- I You spoke to others about the bonds or about [ Company X ] before and after you invested in [ Company X ] which also led to their purchase.
- O Yes I did, certainly.
- I Ok firstly about the people you spoke to before investing in the bonds, how important were those conversations for you?
- O That was my brother who recommended them and so I made contact with them.
- I So it was your brother who led you to invest in [ Company X ] without which you probably would not have invested in them?
- O Probably not yes.
- I Concerning the person you spoke to after buying the bonds. Why did you speak to that person about [ Company X ] ?
- O Yes simply since my older sister who is really not into this kind of thing had money sitting there in her account and as you know interest rates these days are close to zero as you know so I recommended that she invest it in [ Company X ].
- I So the recommendation you made overwhelmingly led her to invest in [ Company X ] I imagine if you're saying she invested there?
- O Yes since I was and both of my brothers were with [ Company X ] so our whole family is now well represented at [ Company X ].

ID: 0010

- I You informed that subsequent to your purchase of [ Company X ] stocks, you spoke to somebody you knew about it.

- K Yes, I always discussed such with acquaintances and friends as well as my daughter and son and my daughter [s.l...] probably bought some. [ Company X ] has very good returns in terms of investment, on the other hand that awakens mistrust in many people's eyes. For example, why do they return such high yields. Will they soon disappear or have problems? With me it was the same, I observed for a year how it developed. My first contact was I believe with [ Company X ] from Wirtschaftwoche (Germany economy magazine) I think at some point which was an investment 12 years ago I believe or 14 years ago, I must check when, but I started small with a purchase costing 5,000DM and then I invested more as it developed.
- I So as you made money over the years and for the reason that you wanted to let others know about the trust you'd built up with them?
- K Yes, yes.
- I Do you still discuss other investment opportunities regularly today with these people? Do you think that these discussions with your children have caused them to invest in the stocks or that it hasn't really influenced them?
- K Yes, yes.
- I Has anyone or your children you've discussed the [Company X] bonds with invested in them?
- K Yes two acquaintances invested in them yes.

ID: 0011

- I You informed that you spoke to at least one person subsequent to making the investment in the bonds.
- E Yes.
- I May I ask you why you spoke to others about the [ Company X ] bonds?
- E Ah. I don't know any more now. Probably amongst friends we just discussed who was investing what and where, then one swaps tips right.
- I Do you talk amongst your friends about other investment opportunities regularly?
- E Yes, amongst close friends at least.
- I Do you discuss whom you'd trust in order to be safe regarding certain bonds?
- E Yes to be safe is one thing and also to take opportunities seriously.
- I Is your viewpoint that discussions amongst friends have influenced investment decisions amongst those friends?
- E Yes, yes.

ID: 0013

- I You informed us in the survey that you'd spoken to others subsequent to the purchase of [ Company X ] bonds, namely an acquaintance, why did you do that and what did you discuss?
- DE It was about the company itself, the offerings, duration of them, interest rates, conditions and the Mittelstand structure behind it rather than some anonymous large concern etc.
- I Did you advise this person to buy the stocks?
- DE Yes, actually.

I Is it your viewpoint that the discussion you had with that person influenced them to invest in the stocks?

DE I think so but I can't know for sure.

ID: 0014

I You also informed that after investing in [ Company X ] bonds that you'd spoken to an acquaintance about the stocks or investment in these bonds.

SU Yes - my father - but I can't say whether he bought any or not. I don't know.

I You informed us that you've held [ Company X ] bonds for 2 or 3 years. Did you wait a certain amount of time then before you advised your father to invest in these bonds or was it directly after buying the bonds or straight away?

SU I told him a while after the purchase.

I So you basically kind of waited a while after regular payments came in and not before?

SU Exactly.

ID: 0016

I You informed us that you spoke to someone else before investing in [ Company X ] bonds.

B Ah that was my daughter. She'd done it so I decided to have a go too.

I So you'd say that without the help of your daughter that you'd not have known about the bonds.

B No, I don't think so.

I Do you discuss other investment opportunities with your daughter?

B Yes, every so often yes.

I And you informed us that you'd spoken to other people after purchasing [ Company X ] bonds. Why did you speak to them about it and what did you speak about?

B Well we discussed about getting involved in financial matters, saying that we didn't get much for our money so I recommended looking at [ Company X ]

I Is it your view that the conversations you had influenced the people you spoke to about the bonds?

B Yes, yes, I know that from one person yes.